

ANA LORENZELLI MOORE

EDUCATION:	<p>Universidad Nacional de La Plata Argentina B. of Pharmacy</p> <p>Universidade Federal do Rio de Janeiro, Brazil</p> <p>Texas Tech University (William C. Herndon)</p>	<p>1964</p> <p>1966 M.Sc.</p> <p>1972 Ph.D.</p>
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AREA OF SPECIALIZATION: Organic Chemistry

PROFESSIONAL EXPERIENCE:

<p>Universidad de La Plata Teaching Assistant 1963–1966 Research Fellow 1966–1967 C.O.N.I.C.E.T. (Argentina)</p> <p>Texas Tech University Teaching Assistant 1967–1968 Welch Foundation Predoctoral Fellow 1968–1972</p> <p>University of Washington Teaching Associate 1973–1974 Research Associate 1974–1976 (Niels H. Andersen)</p> <p>Arizona State University Teaching Intern 1976–1977 Visiting Assistant Professor 1977–1982 American Association of University Women Fellow 1980–1981 Research Associate 1982–1988 Research Specialist Center for the Study of Early Events in Photosynthesis 1988–1989 Associate Professor 1989–1996 Asst. Chair for Graduate Studies 1995– 1998 Professor 1996–present Regents’ Professor 2011</p> <p>Muséum National d’Histoire Naturelle</p>
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Laboratoire de Biophysique, Paris, France, Visiting
Scientist 1982–1983

Laboratoire de Physico-Chimie
des Systèmes Polyphases,
Associé au CNRS (UA.330),
Montpellier, France
Visiting Scientist 1984–1988

PROFESSIONAL
ORGANIZATIONS:

American Chemical Society
Inter-American Photochemical Society
American Society for Photobiology
International Carotenoid Society

AWARDS

Innovators of the Year Award
AzTE Technology Ventures, Tempe, AZ 2006
Award “Raices”
Ministry of Science, Technology and Innovation of
Argentina, Buenos Aires
Argentina, 2012.

OTHER ACTIVITIES:

American Society for Photobiology
Council Member 1995–1998
Gordon Conference, Electron-Donor Acceptor Interactions
Co-Vice Chair 1998–2000
Gordon Conference, Electron-Donor Acceptor Interactions
Co-Chair 2000–2002
Editorial Advisory Board of
Accounts of Chemical Research 2003–2006
International Society for Photobiology
Council Member 2004–2009

PUBLICATIONS:

1. “Metal Ion Probes of Molecular Geometry, II. A Direct Spectroscopic Determination of the Absolute Configuration of Hydroxyl Bearing Asymmetric Centers Based on the Shift Reagent, Eu (FOD)₃,” N. H. Andersen, B. J. Bottino, A. L. Moore and J. R. Shaw, *J. Am. Chem. Soc.*, **96**, 603 (1974).
2. “Sesquiterpenes of Nine European Liverworts from the Genera, *Anastrepta*, *Bazzania*, *Jungermannia*, *Lepidozia* and *Scapania*,” N. H. Andersen, P. Bissonette, C. B. Liu, B. Skunk, Y. Ohta, C. W. Tseng, A. L. Moore and S. Huneck, *Phytochemistry*, **16**, 1731 (1977).
3. “Anastreptene, a Commonly Encountered Sesquiterpene of Liverworts (Hepaticae),” N. H. Andersen, Y. Ohta, A. L. Moore and C. W. Tseng, *Tetrahedron*, **34**, 41 (1978).

4. "The Structure of Isobarbatene, the Stable Tricyclic End-Point of the Bazzanene-Barbatene Sesquiterpenes," N. H. Andersen, C. W. Tseng, A. L. Moore and Y. Ohta, *Tetrahedron*, **34**, 47 (1978).
5. "Acetyl Cation Facilitated Cyclization of Olefinic Aldehydes, Factors Determining Regiochemistry," N. H. Andersen, D. Ladner and A. L. Moore, *Synthetic Communications*, **8**, 437 (1978).
6. "Light Absorption and Energy Transfer in Polyene-Porphyrin Esters," G. Dirks, A. L. Moore, T. A. Moore and D. Gust, *Photochem. Photobiol.*, **32**, 277-280 (1980).
7. "Energy Transfer from Carotenoid Polyenes to Porphyrins. A Light-Harvesting Antenna," A. L. Moore, G. Dirks, D. Gust and T. A. Moore, *Photochem. Photobiol.*, **32**, 691-696 (1980).
8. "Mimicry of Antenna and Photoprotective Carotenoid Functions by a Synthetic Carotenoporphyrin," R. V. Bensasson, E. J. Land, A. L. Moore, R. L. Crouch, G. Dirks, T. A. Moore and D. Gust, *Nature*, **290**, 329-332 (1981).
9. "Photoprotection by Carotenoids During Photosynthesis: Motional Dependence of Intramolecular Energy Transfer," A. L. Moore, A. Joy, R. Tom, D. Gust, T. A. Moore, R. V. Bensasson and E. J. Land, *Science*, **216**, 982-984 (1982).
10. "Mimicry of Carotenoid Function in Photosynthesis: Synthesis and Photophysical Properties of a Carotenopyropheophorbide," P. A. Liddell, G. A. Nemeth, W. R. Lehman, A. M. Joy, A. L. Moore, R. V. Bensasson, T. A. Moore and D. Gust, *Photochem. Photobiol.*, **36**, 641-645 (1982).
11. "Energy Transfer and Photoinduced Charge Separation in a Carotenoporphyrin-Quinone Triad Molecule," T. A. Moore, P. Mathis, D. Gust, A. L. Moore, P. A. Liddell, G. A. Nemeth, W. R. Lehman, R. V. Bensasson, E. J. Land and Chachaty, In: *Advances in Photosynthesis Research*, C. Sybesma, ed. (The Hague: Nijhoff/Junk), pp. 729-732 (1984).
12. "NMR Spectra of Carotenoporphyrins. Computer Assisted Conformational Analysis," C. Chachaty, D. Gust, T. A. Moore, G. A. Nemeth, P. A. Liddell and A. L. Moore, *Organic Magnetic Resonance*, **22**, 39-46 (1984).
13. "Photodriven Charge Separation in a Carotenoporphyrin-Quinone Triad," T. A. Moore, D. Gust, P. Mathis, J. C. Mialocq, C. Chachaty, R. V. Bensasson, E. J. Land, D. Doizi, P. A. Liddell, W. R. Lehman, G. A. Nemeth and A. L. Moore, *Nature*, **307**, 630-632 (1984).
14. "Stereodynamics of Intramolecular Triplet Energy Transfer in Carotenoporphyrins," D. Gust, T. A. Moore, R. V. Bensasson, P. Mathis, E. J. Land, C. Chachaty, A. L.

- Moore, P. A. Liddell and G. A. Nemeth, *J. Amer. Chem. Soc.*, **107**, 3631-3640 (1985).
15. "Photodriven Transmembrane Charge Separation and Electron Transfer by a Carotenoporphyrin-Quinone Triad," P. Seta, E. Bienvenue, A. L. Moore, P. Mathis, R. V. Bensasson, P. Liddell, P. J. Pessiki, A. Joy, T. A. Moore and D. Gust, *Nature*, **316**, 653-655 (1985).
 16. "Photodriven Electron Transfer in Triad Molecules: A Two-Step Charge Recombination Reaction," D. Gust, T. A. Moore, L. R. Makings, P. A. Liddell, G. A. Nemeth and A. L. Moore, *J. Amer. Chem. Soc.*, **108**, 8028-8031 (1986).
 17. "Charge Separation in Carotenoporphyrin-Quinone Triads: Synthetic, Conformational and Fluorescence Lifetime Studies," D. Gust, T. A. Moore, P. A. Liddell, G. A. Nemeth, L. R. Makings, A. L. Moore, D. Barrett, P. J. Pessiki, R. V. Bensasson, M. Rouge , C. Chachaty, F. C. De Schryver, M. van der Auweraer, A. R. Holzwarth and J. S. Connolly, *J. Am. Chem. Soc.*, **109**, 846-856 (1987).
 18. "Triplet-Triplet Energy Transfer in B800-850 Light-Harvesting Complexes of Photosynthetic Bacteria and Synthetic Carotenoporphyrin Molecules: An Electron Spin Resonance Investigation," H. A. Frank, B. W. Chadwick, J. J. Oh, D. Gust, T. A. Moore, P. A. Liddell, A. L. Moore, L. R. Makings and R. J. Cogdell, *Biochim. Biophys. Acta*, **892**, 253-263 (1987).
 19. "Energy Transfer and Transmembrane Charge Transfer in Model Systems for Photosynthesis," T. A. Moore, D. Gust, A. L. Moore, P. Seta, E. Bienvenue and R. V. Bensasson, In: *Supramolecular Photochemistry*, V. Balzani, ed. (Boston: D. Reidel Press), 283-297 (1987).
 20. "Pulse Radiolytic and Electrochemical Investigations of Intramolecular Electron Transfer in Carotenoporphyrins and Carotenoporphyrin - Quinone Triads," E. J. Land, D. Lexa, R. V. Bensasson, D. Gust, T. A. Moore, A. L. Moore, P. A. Liddell and G. A. Nemeth, *J. Phys. Chem.*, **91**, 4831-4835 (1987).
 21. "Photoinitiated Charge Separation in a Carotenoid-Porphyrin-Diquinone Tetrad: Enhanced Quantum Yields via Multistep Electron Transfers," D. Gust, T. A. Moore, A. L. Moore, D. Barrett, L. O. Harding, L. R. Makings, P. A. Liddell, F. C. De Schryver, M. van der Auweraer, R. V. Bensasson and M. Rouge , *J. Am. Chem. Soc.*, **110**, 321-323 (1988).
 22. "A Carotenoid-Diporphyrin-Quinone Model for Photosynthetic Multistep Electron and Energy Transfer," D. Gust, T. A. Moore, A. L. Moore, L. R. Makings, G. R. Seely, X. Ma, T. T. Trier and F. Gao, *J. Am. Chem. Soc.*, **110**, 7567-7569 (1988).
 23. "Photoinitiated Electron Transfer in Carotenoporphyrin-Quinone Triads: Enhanced Quantum Yields via Control of Reaction Exergonicity," T. A. Moore, D. Gust, S. Hatlevig, A. L. Moore, L. R. Makings, P. J. Pessiki, F. C. De Schryver, M. van der

- Auwerker, D. Lexa, R. V. Bensasson and M. Rougée, *Israel J. Chem.*, **28**, 87-95 (1988).
24. "A Carotenoid-Porphyrin-Diquinone Tetrad: Synthesis, Electrochemistry and Photoinitiated Electron Transfer," D. Gust, T. A. Moore, A. L. Moore, G. Seely, P. A. Liddell, D. Barrett, L. O. Harding, X. C. Ma, S.-J. Lee and F. Gao, *Tetrahedron*, **45**, 4867-4891 (1989).
 25. "Model Systems for Photosynthesis Acting as Photoinduced Molecular Wires in Bilayers," P. Seta, E. Bienvenue, A. L. Moore, T. A. Moore and D. Gust, *Electrochimica Acta*, **34**, 1723-1727 (1989).
 26. "The Function of Carotenoid Pigments in Photosynthesis and Their Possible Involvement in the Evolution of Higher Plants," T. A. Moore, D. Gust and A. L. Moore, In: *Carotenoids: Chemistry and Biology*, N. I. Krinsky, M. M. Mathews-Roth and R. F. Taylor, eds. (New York: Plenum Press), pp. 223-228 (1989).
 27. "Efficient Multistep Photoinitiated Electron Transfer in a Molecular Pentad," D. Gust, T. A. Moore, A. L. Moore, S.-J. Lee, E. Bittersmann, D. K. Luttrull, A. A. Rehms, J. M. De Graziano, X. C. Ma, F. Gao, R. E. Belford and T. T. Trier, *Science*, **248**, 199-201 (1990).
 28. "Singlet Photochemistry in Model Photosynthesis: Identification of Charge Separated Intermediates by Fourier Transform and CW EPR Spectroscopies," K. Hasharoni, H. Levanon, J. Tang, M. K. Bowman, J. R. Norris, D. Gust, T. A. Moore and A. L. Moore, *J. Am. Chem. Soc.*, **112**, 6477-6481 (1990).
 29. "Multistep Photoinitiated Charge Separation in a Molecular Pentad," T. A. Moore, D. Gust, A. L. Moore, S.-J. Lee, E. Bittersmann, D. K. Luttrull, J. M. DeGraziano, X. C. Ma and F. Gao, *Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, **12**, 4, 1737-1738 (1990).
 30. "Analysis of Time-Resolved CW-EPR Spectra of Short-Lived Radicals at Different Times After Laser Excitation," K. Hasharoni, H. Levanon, M. K. Bowman, J. R. Norris, D. Gust, T. A. Moore and A. L. Moore, *Applied Magn. Reson.*, **1**, 357-368 (1990).
 31. "Long-Lived Photoinitiated Charge Separation in Carotene-Diporphyrin Triad Molecules," D. Gust, T. A. Moore, A. L. Moore, F. Gao, D. Luttrull, J. M. DeGraziano, X. C. Ma, L. R. Makings, S.-J. Lee, T. T. Trier, E. Bittersmann, G. R. Seely, S. Woodward, R. V. Bensasson, M. Rougée, F. C. De Schryver and M. van der Auwerker, *J. Am. Chem. Soc.*, **113**, 3638-3649 (1991).
 32. "Tetraarylporphyrins in Mixed Langmuir-Blodgett Films: Steady-State and Time Resolved Fluorescence Studies," D. Gust, T. A. Moore, A. L. Moore, D. K. Luttrull, J. M. DeGraziano, N. J. Boldt, M. van der Auwerker and F. C. De Schryver, *Langmuir*, **7**, 1483-1490 (1991).

33. "Proton Assisted Photoinduced Electron Transfer from Porphyrin to Quinone: A Photo-CIDNP and Laser Flash Photolysis Study," D. Gust, T. A. Moore, A. L. Moore, X. C. Ma, R. A. Nieman, G. R. Seely, R. E. Belford and J. E. Lewis, *J. Phys. Chem.*, **95**, 4442-4445 (1991).
34. "Mimicking Photosynthetic Electron Transfer," D. Gust, T. A. Moore and A. L. Moore, In: *Materials Synthesis Based on Biological Processes*, M. Alper, P. Clavert, R. Frankel, P. Rieke and D. Tirrell, eds. (Pittsburgh: Materials Research Society), 141-152 (1991).
35. "Long-Lived Photoinitiated Charge Separation in Carotene-Diporphyrin Triad Molecules," D. Gust, T. A. Moore, A. L. Moore, F. Gao, D. Luttrull, J. M. DeGraziano, X. C. Ma, L. R. Makings, S.-J. Lee, T. T. Trier, E. Bittersmann, G. R. Seely, S. Woodward, R. V. Bensasson, M. Rougée, F. C. De Schryver and M. van der Auweraer, *J. Am. Chem. Soc.*, **113**, 3638-3649 (1991).
36. "Synthesis of Carotenoporphyrin Models for Photosynthetic Energy and Electron Transfer," D. Gust, T. A. Moore, A. L. Moore and P. A. Liddell, *Methods in Enzymology*, **213**, 87-100 (1992).
37. "Triplet and Singlet Energy Transfer in Carotene-Porphyrin Dyads: The Role of the Linking Bonds," D. Gust, T. A. Moore, A. L. Moore, C. Devadoss, P. A. Liddell, R. Hermant, R. A. Nieman, L. J. Demanche, J. M. DeGraziano and I. Gouni, *J. Am. Chem. Soc.*, **114**, 3590-3603 (1992).
38. "The Optimization of Photochemical Energy Conversion: Synthetic Supramolecular Devices vis à vis Photosynthesis," T. A. Moore, D. Gust and A. L. Moore, In: *Proceedings of the II NATO Science Forum on Supramolecules, Chemistry*, V. Balzani and L. De Cola, Eds., Kluwer 295-311 (1992).
39. "Synthesis of New Carotenoids for Photosynthetic Model Systems," B.-L. Liu, D. Gust, T. A. Moore and A. L. Moore, In *Research in Photosynthesis, Vol. II*, N. Murata, ed. (Amsterdam, Kluwer), 801-804 (1992).
40. "Mimicking Photosynthetic Energy and Electron Transfer," D. Gust, T. A. Moore and A. L. Moore, *Photochemical and Photoelectrochemical Conversion and Storage of Solar Energy*, A. W. Tian and Y. Cao, eds. (Beijing: International Academic Publishers), 113-119 (1993).
41. "Nitroxyl Free Radical Enhancement of the Forbidden $O_2(^3S_g^-) \rightarrow O_2(^1D_g)$ Radiative Transition in Chlorinated Hydrocarbon Solvents," R. E. Belford, G. Seely, D. Gust, T. A. Moore, A. L. Moore, N. J. Cherepyl, S. Ekbundit, J. E. Lewis and S. H. Lin, *J. Photochem. Photobiol. A*, 125-133 (1993).
42. "Molecular Mimicry of Photosynthetic Energy and Electron Transfer," D. Gust, T. A. Moore and A. L. Moore, *Acc. Chem. Res.*, **26**, 198-205 (1993).

43. "Mimicking Carotenoid Quenching of Chlorophyll Fluorescence," R. M. Hermant, P. A. Liddell, S. Lin, R. G. Alden, H. K. Kang, A. L. Moore, T. A. Moore and D. Gust, *J. Am. Chem. Soc.*, **115**, 2080-2081 (1993).
44. "Mimicking the Photosynthetic Triplet Energy Transfer Relay," D. Gust, T. A. Moore, A. L. Moore, A. A. Krasnovsky, Jr., P. A. Liddell, D. Nicodem, J. M. DeGraziano, P. Kerrigan, L. R. Makings, and P. J. Pessiki, *J. Am. Chem. Soc.*, **115**, 5684-5691 (1993).
45. "Photoinduced Electron Transfer in a Porphyrin Dyad," D. Gust, T. A. Moore, A. L. Moore, L. Leggett, S. Lin, J. M. DeGraziano, R. M. Hermant, D. Nicodem, P. Craig, G. R. Seely and R. Nieman, *J. Phys. Chem.*, **97**, 7926-7931 (1993).
46. "The Photochemistry of Carotenoids. Some Photosynthetic and Photomedical Aspects," D. Gust, T. A. Moore, A. L. Moore, J. Jori and E. Reddi, *Ann. New York Acad. Sci.*, **691**, 32-48 (1993).
47. "Photoinitiated Charge Separation in a Carotenoid-Porphyrin-Diquinone Tetrad: Enhancement of Quantum Yields via Control of Electronic Coupling," S.-J. Lee, J. M. DeGraziano, A. N. Macpherson, E.-J. Shin, G. R. Seely, P. K. Kerrigan, A. L. Moore, T. A. Moore and D. Gust, *Chem. Phys.*, **176**, 321-336 (1993).
48. "Photoinitiated Electron and Energy Transfer in Molecular Pentads," D. Gust, T. A. Moore, A. L. Moore, A. N. Macpherson, A. Lopez, J. M. DeGraziano, I. Gouni, E. Bittersmann, G. R. Seely, F. Gao, R. A. Nieman, X. C. Ma, L. Demanche, S.-C. Hung, D. K. Luttrull, S.-J. Lee and P. K. Kerrigan, *J. Am. Chem. Soc.*, **115**, 11141-11152 (1993).
49. "The Effect of Coordinated Ligands on Interporphyrin Photoinduced Electron Transfer Rates," D. Gust, T. A. Moore, A. L. Moore, H.-K. Kang, J. M. DeGraziano, P. A. Liddell and G. Seely, *J. Phys. Chem.*, **97**, 13637-13642 (1993).
50. "Photosynthesis Mimics as Molecular Electronics Devices," D. Gust, T. A. Moore and A. L. Moore, *IEEE Engineering in Medicine and Biology Magazine*, February/March issue, 58-66 (1994).
51. "Kinetics of Multistep Photoinitiated Electron Transfer Reactions in a Molecular Triad," S.-C. Hung, S. Lin, A. N. Macpherson, J. M. Degraziano, P. K. Kerrigan, P. A. Liddell, A. L. Moore, T. A. Moore and D. Gust, *J. Photochem. Photobiol. A: Chem.*, **77**, 207-216 (1994).
52. "Carotenoporphyrins as Selective Photodiagnostic Agents for Tumors," E. Reddi, A. Segalla, G. Jori, P. Kerrigan, P. A. Liddell, A. Moore, T. Moore and D. Gust, *British J. Cancer*, **69**, 40-45 (1994).
53. "Carotenoids: Nature's Unique Pigments for Light and Energy Processing," T. A. Moore, D. Gust and A. L. Moore, *Pure & Appl. Chem.*, **66**, 1033-1040 (1994).

54. "A New Porphyrin Derivative for Use as a Diene in the Diels-Alder Reaction," P. A. Liddell, L. J. Demanche, S. Li, A. Macpherson, R. A. Nieman, A. L. Moore, T. A. Moore and D. Gust, *Tetrahedron Lett.*, **35**, 995-998 (1994).
55. "Molecular Approaches to Artificial Photosynthesis," D. Gust, T. A. Moore and A. L. Moore, in *Alternative Fuels and the Environment*, F. S. Sterrett, ed., Lewis Publishers, Chelsea, MI, 125-139 (1995).
56. "Free Energy Dependence of Photoinduced Charge Separation Rates in Porphyrin Dyads," J. M. DeGraziano, P. A. Liddell, L. Leggett, A. L. Moore, T. A. Moore and D. Gust, *J. Phys. Chem.*, **98**, 1758-1761 (1994).
57. "Laser-Induced Fluorescence In Malignant and Normal Tissue in Mice Injected with Two Different Carotenoporphyrins," Henrik Nilsson, Jonas Johansson, Katarina Svanberg, Sune Svanberg, Giulio Jori, Elena Reddi, Anna Segalla, Devens Gust, Ana L. Moore, and Thomas A. Moore, *British J. Cancer*, **70**, 873-879 (1994).
58. "Preparation and Photophysical Studies of Porphyrin-C₆₀ Dyads," P. A. Liddell, J. P. Sumida, A. N. Macpherson, L. Noss, G. R. Seely, K. N. Clark, A. L. Moore, T. A. Moore and D. Gust, *Photochem. Photobiol.*, **60**, 537-541 (1994).
59. "The Effect of Anions on the Electrochemistry of Zinc Tetraphenylporphyrin," G. R. Seely, D. Gust, T. A. Moore and A. L. Moore, *J. Phys. Chem.*, **98**, 10659-10664 (1994).
60. "Coordinated Photoinduced Electron and Proton Transfer in a Molecular Triad," S-Ch. Hung, A. N. Macpherson, S. Lin, P. A. Liddell, G. R. Seely, A. L. Moore, T. A. Moore and D. Gust, *J. Am. Chem. Soc.*, **117**, 1657-1658 (1995).
61. "Molecular Motions of b-Carotene and a Carotenoporphyrin Dyad in Solution: A Carbon-13 NMR Spin-Lattice relaxation Time Study," S. Li, S. L. Swindle, S. K. Smith, R. A. Nieman, A. L. Moore, T. A. Moore and D. Gust, *J. Phys. Chem.*, **99**, 3371-3378 (1995).
62. "Ultrafast Photoinduced Electron Transfer in Rigid Porphyrin-Quinone Dyads," A. N. Macpherson, P. A. Liddell, S. Lin, L. Noss, G. R. Seely, J. M. DeGraziano, A. L. Moore, T. A. Moore and D. Gust, *J. Am. Chem. Soc.*, **117**, 7202-7212 (1995).
63. "Synthesis and Fluorescence Quenching Studies of a Series of Carotenoporphyrins with Carotenoids of Various Lengths," S. L. Cardoso, D. E. Nicodem, T. A. Moore, A. L. Moore and D. Gust, *J. Braz. Chem. Soc.*, **7**, 19-29, (1996).
64. "Photoinduced Electron Transfer in a Carotenobuckminsterfullerene Dyad," H. Imahori, S. Cardoso, D. Tatman, S. Lin, L. Noss, G. R. Seely, L. Sereno, J. J. Silber, T. A. Moore, A. L. Moore, and D. Gust, *Photochem. Photobiol.*, **62**, 1009-1014 (1995).

65. "Photoelectrochemistry of Langmuir-Blodgett Films of Carotenoid Pigments on ITO Electrodes," L. Sereno, J. J. Silber, L. Otero, M. del V. Bohoquez, A. L. Moore, T. A. Moore and D. Gust, *J. Phys. Chem.*, **100**, 814-821 (1996).
66. "Energy and Photoinduced Electron Transfer in Porphyrin-Fullerene Dyads," D. Kuciauskas, S. Lin, G. R. Seely, A. L. Moore, T. A. Moore, D. Gust, T. Drovetskaya, C. A. Reed and P. D. W. Boyd, *J. Phys. Chem.*, **100**, 15926-15932 (1996).
67. "Solvent Dependence of Photoinduced Electron Transfer in Porphyrin Dyads," J. M. DeGraziano, A. N. Macpherson, P. A. Liddell, L. Noss, J. P. Sumida, G. R. Seely, J. E. Lewis, A. L. Moore, T. A. Moore and D. Gust, *New Journal of Chemistry*, **20**, 839-851 (1996).
68. "Stable Binding of Isothiocyanoporphyrin Molecules to Au(111): An STM Study," W. Han, S. Li, S. Lindsay, D. Gust, T. A. Moore and A. L. Moore, *Langmuir*, **12**, 5742-5744 (1996).
69. "Porphyrin and Pyropheophorbide Phosphorescence in Synthetic Molecules that Mimic Photosynthetic Triplet Energy Transfer," A. A. Krasnovsky, Jr., M. E. Bashtanov, N. N. Drozdova, P. A. Liddell, A. L. Moore, T. A. Moore and D. Gust, *Journal of Photochemistry and Photobiology A: Chemistry*, **102**, 157-161 (1997).
70. "Aryl Ring Rotation in Porphyrins. A Carbon-13 NMR Spin-Lattice Relaxation Time Study," L. Noss, P. A. Liddell, A. L. Moore, T. A. Moore and D. Gust, *J. Chem. Phys. B*, **101**, 458-465 (1997).
71. "Structural Effects on Photoinduced Electron Transfer in Carotenoid-Porphyrin-Quinone Dyads," D. Kuciauskas, P. A. Liddell, S.-C. Hung, S. Lin, S. Stone, G. R. Seely, A. L. Moore, T. A. Moore and D. Gust, *J. Phys. Chem. B*, **101**, 429-440 (1997).
72. "Photoinduced Charge Separation and Charge Recombination to a Triplet State in a Carotene-Porphyrin-Fullerene Triad," P. A. Liddell, D. Kuciauskas, J. P. Sumida, B. Nash, D. Nguyen, A. L. Moore, T. A. Moore and D. Gust, *J. Am. Chem. Soc.*, **119**, 1400-1405 (1997).
73. "Model Systems for Observing Photoredox Reactions of Carotenoids," A. L. Moore, T. A. Moore, D. Gust, J. J. Silber, L. Sereno, F. Fungo, L. Otero, G. Steinberg-Yfrach, P. A. Liddell, S.-Ch. Hung, H. Imahori, S. Cardoso, D. Tatman and A. N. Macpherson, *Pure & Appl. Chem.*, **69**, 2111-2116 (1997).
74. "Carotenoid Triplet Detection by Time-Resolved EPR Spectroscopy in Carotenopyropheophorbide Dyads," D. Carbonera, M. Di Valentin, C. Corvaja, G. Giacometti, G. Agostini, P. A. Liddell, A. L. Moore, T. A. Moore and D. Gust, *J. Photochem. Photobiol. A: Chem.*, **105**, 329-335 (1997).
75. "Dynamics of Photoinduced Electron Transfer in a Carotenoid-Porphyrin-Dinitronaphthalene-carbodimide Molecular Triad," Q. Tan, D. Kuciauskas, S. Lin, S.

- Stone, A. L. Moore, T. A. Moore and D. Gust, *J. Phys. Chem.*, **101**, 5214-5223 (1997).
76. "Artificial Photosynthetic Reaction Centers in Liposomes: Photochemical Generation of Transmembrane Proton Potential," G. Steinberg-Yfrach, P. A. Liddell, S.-C. Hung, A. L. Moore, D. Gust and T. A. Moore, *Nature (London)*, **385**, 239-241 (1997).
77. "Fullerenes Linked to Photosynthetic Pigments," D. Gust, T. A. Moore and A. L. Moore, *Research on Chemical Intermediates*, **23**, 621-651 (1997).
78. "Energy Transfer and Spin Polarization of the Carotenoid Triplet State in Synthetic Carotenoporphyrin Dyads and in Natural Antenna Complexes," D. Carbonera, M. De Valentin, G. Agostini, G. Giacometti, P. A. Liddell, D. Gust, A. L. Moore and T. A. Moore, *Applied Magn. Reson.*, **13**, 487-504 (1997).
79. "STM Contrast, Electron-Transfer Chemistry and Conduction in Molecules," W.-H. Han, E. N. Durantini, T. A. Moore, A. L. Moore, D. Gust, P. Res, G. Letherman, G. R. Seely, N. Tao and S. M. Lindsay, *J. Phys. Chem. B*, **101**, 10719-10725 (1997).
80. "A Carotene-Porphyrin-Fullerene Triad: Photoinduced Charge Separation and Charge Recombination to a Triplet State," D. Gust, T. A. Moore, A. L. Moore, P. A. Liddell, D. Kuciauskas, J. P. Sumida, B. Nash and D. Nguyen, *Recent Advances in the Chemistry and Physics of Fullerenes and Related Materials, Vol. 4*, K. M. Kadish and R. S. Ruoff, eds., The Electrochemical Society, Pennington, NJ, pp. 9-24 (1997).
81. "Photosynthesis as a Paradigm for Molecular-Scale Electronics," D. Gust, T. A. Moore and A. L. Moore, *Molecular Nanotechnology - Biological Approaches and Novel Applications*, IBC, Southborough, MA, Ch. 2.1, 2.1.1-2.1.39 (1997).
82. "Laser Induced Fluorescence Studies of the Biodistribution of Carotenoporphyrins in Mice," H. Nilsson, J. Johansson, K. Svanberg, S. Svanberg, G. Jori, E. Reddi, A. Segalla, D. Gust, A. L. Moore, and T. A. Moore, *Br. J. Cancer*, **76**, 355-364 (1997).
83. "Contrasting Photoinduced Electron Transfer Properties of Two Closely Related Rigidly-Linked Porphyrin-Quinone Dyads," J. P. Sumida, P. A. Liddell, A. N. Macpherson, G. R. Seely, A. L. Moore, T. A. Moore and D. Gust, *J. Phys. Chem.*, **102**, 5512-5519 (1998).
84. "Light-Driven Production of ATP Catalised by F₀F₁-APT Synthase in an Artificial Photosynthetic Membrane," G. Steinberg-Yfrach, J.-L. Rigaud, E. N. Durantini, A. L. Moore, D. Gust and T.A. Moore, *Nature (London)*, **392**, 479-482 (1998).
85. "Influence of Tumor Depth, Blood Absorption and Autofluorescence on Measurements of Exogenous Fluorophores in Tissue," A. E. Saarnak, T. Rodrigues, J. Schwatz, A. L. Moore, T., A. Moore, D. Gust, M. J. C. van gemert, H. J. C. M. Sterenborg and S. Thomsen, *Lasers Med. Sci.*, **13**, 22-31 (1998).

86. "Carotenoematoporphyrins as Tumor Imaging Dyes. Synthesis and *in vitro* Photophysical Characterization," D. Tatman, P. A. Liddell, T. A. Moore, D. Gust and A. L. Moore, *Photochem. Photobiol.*, **68**, 459-466 (1998).
87. "EPR Investigation of Photoinduced Radical Pair Formation and Decay to a Triplet State in a Carotene-Porphyrin-Fullerene Triad," D. Carbonera, M. Di Valentin, C. Corvaja, G. Agostini, G. Giacometti, P. A. Liddell, D. Kuciauskas, A. L. Moore, T. A. Moore and D. Gust, *J. Am. Chem. Soc.*, **120**, 4398-4405 (1998).
88. "Photoinduced Electron and Proton Transfer in a Molecular Triad," S-Ch. Hung, A. N. Macpherson, S. Lin, P. A. Liddell, G. R. Seely, A. L. Moore, T. A. Moore, and D. Gust, in ACS Advances in Chemistry Series 254, Photochemistry and Radiation Chemistry: Complementary Methods for the Study of Electron-Transfer, Eds J. F. Wishart and D. G. Nocera, pp 177-218 (1998).
89. "Magnetic Switching of Charge Separation Lifetimes in Artificial Photosynthetic Reaction Centers," D. Kuciauskas, P. A. Liddell, A. L. Moore, T. A. Moore and D. Gust, *J. Am. Chem. Soc.* **120**, 4398-4405 (1998).
90. "Mimicry of Carotenoid Photoprotection in Artificial Photosynthetic Reaction Centers: Triplet-Triplet Energy Transfer by a Relay Mechanism," D. Gust, T. A. Moore, A. L. Moore, D. Kuciauskas, P. A. Liddell, and B. Halbert, *J. Photochem. Photobiol. B: Biology*, **43**, 209-216 (1998).
91. "Increasing the Yield of Photoinduced Charge Separation Through Parallel Electron Transfer Pathways," N. I. Maniga, J. P. Sumida, S. Stone, A. L. Moore, T. A. Moore and D. Gust, *J. Porphyrins and Phthalocyanines*, **3**, 32-44 (1999).
92. "Solvent Effects and Electron Transfer Dynamics in a Porphyrin-Fullerene Dyad and a Carotenoporphyrin-Fullerene Triad," D. Kuciauskas, P. A. Liddell, T. A. Moore, A. L. Moore, and D. Gust, *Recent Advances in the Chemistry and Physics of Fullerenes and Related Materials, Vol. 6*, K. M. Kadish and R. S. Ruoff, eds., The Electrochemical Society, Pennington, NJ, pp. 242-261 (1998).
93. "Mimicking Bacterial Photosynthesis," D. Gust, T. A. Moore and A. L. Moore, *Pure & Appl. Chem.*, **70**, 2189-2200 (1998).
94. "Carotene as a Molecular Wire: Conducting Atomic Force Microscopy," G. Leatherman, E. N. Durantini, D. Gust, T. A. Moore, A. L. Moore, S. Stone, Z. Zhou, P. Rez, Y. Z. Liu, and S. M. Lindsay, *J. Phys. Chem. B*, **103**, 4006-4010 (1999).
95. "Novel and Biomimetic Functions of Carotenoids in Artificial Photosynthesis," T. A. Moore, A. L. Moore and D. Gust, In *The Photochemistry of Carotenoids*, H. A. Frank, A. J. Young, G. Britton and R. J. Cogdell, Eds., Kluwer Academic Press: Dordrecht, The Netherlands, 327-339 (1999).
96. "An Artificial Photosynthetic Antenna-Reaction Center Complex," D. Kuciauskas, P. A. Liddell, S. Lin, T. E. Johnson, S. J. Weghorn, J. S. Lindsey, A. L. Moore, T. A. Moore, and D. Gust, *J. Am. Chem. Soc.*, **121**, 8604-8614 (1999).

97. "An Artificial Photosynthetic Membrane," D. Gust, T. A. Moore and A. L. Moore, *Zeitschrift fur Physikalische Chemie*, **213**, S. 149–155 (1999).
98. "Photochemistry of Supramolecular Systems Containing C₆₀", D. Gust, T. A. Moore and A. L. Moore, *J. Photochem. Photobiol., B: Biology*, **58**, 63–71 (2000).
99. "Localisation and Accumulation of a New Carotenoporphyrin in Two Primary Tumour Models" J. T. H. M. van den Akker, O. C. Speelman, H. J. van Staveren, A. L. Moore, T. A. Moore, D. Gust, W. M. Star, and H. J. C. M. Sterenborg, *J. Photochem. Photobiol., B: Biology*, **54**, 108–115 (2000).
100. "Pharmacokinetics of ICG and HPPH-car for the Detection of Normal and Tumor Tissue Using Fluorescence, Near-infrared Reflectance Imaging: A Case Study," M. Gurfinkel, A. B. Thompson, W. Ralston, T. L. Troy, A. L. Moore, T. A. Moore, J. D. Gust, D. Tatman, J. S. Reynolds, B. Muggenburg, K. Nikula, R. Pandey, R. H. Mayer, D. J. Hawrysz and E. M. Sevick-Muraca, *Photochem. Photobiol.*, **72**, 94–102 (2000).
101. "Photoinduced Electron Transfer in Carotenoporphyrin-Fullerene Triads: Temperature and Solvent Effects" D. Kuciauskas, P. A. Liddell, S. Lin, S. G. Stone, A. L. Moore, T. A. Moore and D. Gust, *J. Phys. Chem. B*, **104**, 4307–4321 (2000).
102. "Synthesis of a Carotenobenzoporphyrin from a *meso*-Diphenylporphyrin," P. A. Liddell, X. Zárate, A. L. Moore, T. A. Moore, and D. Gust, *Tetrahedron Lett.*, **41**, 9661–9665 (2000).
103. "Driving Force and Electronic Coupling Effects on Photoinduced Electron Transfer in a Fullerene - Based Molecular Triad," J. L. Bahr, D. Kuciauskas, M. A. Liddell, A. L. Moore, T. A. Moore, and D. Gust, *Photochem. Photobiol.*, **72**, 598–611 (2000).
104. "Synthesis of Diads and Triads Derived from Carotenoids and Fullerene C₆₀," E. N. Durantini, A. L. Moore, T. A. Moore and D. Gust, *Molecules*, **5**, 529–530 (2000).
105. "Mimicking Photosynthetic Solar Energy Transduction", D. Gust, T. A. Moore and A. L. Moore, *Acc. Chem. Res.*, **34**, 40–48 (2001).
106. "Photoswitched Singlet Energy Transfer in a Porphyrin-Spiropyran Dyad", J. L. Bahr, G. Kodis, L. de la Garza, A. L. Moore, T. A. Moore and D. Gust, *J. Am. Chem. Soc.*, **123**, 7124–7133 (2001).
107. "Photoelectrochemistry of a Pigment Used in Artificial Photosynthesis: an Anilinocarotenoid," F. Fungo, L. Otero, E. N. Durantini, J. J. Silber, L. Sereno, E. Mariño-Ochoa, T. A. Moore, A. L. Moore and D. Gust, *J. Phys. Chem. B*, **105**, 4783–4790 (2001).

108. "Covalently Linked Systems Containing Porphyrin Units," D. Gust, A. L. Moore, and T. A. Moore, *Handbook on Electron Transfer in Chemistry*, V. Balzani, Ed., Wiley-VCH, vol. 3, 272–336 (2001).
109. "Photoinduced Electron Transfer in Tetrathiafulvalene-Porphyrin-Fullerene Molecular Triads," P. A. Liddell, G. Kodis, L. de la Garza, J. L. Bahr, A. L. Moore, T. A. Moore and D. Gust, *Helvetica Chimica Acta*, **84**, 2765–2783 (2001).
110. "Reproducible Measurement of Single-Molecule Conductivity," X. D. Cui, A. Primak, X. Zarate, J. Tomfohr, O. F. Sankey, A. L. Moore, T. A. Moore, D. Gust, G. Harris and S. M. Lindsay, *Science*, **294**, 571–574 (2001).
111. "Efficient Energy Transfer and Electron Transfer in an Artificial Photosynthetic Antenna-Reaction Center Complex." G. Kodis, P. A. Liddell, L. de la Garza, P. C. Clausen, J. S. Lindsey, A. L. Moore, T. A. Moore and D. Gust, *J. Phys. Chem. A*, **106**, 2036–2048 (2002).
112. "Making Electrical Contacts to Molecular Monolayers," X. D. Cui, X. Zarate, J. Tomfohr, O. F. Sankey, A. Primak, A. L. Moore, T. A. Moore, D. Gust, G. Harris and S. M. Lindsay, *Nanotechnology*, **13**, 5–14 (2002).
113. "Dynamics of Photoinduced Electron Transfer in an Amphiphilic A₂⁺-S-D triad molecule," M. Sakomura, S. Lin, T. A. Moore, A. L. Moore, D. Gust and M. Fujihira, *J. Phys. Chem. A*, **106**, 2118–2226 (2002).
114. "A Thiol-Substituted Carotenoid Self-Assembles on Gold Surfaces," D. Liu, G. J. Szulcowski, L. D. Kispert, A. Primak, T. A. Moore, A. L. Moore and D. Gust, *J. Phys. Chem. B*, **106**, 2933–2936 (2002).
115. "The Gold Porphyrin First Excited Singlet State," J. Andréasson, G. Kodis, S. Lin, A. L. Moore, T. A. Moore and D. Gust, *Photochem. Photobiol.*, **76**, 47–50 (2002).
116. "Photoinduced Electron Transfer in p-Extended Tetrathiafulvalene-Porphyrin-Fullerene Triad Molecules," G. Kodis, P. A. Liddell, L. de la Garza, A. L. Moore, T. A. Moore and D. Gust, *J. Mater. Chem.*, **12**, 2100–2108 (2002).
117. "Ultrafast Energy Transfer from a Carotenoid to a Chlorin in a Simple Artificial Photosynthetic Antenna," A. N. Macpherson, P. A. Liddell, D. Kuciasukas, D. Tatman, T. Gillbro, D. Gust, T. A. Moore and A. L. Moore, *J. Phys. Chem. B*, **106**, 9424–9433 (2002).
118. "Photonic Switching of Photoinduced Electron Transfer in a Dithienylethene-Porphyrin-Fullerene Triad Molecule," P. A. Liddell, G. Kodis, A. L. Moore, T. A. Moore and D. Gust, *J. Am. Chem. Soc.*, **124**, 7668–7669 (2002).
119. "High-efficiency Energy Transfer from Carotenoids to a Phthalocyanine in an Artificial Photosynthetic Antenna," E. Mariño-Ochoa, R. Palacios, G. Kodis, A. N.

- Macpherson, T. Gillbro, D. Gust, T. A. Moore and A. L. Moore, *Photochem. Photobiol.*, **76**, 116–121 (2002).
120. “Active Transport of Ca⁺⁺ by an Artificial Photosynthetic Membrane,” I. M. Bennett, H. M. Vanegas Farfano, F. Bogani, A. Primak, P. A. Liddell, L. Otero, L. Sereno, J. J. Silber, A. L. Moore, T. A. Moore and D. Gust, *Nature*, 401–403 (2002).
 121. “Bias-Induced Forces in Conducting Atomic Force Microscopy and Contact Charging of Organic Monolayers,” X. D. Cui, X. Zarate, J. Tomfohr, A. Primak, A. L. Moore, T. A. Moore, D. Gust, G. Harris, O. F. Sankey and S. M. Lindsay, *Ultramicroscopy*, **92**, 6776 (2002).
 122. “11,4,5,8-Tetramethoxyanthracene,” J. W. Springer, T. A. Moore, A. L. Moore, D. Gust and T. L. Groy, *Acta Cryst. E*, **58**, o1145–o1146 (2002).
 123. “The Design and Synthesis of Artificial Photosynthetic Antennas, Reaction Centres and Membranes,” T. A. Moore, A. L. Moore and D. Gust, *Phil. Trans. R. Soc. Lond. B* **357**, 1481–1498 (2002).
 124. “Changes in the Electronic Properties of a Molecule When it is Wired into a Circuit,” X. D. Cui, A. Primak, X. Zarate, J. Tomfohr, O. F. Sankey, A. L. Moore, T. A. Moore, D. Gust, L. A. Nagahara, and S. M. Lindsay, *J. Phys. Chem. B*, **106**, 8609–8614 (2002).
 125. “Correlation of Fluorescence Quenching in Carotenoporphyrin Dyads with the Energy of Intramolecular Charge Transfer States. Effect of the Number of Double Bonds of the Carotenoid Moiety,” F. Fungo, L. Otero, E. Durantini, W. J. Thompson, J. J. Silber, T. A. Moore, A. L. Moore, D. Gust and L. Sereno, *Phys. Chem. Chem Phys.*, **5**, 469–475 (2003).
 126. “Reaction Center Models in Liquid Crystals: Identification of Paramagnetic Intermediates,” M. Di Valentin, A. Bisol, G. Giacometti, G. Agostini, P. A. Liddell, A. L. Moore, T. A. Moore, D. Gust and D. Carbonera, *Molecular Crystals and Liquid Crystals*, **394**, 19–30 (2003).
 127. “Stepwise Sequential and Parallel Photoinduced Charge Separation in a Porphyrin-Triquinone Tetrad,” J. Springer, G. Kodis, L. de la Garza, A. L. Moore, T. A. Moore and D. Gust, *J. Phys. Chem. A*, **107**, 3567–3575 (2003).
 128. “The Electron Transport Properties of a Carotene Molecule in a Metal-(Single-Molecule)-Metal Junction,” G. K. Ramachandran, J. K. Tomfohr, J. Li, O. F. Sankey, X. Zarate, A. Primak, Y. Terazano, T. A. Moore, A. L. Moore, D. Gust, L. Nagahara and S. M. Lindsay, *J. Phys. Chem. B*, **107**, 6162–6169 (2003).
 129. “Characterization of the Giant Transient Dipole Generated by Photoinduced Electron Transfer in a Carotene-Porphyrin-Fullerene Molecular Triad,” S. N. Smirnov, P. A. Liddell, I. V. Vlassiuk, A. Teslja, D. Kuciauskas, C. L. Braun, A. L. Moore, T. A. Moore and Gust, *D. J. Phys. Chem. A.*, **107**, 7567–7573 (2003).

130. "Enzyme-Based Photoelectrochemical Biofuel Cell," L. de la Garza, Goojin Jeong, P. A. Liddell, T. Sotomura, T. A. Moore, A. L. Moore and D. Gust, *J. Phys. Chem. B*, **107**, 10252–10260 (2003).
131. "Photoinduced Hole Transfer from the Triplet State in a Porphyrin-Based Donor-Bridge-Acceptor System," J. Andréasson, G. Kodis, T. Ljungdahl, A. L. Moore, T. A. Moore, D. Gust, J. Mårtensson, B. Albinsson, *J. Phys. Chem. A*, **107**, 8825–8833 (2003).
132. "Light-Harvesting and Photoprotective Functions of Carotenoids in Compact Artificial Photosynthetic Antenna Designs," G. Kodis, C. Herrero, R. Palacios, E. Mariño-Ochoa, S. Gould, L. de la Garza, R. van Grondelle, D. Gust, T. A. Moore, A. L. Moore and J. T. M. Kennis, *J. Phys. Chem. B*, **108**, 414–425 (2004).
133. "Synthesis and Photochemistry of a Carotene-Porphyrin-Fullerene Model Photosynthetic Reaction Center," G. Kodis, P. A. Liddell, A. L. Moore, T. A. Moore and D. Gust, *J. Phys. Org. Chem.*, **17**, 724–734 (2004).
134. "Photonic Control of Photoinduced Electron Transfer via Switching of Redox Potentials in a Photochromic Moiety," Y. Terazono, G. Kodis, J. Andréasson, G. Jeong, A. Brune, T. Hartmann, H. Dürr, A. L. Moore, T. A. Moore and D. Gust, *J. Phys. Chem. B*, **108**, 1812–1814 (2004).
135. "Photonic Switching of Photoinduced Electron Transfer in a Dihydropyrene-Porphyrin-Fullerene Molecular Triad," P. A. Liddell, G. Kodis, J. Andréasson, L. de la Garza, S. Bandyopadhyay, R. H. Mitchell, T. A. Moore, A. L. Moore and D. Gust, *J. Am. Chem. Soc.*, **126**, 4803–4811 (2004).
136. "Artificial Photosynthetic Reaction Centers with Porphyrins as Primary Electron Acceptors," S. L. Gould, G. Kodis, R. Palacios, L. de la Garza, A. Brune, D. Gust, T. A. Moore and A. L. Moore, *J. Phys. Chem. B*, **108**, 10566–10580 (2004).
137. "Benzene-Templated Model Systems for Photosynthetic Antenna-Reaction Center Function," P. A. Liddell, G. Kodis, L. de la Garza, A. L. Moore, T. A. Moore and D. Gust, *J. Phys. Chem. B*, **108**, 10256–10265 (2004).
138. "Porphyrin-Sensitized Nanoparticulate TiO₂ as the Photoanode of a Hybrid Photoelectrochemical Biofuel Cell," A. Brune, G. Jeong, P. A. Liddell, T. Sotomura, T. A. Moore, A. L. Moore and D. Gust, *Langmuir*, **20**, 8366–8371 (2004).
139. "Photoinduced Electron Transfer in a Symmetrical Diporphyrin-Fullerene Triad," P. A. Liddell, G. Kodis, D. Kuciauskas, J. Andréasson, A. L. Moore, T. A. Moore and D. Gust, *Phys. Chem. Chem. Phys.*, **6**, 5509–5515 (2004).
140. "Molecule-Based Photonically Switched Half-Adder," J. Andréasson, G. Kodis, Y. Terazono, P. A. Liddell, S. Bandyopadhyay, R. H. Mitchell, T. A. Moore, A. L. Moore and D. Gust, *J. Amer. Chem. Soc.*, **126**, 15926–15927 (2004).

141. "Photochemistry of Artificial Photosynthetic Reaction Centers in Liquid Crystals Probed by Multifrequency EPR (9.5 and 95 GHz)," M. Di Valentin, A. Bisol, G. Agostini, M. Fuhs, P. A. Liddell, A. L. Moore, T. A. Moore, D. Gust and D. Carbonera, *J. Am. Chem. Soc.*, **126**, 17074–17086 (2004).
142. "Electrocatalytic Reduction of Oxygen in a Novel Catalytic System with Cobalt Phthalocyanines and Manganese Oxide," K. Arihara, L. Mao, P. A. Liddell, E. Mariño-Ochoa, A. L. Moore, T. Imase, D. Zhang, T. Sotomura and T. Ohsaka, *J. Electrochem. Soc.*, **151**, 2047–2052 (2004).
143. "Electronic Decay Constant of Carotenoid Polyenes from Single-Molecule Measurements," J. He, F. Chen, J. Li, O. F. Sankey, Y. Terazono, C. Herrero, D. Gust, T. A. Moore, A. L. Moore and S. M. Lindsay, *J. Am. Chem. Soc.*, **127**, 1384–1385 (2005).
144. "Photochromic Control of Photoinduced Electron Transfer. A Molecular Double-Throw Switch," S. D. Straight, J. Andréasson, G. Kodis, A. L. Moore, T. A. Moore, D. Gust, *J. Am. Chem. Soc.*, **127**, 2717–2724 (2005).
145. "Molecular AND and INHIBIT Gates Based on Control of Porphyrin Fluorescence by Photochromes," S. D. Straight, J. Andréasson, G. Kodis, S. Bandyopadhyay, R. H. Mitchell, T. A. Moore, A. L. Moore and D. Gust, *J. Am. Chem. Soc.*, **127**, 9403–9409 (2005).
146. "Photoelectrochemical Biofuel Cells," T. Sotomura, D. Gust, T. A. Moore and A. L. Moore, *Eco Industry*, **10**, 19–26 (2005).
147. "Switching of a Photochromic Molecule on Gold Electrodes: Single Molecule Measurements," J. He, F. Chen, P. A. Liddell, J. Andréasson, S. D. Straight, D. Gust, T. A. Moore, A. L. Moore, J. Li, O. F. Sankey and S. M. Lindsay, *Nanotechnology*, **16**, 695–702 (2005).
148. "Bio-Inspired Energy Conversion," R. E. Palacios, S. L. Gould, C. Herrero, M. Hambourger, A. Brune, G. Kodis, P. A. Liddell, J. Kennis, A. N. Macpherson, D. Gust, T. A. Moore and A. L. Moore, *Pure & Appl. Chem.*, **77**, 1001–1008 (2005).
149. "Hybrid Photoelectrochemical-Fuel Cell," A. L. Moore, T. A. Moore and D. Gust, in *Nanotechnology and the Environment. Applications and Implications*, Chapter 49 in Symposium Series No. 890, Karn, B.; Masciangioli, T.; Zhang, W.-X.; Colvin, V.; Alivisatos, P., Eds., American Chemical Society, Washington, D. C., 361–367 (2005).
150. "Enzyme-Assisted Reforming of Glucose to Hydrogen in a Photoelectrochemical Cell," M. Hambourger, A. Brune, D. Gust, A. L. Moore and T. A. Moore, *Photochem. Photobiol.*, **81**, 1015–1020 (2005).
151. "Mimicking Bacterial Photosynthesis," D. Gust, T. A. Moore and A. L. Moore, in *Artificial Photosynthesis*, Collings, A. F.; Critchley, C., Wiley-VCH, Weinheim, pp. 187–210 (2005).
152. "Photoinduced Long-Lived Charge Separation in a Tetrathiafulvalene-Porphyrin-Fullerene Triad Detected by Time-Resolved Electron Paramagnetic Resonance," M.

- Di Valentin, A. Bisol, G. Agostini, P. A. Liddell, G. Kodis, A. L. Moore, T. A. Moore, D. Gust and D. Carbonera, *J. Phys. Chem. B*, **109**, 14401–14409 (2005).
153. “Artificial Photosynthetic Reaction Centers: Mimicking Sequential Electron and Triplet-Energy Transfer,” R. E. Palacios, G. Kodis, S. L. Gould, L. de la Garza, A. Brune, D. Gust, T. A. Moore and A. L. Moore, *ChemPhysChem*, **6**, 2359–2370 (2005).
154. “Molecular AND Logic Gate Based on Electric Dichroism of a Photochromic Dihydroindolizine,” J. Andréasson, Y. Terazono, B. Albinsson, T. A. Moore, A. L. Moore and D. Gust, *Angewandte Chemie International Edition*, **44**, 7591–7594 (2005).
155. “Artificial Photosynthetic Reaction Centers with Carotenoid Antennas,” S. L. Gould, G. Kodis, P. A. Liddell, R. E. Palacios, A. Brune, D. Gust, T. A. Moore and A. L. Moore, *Tetrahedron*, **62**, 2074–2096 (2006).
156. “Energy and Photoinduced Electron Transfer in a Wheel-Shaped Artificial Photosynthetic Antenna-Reaction Center Complex,” G. Kodis, Y. Terazono, P. A. Liddell, J. Andréasson, V. Garg, M. Hambourger, T. A. Moore, A. L. Moore and D. Gust, *J. Am. Chem. Soc.*, **128**, 1818–1827 (2006).
157. “Molecular Switches Controlled by Light,” D. Gust, T. A. Moore and A. L. Moore, *Chem. Commun.*, 1169–1178 (2006).
158. “Artificial Photosynthetic Antenna-Reaction Center Complexes Based on a Hexaphenylbenzene Core,” Y. Terazono, P. A. Liddell, V. Garg, G. Kodis, A. Brune, M. Hambourger, T. A. Moore, A. L. Moore and D. Gust, *J. Porphyrins and Phthalocyanines*, **9**, 706–723, (2005).
159. “Characterization of Proton Transport Across a Waveguide-Supported Lipid Bilayer,” T. W. McBee, L. Wang, C. Ge, B. Beam, A. L. Moore, D. Gust, T. A. Moore, N. R. Armstrong and S. S. Saavedra, *J. Am. Chem. Soc.*, **128**, 2184–2185 (2006).
160. “Tetrapyrrole Singlet-Excited State Quenching by Covalently Linked Carotenoids: Mimicking Nonphotochemical Quenching in Oxygenic Photosynthesis,” R. Berera, C. Herrero, I. H. M. van Stokkum, M. Vengris, G. Kodis, R. E. Palacios, H. van Amerongen, R. van Grondelle, D. Gust, T. A. Moore, A. L. Moore and J. T. M. Kennis, *Proc. Natl. Acad. Sci.*, **103**, 5343–5348 (2006).
161. “Photoswitchable Sensitization of Porphyrin Excited States,” S. D. Straight, Y. Terazono, G. Kodis, T. A. Moore, A. L. Moore and D. Gust, *Australian Journal of Chemistry*, **59**, 170–174 (2006).
162. “Time-Resolved EPR Investigation of Charge Recombination to a Triplet State in a Carotene-Diporphyrin Triad” M. Di Valentin, A. Bisol, G. Agostini, A. L. Moore, T. A. Moore, D. Gust, R. E. Palacios, S. L. Gould and D. Carbonera, *Molecular Physics*, **104**, 1595–1607 (2006).
163. “Conductance of a Biomolecular Wire.” I. Visoly-Fisher, K. Daie, Y. Terazono, C. Herrero, F. Fungo, L. Otero, E. Durantini, J. J. Silber, L. Sereno, D. Gust, T. A.

- Moore, A. L. Moore and S. M. Lindsay, *Proc. Natl. Acad. Sci.*, **103**, 8686–8690 (2006).
164. “Molecular 2:1 Digital Multiplexer,” J. Andréasson, S. D. Straight, S. Bandyopadhyay, R. H. Mitchell, T. A. Moore, A. L. Moore, and D. Gust, *Angewandte Chemie, International Edition*, **46**, 958–961, (2007).
 165. “Charge Separation and Energy Transfer in a Caroteno-C₆₀ dyad: Photoinduced Electron Transfer from the Carotenoid Excited States,” R. Berera, G. F. Moore, I. van Stokkum, G. Kodis, M. Gervaldo, R. van Grondelle, J. T. M. Kennis, D. Gust, T. A. Moore, and A. L. Moore, *Photochem. Photobiol. Sci.*, **5**, 1142–1149 (2006).
 166. “Parameters Affecting the Chemical Work Output of a Hybrid Photoelectrochemical Biofuel Cell,” M. Hambourger, P. A. Liddell, D. Gust, A. L. Moore and T. A. Moore, *Photochem. Photobiol. Sci.*, **6**, 431–437 (2007).
 167. “Tetrapyrrole Singlet Excited State Quenching by Carotenoids in an Artificial Photosynthetic Antenna,” R. E. Palacios, G. Kodis, C. Herrero, E. M. Ochoa, M. Gervaldo, S. L. Gould, J. T. M. Kennis, D. Gust, T. A. Moore, and A. L. Moore, *J. Phys. Chem. B.*, **110**, 25411–25420 (2006).
 168. “All-Photonic Molecular Half-Adder,” J. Andréasson, S. D. Straight, G. Kodis, C.-D. Park, M. Hambourger, M. Gervaldo, B. Albinsson, T. A. Moore, A. L. Moore and D. Gust, *J. Am. Chem. Soc.*, **128**, 16259–16265 (2006).
 169. “All-Photonic Molecular XOR and NOR Logic Gates Based on Photochemical Control of Fluorescence in a Fulgimide-Porphyrin-Dithienylethene Triad,” S. D. Straight, P. A. Liddell, Y. Terazono, T. A. Moore, A. L. Moore and D. Gust, *Adv. Funct. Mater.*, **17**, 777–785 (2007).
 170. “A Molecule-Based 1:2 Digital Demultiplexer,” J. Andréasson, S. D. Straight, S. Bandyopadhyay, R. H. Mitchell, T. A. Moore, A. L. Moore and D. Gust, *J. Phys. Chem. C*, **111**, 14274–14278, (2007).
 171. “Energy Transfer, Excited-State Deactivation and Exciplex Formation in Artificial Caroteno-Phthalocyanine Light Harvesting Antennas,” R. Berera, I. H. M van Stokkum, G. Kodis, A. Keirstead, S. Pillai, C. Herrero, R. E. Palacios, M. Vengris, R. van Grondelle, D. Gust, T. A. Moore, A. L. Moore, and J. T. M., *J. Phys. Chem. B.*, **111**, 6868–6877 (2007).
 172. “Bio-Inspired Constructs for Sustainable Energy Production and Use,” A. L. Moore, D. Gust and T. A. Moore, *L'Actualité Chimique*, **308–309**, 50–56, (2007).
 173. “Photoinduced Electron Transfer in a Hexaphenylbenzene-Based Self-Assembled Porphyrin-Fullerene Triad,” Y. Terazono, G. Kodis, P. A. Liddell, V. Garg, M. Gervaldo, T. A. Moore, A. L. Moore and D. Gust, *Photochem. Photobiol.*, **83**, 464–469 (2007).

174. "Porphyrin-Based Hole Conducting Electropolymer," P. A. Liddell, M. Gervaldo, J. W. Bridgewater, A. E. Keirstead, S. Lin, T. A. Moore, A. L. Moore and D. Gust, *Chemistry of Materials*, **20**, 135–142 (2008).
175. "[FeFe]-Hydrogenase Catalyzed H₂ Production in a Photoelectrochemical Biofuel Cell," M. Hambourger, M. Gervaldo, D. Svedruzic, P. W. King, D. Gust, M. Ghirardi, A. L. Moore and T. A. Moore, *J. Am. Chem. Soc.*, **130**, 2015–2022 (2008).
176. "Ultrafast Energy Transfer Dynamics of a Bioinspired Dyad Molecule," J. Savolainen, N. Dijkhuizen, R. Fanciulli, P. A. Liddell, D. Gust, T. A. Moore A. L. Moore, M. Motzkus and J. L. Herek, *J. Phys. Chem. B.*, **112**, 2678–2685 (2008).
177. "Entropic Changes Control the Charge Separation Process in Triads Mimicking Photosynthetic Charge Separation. Laser-Induced Optoacoustic Studies of Carotene-Porphyrin-Acceptor Supermolecules in Micellar Nanoreactors." A. C. Rizzi, M. van Gastel, P. A. Liddell, R. E. Palacios, Gary F. Moore, G. Kodis, A. L. Moore, T. A. Moore, D. Gust, and S. E. Braslavsky, *J. Phys. Chem. A.*, **112**, 4215–4223 (2008).
179. "Controlling the Efficiency of an Artificial Light-Harvesting Complex." J. Savolainen, R. Fanciulli, N. Dijkhuizen, A. L. Moore, J. Hauer, T. Buckup, M. Motzkus and J. L. Herek, *Proc. Natl. Acad. Sci.*, **105**, 7641–7646 (2008).
180. "A Bioinspired Construct That Mimics the Proton Coupled Electron Transfer between P680⁺ and the Tyr_Z-His190 Pair of Photosystem II." G. F. Moore, M. Hambourger, M. Gervaldo, O. G. Poluektov, T. Rajh, D. Gust, T. A. Moore and A. L. Moore, *J. Am. Chem. Soc.*, **130**, 10466–10467 (2008).
181. "Self-Regulation of Photoinduced Electron Transfer by a Molecular Nonlinear Transducer." S. D. Straight, G. Kodis, Y. Terazono, M. Hambourger, T. A. Moore, A. L. Moore, D. Gust, *Nature Nanotechnology*, **3**, 280–283 (2008).
182. "Engineered and Artificial Photosynthesis: Human Ingenuity Enters the Game." D. Gust, D. Kramer, A. L. Moore, T. A. Moore, W. Vermaas, *MRS Bulletin*, **33**, 383–386 (2008).
183. "Biology and Technology for Photochemical Fuel Production," M. Hambourger, G. F. Moore, D. M. Kramer, D. Gust, A. L. Moore and T. A. Moore, *Chemical Society Reviews*, **38**, 25–35 (2009).
184. "Molecular All-Photonic Encoder-Decoder," J. Andréasson, S. D. Straight, T. A. Moore, A. L. Moore and D. Gust, *J. Am. Chem. Soc.*, **130**, 11122–11128 (2008).
185. "Photoassisted Overall Water Splitting in a Visible Light-Absorbing Dye Sensitized Photoelectrochemical Cell," W. J. Youngblood, S.-H. A. Lee, Y. Kobayashi, E. A. Hernandez-Pagan, P. G. Hoertz, T. A. Moore, A. L. Moore, D. Gust and T. E. Mallouk, *J. Am. Chem. Soc.*, **131**, 926–927 (2009).

186. “Artificial Photosynthesis: Progress and Promise,” D. Gust, A. L. Moore and T. A. Moore, in *Ciamician, Profeta dell’Energia Solare*, Venturi, M. Ed., Fondazione Eni Enrico Mattei, Bologna, **2009**, 187–208.
187. “All-Photonic Molecular Keypad Lock,” J. Andréasson, S. D. Straight, T. A. Moore, A. L. Moore and D. Gust, *Chem. Eur. J.*, **15**, 3936–3939 (2009).
188. “Multiantenna Artificial Photosynthetic Reaction Center Complex,” Y. Terazono, G. Kodis, P. A. Liddell, V. Garg, T. A. Moore, A. L. Moore and D. Gust, *J. Phys. Chem. B*, **113**, 7147–7155 (2009).
189. “Solar Energy Conversion in a Photoelectrochemical Biofuel Cell,” M. Hambourger, G. Kodis, M. Vaughn, G. F. Moore, D. Gust, A. L. Moore and T. A. Moore, *Dalton Trans.*, 9979–9989 (2009).
190. “Solar Fuels via Artificial Photosynthesis,” D. Gust, T. A. Moore and A. L. Moore, *Acc. Chem. Res.*, **42**, 1890–1898 (2009).
191. “1-(3’ Amino)propylsilatrane Derivatives as Covalent Surface Linkers to Nanoparticulate Metal Oxide Films for Use in Photoelectrochemical Cells,” B. J. Brennan, A. E. Keirstead, P. A. Liddell, S. A. Vail, T. A. Moore, A. L. Moore and D. Gust, *Nanotechnology*, **20**, 505203 (10pp) (2009).
192. “Effects of Protonation State on a Tyrosine-Histidine Bioinspired Redox Mediator,” G. F. Moore, M. Hambourger, G. Kodis, W. Michl, D. Gust, T. A. Moore, and A. L. Moore, *J. Phys. Chem. B*, **114** (45), 14450–14457 (2010).
193. “Photochemical Triode Molecular Signal Transducer,” A. E. Keirstead, J. W. Bridgewater, Y. Terazono, G. Kodis, S. Straight, P. A. Liddell, A. L. Moore, T. A. Moore and D. Gust, *J. Am. Chem. Soc.*, **132**, 6588–6595 (2010).
194. “Towards Molecular Logic and Artificial Photosynthesis,” D. Gust, A. L. Moore and T. A. Moore, in *From Non-Covalent Assemblies to Molecular Machines*, Sauvage, J.-P.; Gaspard, P. Eds., Wiley-VCH (Weinheim), **2010**, 321–354.
195. “A Photo- and Electrochemically-Active Porphyrin-Fullerene dyad Electropolymer,” M. Gervaldo, P. A. Liddell, G. Kodis, B. J. Brennan, C. R. Johnson, J. W. Bridgewater, A. L. Moore, T. A. Moore and D. Gust, *Photochem. Photobiol. Sci.*, **9**, 890–900 (2010).
196. “Molecule-Based All-Photonic AND and NAND Gates,” J. Andréasson, Y. Terazono, M. P. Eng, A. L. Moore, T. A. Moore and D. Gust, *Dyes and Pigments*, **89**, 284–289 (2011).
197. “A Porphyrin-Stabilized Iridium Oxide Water Oxidation Catalyst,” B. D. Sherman, S. Pillai, G. Kodis, J. Bergkamp, T. E. Mallouk, D. Gust, T. A. Moore and A. L. Moore, *Can. J. Chem.*, **9**, 152–157 (2011).

198. "Mimicking the Role of the Antenna in Photosynthetic Photoprotection," Y. Terazono, G. Kodis, K. Bhushan, J. Zaks, C. Madden, A. L. Moore, T. A. Moore, G. R. Fleming and D. Gust, *J. Am. Chem. Soc.* **133**, 2916–2922 (2011).
199. "Conformationally Constrained Macrocyclic Diporphyrin-Fullerene Artificial Photosynthetic Reaction Center," V. Garg, G. Kodis, M. Chachisvilis, M. Hambourger, A. L. Moore, T. A. Moore and D. Gust, *J. Am. Chem. Soc.*, **133**, 2944–2954 (2011).
200. "Two-Photon Study on the Electronic Interactions Between the First Excited Singlet States in Carotenoid-Tetrapyrrole Dyads," P. N. Liao, S. Pillai, D. Gust, T. A. Moore, A. L. Moore and P. J. Walla, *J. Phys. Chem. A*, **115**, 4082–4091(2011).
201. "Carotenoid Photoprotection in Artificial Photosynthetic Antennas," M. Kloz, S. Pillai, G. Kodis, D. Gust, T. A. Moore, A. L. Moore, R. van Grondelle and J. T. M. Kennis, *J. Am. Chem. Soc.*, **133**, 7007–7015 (2011).
202. "All-Photonic Multifunctional Molecular Logic Device, J. Andréasson, U. Pischel, S. D. Straight, T. A. Moore, A. L. Moore and D. Gust, *J. Am. Chem. Soc.*, **133**, 11641–11648 (2011).
203. "Photochemical Synthesis of a Water Oxidation Catalyst Based on Cobalt Nanostructures," T.-L. Wee, B. D. Sherman, D. Gust, A. L. Moore, T. A. Moore, Y. Liu and J. Scaiano, *J. Am. Chem. Soc.*, **133**, 16742–16745 (2011).
204. "Synthesis and Characterization of Silicon Phthalocyanines Bearing Axial Phenoxy Groups for Attachment to Semiconducting Metal Oxides," J. Bergkamp, B. D. Sherman, E. Mariño-Ochoa, R. E. Palacios, G. Cosa, T. A. Moore, D. Gust and A. L. Moore, *J. Porphyrins Phthalocyanines*, **15**, 943–950 (2011).
205. "Oxidative Coupling of Porphyrins Using Copper(II) Salts," B. J. Brennan, M. J. Kenney, P. A. Liddell, B. R. Cherry, J. Li, A. L. Moore, T. A. Moore and D. Gust, *Chem. Commun.*, **47**, 10034–10036. (2011).
206. "On the Role of Excitonic Interactions in Carotenoid–Phthalocyanine Dyads and Implications for Photosynthetic Regulation," P. N. Liao, S. Pillai, M. Kloz, D. Gust, A. L. Moore, T. A. Moore, J. T. M. Kennis, R. van Grondelle and P. J. Walla, *Photosynth. Res.*, **111**, 237–243 (2012).
207. "Realizing Artificial Photosynthesis," D. Gust, T. A. Moore and A. L. Moore, *Faraday Disc.*, **155**, 9–26 (2012).
208. "Data and Signal Processing Using Photochromic Molecules," D. Gust, J. Andréasson, U. Pischel, T. A. Moore and A. L. Moore, *Chem. Commun.*, **48**, 1947–1957 (2012).
209. "Catalytic Turnover of [FeFe]-Hydrogenase Based on Single Molecule Imaging," C. Madden, M. D. Vaughn, I. Díez-Pérez, K. A. Brown, P. W. King, D. Gust, A. L. Moore and T. A. Moore, *J. Am. Chem. Soc.*, **134**, 1375–1892 (2012).
210. "Optical and Electrochemical Properties of Hydrogen-Bonded Phenol-

- Pyrrolidino[60]Fullerenes,” G. F. Moore, J. D. Megiatto, Jr., M. Hambourger, M. Gervaldo, G. Kodis, A. L. Moore, T. A. Moore and D. Gust, *Photochem. Photobiol. Sci.*, **11**, 1018–1025 (2012).
211. “Improving the Efficiency of Water Splitting in Dye-Sensitized Solar Cells by Using a Biomimetic Electron Transfer Mediator” Y. Zhao, J. R. Swierk, J. D. Megiatto Jr., B. Sherman, W. J. Youngblood, D. Qin, D. M. Lentza, A. L. Moore, T. A. Moore, D. Gust and T. E. Mallouk, *Proc. Natl. Acad. Sci.*, **105**, 15612–15616 (2012)
212. “Mimicking the Electron Transfer Chain in Photosystem II with a Molecular Triad Thermodynamically Capable of Water Oxidation” J. D. Megiatto, Jr., A. Antoniuk-Pablant, B. D. Sherman, G. Kodis, M. Gervaldo, T. A. Moore, A. L. Moore and D. Gust *Proc. Natl. Acad. Sci.*, **39**, 15578–15583 (2012).
213. “New Light-Harvesting Roles of Hot and Forbidden Carotenoid States in Artificial Photosynthetic Constructs” M. Kloz, S. Pillai, G. Kodis, D. Gust, T. A. Moore, A. L. Moore, R. van Grondelle and J. T. M. Kennis *Chem. Sci.*, **3**, 2052–2061 (2012).
214. “Base-Catalyzed Direct Conversion of Dipyrrromethanes to 1,9-Dicarbinoles: A [2 + 2] Approach for Porphyrins,” Y. Terazono, E. J. North, A. L. Moore, T. A. Moore and D. Gust, *Org. Lett.*, **14**, 1776–1779 (2012).
215. “Intramolecular Hydrogen Bonding as a Synthetic Tool to Induce Chemical Selectivity in Acid Catalyzed Porphyrin Synthesis,” J. D. Megiatto Jr., D. Patterson, B. D. Sherman, T. A. Moore, D. Gust and A. L. Moore, *Chem. Commun.*, **48**, 4558–4560 (2012).
216. “Simple and Accurate Correlation of Experimental Redox Potentials and DFT-Calculated HOMO/LUMO Energies of Polycyclic Aromatic Hydrocarbons,” D. D. Méndez-Hernández, P. Tarakeshwar, D. Gust, T. A. Moore, A. L. Moore and V. Mujica, *J. Mol. Model.*, **19**, 2845–2848 (2013). [DOI: 10.1007/s00894-012-1694-7].
217. “Analog Applications of Photochemical Switches,” G. Copley, T. A. Moore, A. L. Moore and D. Gust, *Adv. Mater.* **25**, 456–461 (2013).
218. “Hole Mobility in Porphyrin- and Porphyrin-Fullerene Electropolymers,” B. J. Brennan, P. A. Liddell, T. A. Moore, A. L. Moore and D. Gust, *J. Phys. Chem. B*, **117**, 426–432 (2013).
219. “Photonic Modulation of Electron Transfer with Switchable Phase Inversion,” J. Frey, G. Kodis, S. D. Straight, T. A. Moore, A. L. Moore, and D. Gust, *J. Phys. Chem. A*, **117**, 607–615 (2013).
220. “Evolution of Reaction Center Mimics to Systems Capable of Generating Solar Fuel,” B. D. Sherman, M. D. Vaughn, J. J. Bergkamp, D. Gust, A. L. Moore and T. A. Moore, *Photosyn. Res.* **120**, 59–70 (2014). DOI [10.1007/s11120-013-9795-4].

221. "Spectral Characteristics and Photosensitization of TiO₂ Nanoparticles in Reverse Micelles by Perylenes," L. I. Hernández, R. Godin, J. J. Bergkamp, M. J. Llansola Portolés, B. D. Sherman, J. Tomlin, G. Kodis, D. D. Méndez-Hernández, S. Bertolotti, C. A. Chesta, E Mariño-Ochoa, A. L. Moore, T. A. Moore, G. Cosa, R. E. Palacios, *J. Phys. Chem. B*, **117**, 4568–4581 (2013).
222. "Carotenoids as Electron or Excited-State Energy Donors in Artificial Photosynthesis: an Ultrafast Investigation of a Carotenoporphyrin and a Carotenofullerene Dyad," S. Pillai, J. Ravensbergen, A. Antoniuk-Pablant, B. D. Sherman, R. van Grondelle, R. N. Frese, T. A. Moore, D. Gust, A. L. Moore and J. T. M. Kennis, *Physical Chemistry Chemical Physics*, **15**, 4775–4784 (2013).
223. "Photoinduced Electron Transfer in Perylene-TiO₂ Nanoassemblies," M. J. Llansola-Portolés, J. J. Bergkamp, J. Tomlin, T. A. Moore, Gerdenis Kodis, A. L. Moore, G. Cosa and R. E. Palacios, *Photochem. Photobiol.*, **89**, 1375–1382 (2013) DOI: 10.1111/php.12108.
224. "Ultrafast Energy Transfer and Excited State Coupling in an Artificial Photosynthetic Antenna," M. Maiuri, J. J. Snellenburg, I. H. M. van Stokkum, S. Pillai, D. Gust, T. A. Moore, A. L. Moore, R. van Grondelle, G. Cerullo and D. Polli, *J. Phys. Chem. B*, **117**, 14183–14190 (2013).
226. "One Approach to Artificial Photosynthesis, M. J. Llansola-Portoles, R. E. Palacios, G. Kodis, J. D. Megiatto, Jr., A. L. Moore, T. A. Moore and D. Gust, *EPA News Letter*, **84**, 98–105 (2013).
227. "Selective Oxidative Synthesis of *meso*-beta Fused Porphyrin Dimers," B. J. Brennan, J. Arero, P. A. Liddell, T. A. Moore, A. L. Moore and D. Gust, *J. Porphyrins Phthalocyanines*, **17**, 247–251 (2013).
228. "Artificial Photosynthetic Reaction Center with a Coumarin-Based Antenna System," V. Garg, G. Kodis, P. A. Liddell, Y. Terazono, T. A. Moore, A. L. Moore, D. Gust, *J. Phys. Chem. B*, **117**, 11299–11308 (2013).
229. "Photoluminescent 1–2 nm Sized Silicon Nanoparticles: A Surface-Dependent System," J. J. Romero, M. J. Llansola-Portolés, M. L. Dell'Arciprete, H. B. Rodríguez, A. L. Moore and M. C. Gonzalez, *Chem. Mater.*, **25**, 3488–3498 (2013).
230. "Comparison of Silatrane, Phosphonic Acid, and Carboxylic Acid Functional Groups for Attachment of Porphyrin Sensitizers to TiO₂ in Photoelectrochemical Cells," B. J. Brennan, M. J. Llansola Portolés, P. A. Liddell, T. A. Moore, A. L. Moore and D. Gust, *Phys. Chem. Chem. Phys.*, **15**, 16605–16614 (2013) DOI:10.1039/C3CP52156G.
231. "Artificial Photosynthesis," D. Gust, T. A. Moore and A. L. Moore, *Theor. Exper. Plant Phys.*, **25**, 182–185 (2013).
232. "A Bioinspired Redox Relay that Mimics Radical Interactions of the Try-His pairs of Photosystem II," J. D. Megiatto, Jr., D. D. Méndez-Hernández, M. E. Tejada-Ferrari,

- A.-L. Teillout, M. J. Llansola Portolés, G. Kodis, O. G. Poluektov, T. Rajh, V. Mujica, T. L. Groy, D. Gust, T. A. Moore and A. L. Moore, *Nature Chem.*, **6**, 423–428 (2014).
233. “Separating Annihilation and Excitation Energy Transfer Dynamics in Light Harvesting Systems.” M. Vengris, D. S. Larsen, L. Valkunas, G. Kodis, C. Herrero, D. Gust, T. A. Moore, A. L. Moore, R. van Grondelle, *J. Phys. Chem. B*, **117**, 11372–11382 (2013) DOI:10.1021/jp403301c
234. “Artificial Photosynthesis Combines Biology with Technology for Sustainable Energy Transformation,” T. A. Moore, A. L. Moore and D. Gust, *AIP Conf. Proc.* **1519**, 68–72 (2013); doi: 10.1063/1.4794712
235. “Serial Time-Resolved Crystallography of Photosystem II Using a Femtosecond X-Ray Laser” C. Kupitz, S. Basu, I. Grotjohann, R. Fromme, N. A. Zatsepin, K. N. Rendek, M. Hunter, R. L. Shoeman, T. A. White, D. Wang, D. James, J-H. Yang, D. E. Cobb, B. Reeder, R. G. Sierra, H. Liu, A. Barty, A. L. Aquila, D. Deponte, R. A. Kirian, S. Bari, J. J. Bergkamp, K. R. Beyerlein, M. J. Bogan, C. Caleman, T-C. Chao, C. E. Conrad, K. M. Davis, H. Fleckenstein, L. Galli, S. P. Hau-Riege, S. Kassemeyer, H. Laksmono, M. Liang, L. Lomb, S. Marchesini, A. M. Martin, M. Messerschmidt, D. Milathianaki, K. Nass, A. Ros, S. Roy-Chowdhury, K. Schmidt, M. Seibert, J. Steinbrener, F. Stellato, L. Yan, C. Yoon, T. A. Moore, A. L. Moore, Y. Pushkar, G. J. Williams, S. Boutet, R. B. Doak, U. Weierstall, M. Frank, H. N. Chapman, J. C.H. Spence and P. Fromme, *Nature*, **513**, 261–265 (2014) Doi:10.1038/nature13453
236. “Synthesis and Spectroscopic Properties of a Soluble Semiconducting Porphyrin Polymer,” R. Schmitz, P. Liddell, G. Kodis, M. J. Kenney, B. J. Brennan, N. Oster, T. A. Moore, A. L. Moore and D. Gust, *Phys. Chem. Chem. Phys.*, **16**, 17569–17579 (2014).
237. “Modulating Short Wavelength Fluorescence with Long Wavelength Light,” G. Copley, J. G. Gillmore, J. Crisman, G. Kodis, C. Gray, B. R. Cherry, B. D. Sherman, P. D. Liddell, M. M. Paquette, L. Kelbaskas, N. L. Frank, A. L. Moore, T. A. Moore, and D. Gust, *J. Am. Chem. Soc.*, **136**, 11994–12003 (2014) Doi.org/10.1021/ja504879p.
238. “Controlling Surface Defects and Photophysics in TiO₂ Nanoparticles,” M. J. Llansola-Portoles, J. J. Bergkamp, D. Finkelstein-Shapiro, B. D. Sherman, G. Kodis, N. M. Dimitrijevic, D. Gust, T. A. Moore and A. L. Moore, *J. Phys. Chem. A*, **118**, 10631–10638, (2014). Doi.org/10.1021/jp506284q.
239. “Building and Testing Correlations for the Estimation of One-Electron Reduction Potentials of a Diverse Set of Organic Molecules,” D. D. Méndez-Hernández, J. G. Gillmore, L. A. Montano, D. Gust, T. A. Moore, A. L. Moore and V. Mujica, *J. Phys. Org. Chem.*, **28**, 320–328 (2015).

240. "Multiporphyrin Arrays with π - π Interchromophore Interactions," Y. Terazono, G. Kodis, M. Chachisvilis, B. Cherry, B. M. Fournier, A. L. Moore, T. A. Moore, D. Gust, *J. Am. Chem. Soc.*, **137**, 245–258 (2015).
241. "Metal-Free Organic Sensitizers for Use in Water-Splitting Dye-Sensitized Photoelectrochemical Cells," J. R. Swierk, D. D. Méndez-Hernández, N. S. McCool, P. A. Liddell, Y. Terazono, I. Pahk, J. J. Tomlin, N. V. Oster, T. A. Moore, A. L. Moore, D. Gust, T. E. Mallouk, *Proc. Natl. Acad. Sci. U. S. A.*, **112**, 1681–1686 (2015).
242. "Charge-Transfer Dynamics of Fluorescent Dye-Sensitized Electrodes under Applied Biases" R. Godin, B. D. Sherman, J. J. Bergkamp, C. A. Chesta, A. L. Moore, T. A. Moore, R. E. Palacios, G. Cosa, *J. Phys. Chem. Lett.*, **6**, 2688–2693 (2015).
243. "Artificial-Photosynthesis: from Molecular to Organic-Inorganic Nanoconstructs," M. J. Llansola-Portoles, R. E. Palacios, D. Gust, T. A. Moore, A. L. Moore, in *From Molecules to Materials—Pathways to Artificial Photosynthesis*, Rozhkova, E.; Ariga, K., Eds. Springer (Chan, Heidelberg, New York, Dordrecht, London), **2015**, 71–98.
244. "A New Method for the Synthesis of β -Cyano Substituted Porphyrins and Their Use as Sensitizers in Photoelectrochemical Devices," A. Antoniuk-Pablant, Y. Terazono, B. J. Brennan, B. D. Sherman, J. D. Megiatto Jr., G. W. Brudvig, A. L. Moore, T. A. Moore, D. Gust, *J. Mat. Chem. A*, **2016**, 4, 2976–2985, DOI: 10.1039/c5ta07226c.
245. "Enhanced Dye-Sensitized Solar Cell Photocurrent and Efficiency Using a Y-Shaped, Pyrazine-Containing Heteroaromatic Sensitizer Linkage," B. L. Watson, B. D. Sherman, A. L. Moore, T. A. Moore, D. Gust, *Phys. Chem. Chem. Phys.*, **17**, 15788–15796 (2015). DOI: 10.1039/C5CP00860C.
246. "Design, Synthesis and Photophysical Studies of Phenylethynyl-Bridged Phthalocyanine-Fullerene Dyads," J. Arero, G. Kodis, R. A. Schmitz, D. D. Méndez-Hernández, T. A. Moore, A. L. Moore, D. Gust, *J. Porphyrins Phthalocyanines*, **19**, 1–12 (2015). DOI: 10.1142/S1088424615500662.
247. "Spectroscopic Analysis of a Biomimetic Model of Tyr_Z function in PSII," J. Ravensbergen, A. Antoniuk-Pablant, B. D. Sherman, G. Kodis, J. D. Megiatto Jr, D. D. Mendez-Hernandez, R. N. Frese, R. van Grondelle, T. A. Moore, A. L. Moore, D. Gust, J. T. M. Kennis, *J. Phys. Chem. B*, **119**, 12156–12163 (2015). DOI: 10.1021/acs.jpcc.5b05298.
248. "Kinetic Isotope Effect of Proton-Coupled Electron Transfer in a Hydrogen Bonded Phenol-Pyrrolidino[60]Fullerene," J. Ravensbergen, C. L. Brown, G. F. Moore, R. N. Frese, R. van Grondelle, D. Gust, T. A. Moore, A. L. Moore, J. T. M. Kennis, *Photochem. Photobiol. Sci.*, **14**, 2147–2150 (2015).
249. "Photo-Injection of High Potential Holes into Cu₅Ta₁₁O₃₀ Nanoparticles by Porphyrin Dyes," I. Sullivan, C. L. Brown, M. J. Llansola-Portoles, M. Gervaldo, G. Kodis, T. A.

Moore, D. Gust, A. L. Moore, P. A. Maggard, *J. Phys. Chem. C*, **119**, 21294–21303 (2015). DOI: 10.1021/acs.jpcc.5b02174.

250. “A Tandem Dye-Sensitized Photoelectrochemical Cell for Light Driven Hydrogen Production,” B. D. Sherman, J. J. Bergkamp, C. L. Brown, A. L. Moore, D. Gust and T. A. Moore, *Energy Environ. Sci.*, **9**, 1812–1817(2016). DOI: 10.1039/C6EE00258G
251. “Resolving Energy and Electron Transfer Processes in Dyads with the Help of Global and Target Analysis,” I.H.M. van Stokkum, J. Ravensbergen, J.J. Snellenburg, R. van Grondelle, S. Pillai, T.A. Moore, D. Gust, A.L. Moore, J.T.M. Kennis, In R. Bruno (Ed.), *Artificial Photosynthesis* (pp. 169–192). ISBN: 9780128032893, Copyright © 2016 Elsevier Ltd. Academic Press.
252. “Marcus Bell-Shaped Electron Transfer Kinetics Observed in an Arrhenius Plot.” M. M. Waskasi, G. Kodis, A. L. Moore, T. A. Moore, D. Gust and D. V. Matyushov, *J. Amer. Chem. Soc.*, **138**, 9251–9257 (2016), DOI: 10.1021/jacs.6b04777.
253. “Photoinduced Electron and Energy Transfer in a Molecular Triad Featuring a Fullerene Redox Mediator.” A. Antoniuk-Pablant, G. Kodis, A. L. Moore, T. A. Moore and D. Gust, *J. Phys. Chem. B*, **120**, 6687–6697 (2016). DOI: 10.1021/acs.jpcc.6b03470.
254. “Artificial Photosynthetic Antennas and Reaction Centers.” M. J. Llansola-Portolés, D. Gust, T. A. Moore and A. L. Moore, *Comptes Rendus Chimie* (2016), printed online DOI: org/10.1016/j.crci.2016.05.016.
255. “An Artificial Photosynthetic Reaction Center Exhibiting Acid-Responsive Regulation of Photoinduced Charge Separation.” I. Pahk, G. Kodis, G. R. Fleming, T. A. Moore, A. L. Moore and D. Gust, *J. Phys. Chem. B.*, **120**, 10553–10562 (2016). DOI: 10.1021/acs.jpcc.6b07609
256. “Synthesis of a Novel Building Block for Preparation of Multi-Chromophoric Sensitizers for Panchromatic Dye-Sensitized Solar Cells.” B. L. Watson, T. A. Moore, A. L. Moore and D. Gust, *Dyes and Pigments*, **136**, 893–897 (2017). DOI: [10.1016/j.dyepig.2016.09.037](https://doi.org/10.1016/j.dyepig.2016.09.037)
257. “Triplet-Triplet Energy Transfer in Artificial and Natural Photosynthetic Antennas.” J. Ho, E. Kish, D. Méndez-Hernández, K. WongCarter, S. Pillai, G. Kodis, J. Niklas, O. G. Poluektov, D. Gust, T. A. Moore, A. L. Moore, V. S. Batista and B. Robert, *Proc. Natl. Acad. Sci. USA*. DOI: 10.1073/pnas.1614857114
258. “Design of Porphyrin-Based Ligands for the Assembly of [d-Block Metal : Calcium] Bimetallic Centers.” M Koepf, J.J. Bergkamp, A-L. Teillout, M. J. Llansola-Portoles, G. Kodis, A. L. Moore, D. Gust and T. A. Moore, *Dalton Trans.* **46**, 4199–4208 (2017).

259. “Concerted One-Electron Two-Proton Transfer Processes in Models Inspired by the Tyr-His Couple of Photosystem II.” M. T. Huynh, S. J. Mora, M. Villalba, M. E. Tejada-Ferrari, P. A. Liddell, B. R. Cherry, A-L. Teillout, C. W. Machan, C. P. Kubiak, D. Gust, T. A. Moore, S. Hammes-Schiffer and A. L. Moore, *ACS Cent. Sci.*, **3**, 372–380 (2017). DOI: 10.1021/acscentsci.7b00125

INVITED AND CONTRIBUTED PAPERS PRESENTED AT NATIONAL OR
INTERNATIONAL MEETINGS:

“Direct Determination of Sequential Binding Constants and Stoichiometry in Lanthanide Shift Reagent (LSR) Donor Complexes by CD,” N. H. Andersen and A. L. Moore, First Chemical Congress of the North American Continent, Mexico City, Nov. 30-Dec. 5, 1974.

“Light Absorption and Energy Transfer Properties of Covalently Lined Polyene-Porphyrins,” G. Dirks, A. L. Moore, D. Gust and T. A. Moore, 8th Annual Meeting American Society for Photobiology, Colorado Springs, Colorado, February 21-23, 1980; Abstract No. TPM-B3.

“Absorption of Light and Energy Transfer in a New Class of Compounds. Carotenoporphyrins,” A. L. Moore, G. Dirks, D. Gust and T. A. Moore, VIII International Photobiology Congress, Strasbourg, France, July 20-25, 1980; Abstract No. P-129.

“Light Absorption and Energy Transfer in Carotenoporphyrins,” E. J. Land, R. V. Bensasson, A. L. Moore, G. Dirks, D. Gust and T. A. Moore, Third International Conference on Photochemical Conversion and Storage of Solar Energy, Boulder, Colorado, August 3-8, 1980; Abstract No. III-2.

“Carotenoporphyrins - Synthetic Mimicry of Antenna and Photoprotective Functions,” A. L. Moore, D. Gust, T. A. Moore, R. L. Crouch, R. V. Bensasson and E. J. Land, 6th International Symposium on Carotenoids, Liverpool, England, July 26-31, 1981.

“Model Studies of Antenna and Photoprotective Functions of Carotenoids in Photosynthesis,” T. A. Moore, A. L. Moore, D. Gust, R. Bensasson and E. Land, International Workshop on Photobiology, Jeju National University, Cheju, Korea, May 26-29, 1982; Abstract No. CP-1.

“Motional Dependence of Intramolecular Energy Transfer in Carotenoporphyrins - Implications for Photoprotection,” D. Gust, T. A. Moore, A. L. Moore, A. Joy, R. Tom, G. Nemeth, R. V. Bensasson and E. J. Land, 10th Annual Meeting American Society for Photobiology, University of British Columbia, Vancouver, B.C., Canada, June 27-July 1, 1982; Abstract No. THAM-E5.

“Photoprotection from Singlet Oxygen in Artificial Photosynthesis,” R. V. Bensasson, T. A. Moore, D. Gust, A. L. Moore, A. Joy, R. Tom, G. Nemeth and E. J. Land, Fourth International Conference on Photochemical Conversion and Storage of Solar Energy, Jerusalem, Israel, August 8-13, 1982; Abstract No. 61.

“Protection by Carotenoids from Singlet Oxygen Produced by Porphyrins,” R. V. Bensasson, T. A. Moore, D. Gust, A. L. Moore, A. Joy, R. Tom, G. Nemeth and E. J. Land, International Symposium on Porphyrins in Tumor Phototherapy, Milan, Italy, May 26-28, 1983.

“Energy Transfer and Charge Separation in Carotenoporphyrins,” D. Gust, P. Mathis, A. L. Moore, P. A. Liddell, G. A. Nemeth, W. R. Lehman, T. A. Moore, R. V. Bensasson, E. J. Land and C. Chachaty, American Society for Photobiology, Eleventh Annual Meeting, Madison, WI, June 28, 1983, *Photochem. Photobiol.*, **37S**, S46 (1983).

“Energy Transfer and Charge Separation in Triad Molecules. Carotenoporphyrins Linked to Quinones,” T. A. Moore, P. Mathis, D. Gust, A. L. Moore, P. A. Liddell, G. A. Nemeth, W. R. Lehman, R. V. Bensasson, E. J. Land and C. Chachaty, Sixth International Congress on Photosynthesis, Brussels, Belgium, August 1-6, 1983.

“Photodriven Charge Separation in Model Systems for Photosynthesis,” D. Gust, T. A. Moore, A. L. Moore, P. A. Liddell, G. A. Nemeth, L. R. Makings, W. R. Lehman, Xth IUPAC Symposium on Photochemistry, CCC-Interlaken, Switzerland, July 22-27, 1984.

“Carotenoporphyrin-Quinone Triads as Artificial Photosynthetic Systems,” T. A. Moore, D. Gust, A. Moore, P. A. Liddell, G. A. Nemeth, L. R. Makings, W. R. Lehman, R. V. Bensasson, P. Mathis, J.-C. Mialozq, C. Chachaty and E. J. Land, Fifth International Conference on Photochemical Conversion and Storage of Solar Energy, Osaka, Japan, August 26-31, 1984; Abs. No. 318.

Poster on biomimetic charge separation. Gordon Conference on Electron Donor Acceptor Interactions, Plymouth, NH, August 13-17, 1984.

“Photodriven Charge Separation and Energy Transfer in a Carotenoporphyrin-Quinone Triad Molecule. Mimicry of Photosynthesis,” A. L. Moore, D. Gust and T. A. Moore, IVth Pan-American Biochemistry Congress, Buenos Aires, Argentina, November 4-8, 1984; Abs. No. 336.

Poster on synthetic model systems. Gordon Conference on Biophysical Aspects of Photosynthesis, New London, NH.

“Transmembrane Photodriven Charge Separation in a Porphyrin-Based Molecular Triad,” P. A. Liddell, P. Seta, E. Bienvenue, A. L. Moore, P. J. Pessiki, D. Gust and T. A. Moore, International Conference on Excited States and Dynamics of Porphyrins, Little Rock, Arkansas, November 17-19, 1985.

“Photodriven Electron Transfer in Carotenoporphyrin-Quinone Triads: A Two-Step Charge Recombination,” D. Gust, T. A. Moore, L. R. Makings, P. A. Liddell, A. L. Moore and G. A. Nemeth, Sixth International Conference on Photochemical Conversion and Storage of Solar Energy, Paris, July, 1986.

“Photoprocesses in Model Membranes Sensitized by Biomimetic Compounds: Carotenoporphyrins,” E. Bienvenue, P. Seta, T. A. Moore, A. L. Moore, D. Gust, R. V. Bensasson and P. Mathis, Sixth International Conference on Photochemical Conversion and Storage of Solar Energy, Paris, July, 1986.

“Two-Step Photodriven Electron Transfer and Charge Recombination in Carotenoporphyrin-Quinone Triads,” T. A. Moore, D. Gust, L. R. Makings, P. A. Liddell, A. L. Moore and G. A. Nemeth, XI IUPAC Symposium on Photochemistry, Lisbon, Portugal, July, 1986.

“Redox Potentials in a Molecular Triad,” D. Lexa, D. Gust, T. A. Moore, A. L. Moore and R. V. Bensasson, First European Congress of Photobiology, Grenoble, September, 1986.

“Synthesis and Charge Transfer Processes in Carotenoid-Containing Photoredox Centers,” A. L. Moore, D. Gust, T. A. Moore, L. R. Makings, P. Liddell, D. Barrett, E. Bienvenue and P. Seta, 8th International Symposium on Carotenoids, Boston, MA, July 27-31, 1987.

“Mimicry of Photosynthetic Charge Separation in a Carotenoid-Porphyrin-Diquinone Molecular Tetrad,” D. Gust, T. A. Moore, A. L. Moore, D. Barrett, L. O. Harding, L. R. Makings and P. A. Liddell, 1988 Biophysical Society Meeting, Phoenix, Arizona, February, 1988; *Biophysical Journal*, **53**, 271a (1988).

“Photoinitiated Interfacial Electron Transfer Catalyzed by a Linked Carotene-Porphyrin-Quinone Incorporated into Liposomes,” A. M. Joy, T. A. Moore, D. Gust, A. L. Moore, P. Pessiki, and P. Liddell, 1988 Biophysical Society Meeting, Phoenix, Arizona, February, 1988; *Biophysical Journal*, **53**, 515a (1988).

“Mimicry of Photosynthetic Charge Separation - Multistep Electron Transfer Reactions in a Carotenoid-Porphyrin-Diquinone Molecular Tetrad,” L. O. Harding, A. L. Moore, D. Barrett, L. R. Makings, P. A. Liddell, D. Gust and T. A. Moore, 16th Annual Meeting of the American Society for Photobiology, Colorado Springs, CO, March, 1988; *Photochem. Photobiology*, **47S**, 17S (1988).

“Enhanced Quantum Yields for Photodriven Charge Separation in Carotenoporphyrin-Quinone Triads Via Fine-Tuning of Reaction Exergonicity,” S. Hatlevig, P. J. Pessiki, A. L. Moore, L. R. Makings, T. A. Moore and D. Gust, 16th Annual Meeting of the American Society for Photobiology, Colorado Springs, CO, March, 1988; *Photochem. Photobiology*, **47S**, 18S (1988).

“Long-Lived, Photoinitiated Charge Separation in a Carotenoid-Porphyrin-Quinone Molecular Tetrad,” D. Gust, T. A. Moore, A. L. Moore, D. Barrett, L. O. Harding, L. R. Makings and P. A. Liddell, Twelfth DOE Solar Photochemistry Research Conference, Airlie, Virginia, May, 1988.

“Multichromophoric Models for Photosynthetic Energy and Photoinduced Electron Transfer,” D. Gust, T. A. Moore, A. L. Moore, L. R. Makings, T. T. Trier, D. K. Luttrull and X. C. Ma, XII IUPAC Symposium on Photochemistry, Bologna, Italy, July, 1988; Abstracts, pp. 85-86 (1988).

“Carotenoporphyrin Quinone Triads and Tetrads as Reaction Center Mimics: Control of Electron Transfer Rates,” A. L. Moore, T. A. Moore, D. Gust, L. O. Harding, S. Hatlevig, L. R. Makings, D. Barrett and P. A. Liddell, XII IUPAC Symposium on Photochemistry, Bologna, Italy, July, 1988; Abstracts, pp. 416-417 (1988).

“Interporphyrin Electron Transfer in Multicomponent Photoredox Systems,” D. Gust, T. A. Moore, A. L. Moore, L. R. Makings, T. T. Trier, D. K. Luttrull, G. R. Seely and X. C. Ma, Seventh International Conference on Photochemical Conversion and Storage of Solar Energy, Evanston, Illinois, July-August, 1988.

“Carotenoid-Porphyrin-Pyropheophorbide Triads which Mimic Triplet Energy Transfer Processes in Reaction Centers of *Rb. sphaeroides*,” T. A. Moore, D. Gust, A. Moore, L. Makings, P. Liddell, and P. Pessiki, Gordon Conference on Physico-chemical Aspects of Photosynthesis, Holderness School, Plymouth, NH, July 4-8, 1988.

“Photoinitiated Charge Separation in a Carotenoid-Porphyrin-Diquinone Molecular Tetrad,” D. Gust, T. A. Moore, A. L. Moore, D. Barrett, L. O. Harding, L. R. Makings, P. A. Liddell, X. C. Ma, S. J. Lee and F. Gao, Thirteenth DOE Solar Photochemistry Research Conference Contractors Meeting, Silver Creek, CO, June 12-15, 1989. (Presentation by D. Gust.)

“Synthetic Multichromophonic Systems as Reaction Center Mimics. Fine Tuning of Electron Transfer Rates,” T. A. Moore, D. Gust, A. L. Moore, L. O. Harding, S.J. Lee, F. Gao, X. C. Ma and R. E. Belford, 17th Annual Meeting of the American Society for Photobiology, Boston, MA, July, 1989; *Photochem. Photobiology*, **49S**, 61S (1989). (Presentation by T. A. Moore.)

“Mimicking the Triplet Energy Transfer Relay of Rb. Sphaeroides,” T. A. Moore, D. Gust, A. L. Moore, L. R. Makings, R. E. Belford, P. A. Liddell, and P. J. Pessiki, 1989 International Chemical Congress of Pacific Basin Societies, Honolulu, Hawaii, 1989; Abstracts, Orgn 128 (1989). (Presentation by T. A. Moore.)

“Multistep Photoinduced Electron Transfer in Porphyrin-Based Tetrad Compounds,” D. Gust, T. A. Moore, A. L. Moore, X. Ma, R. E. Belford, D. K. Luttrull, and F. Gao, 1989 International Chemical Congress of Pacific Basin Societies, Honolulu, Hawaii, 1989; Abstracts, Phy 173 (1989).

“Multistep Photoinitiated Electron Transfer in Molecular Pentads and Tetrads,” D. Gust, T. A. Moore, A. L. Moore, S.J. Lee, E. Bittersmann, D. K. Luttrull, J. M. DeGraziano, X. C. Ma and F. Gao, 14th DOE Solar Photochemistry Research Conference, Lake Harmony, PA, June, 1990.

“Photoacoustic Detection of the Relaxation of Porphyrin and Carotenoid Excited Species,” T. A. Moore, D. Gust and A. L. Moore, XIIIth IUPAC Symposium on Photochemistry, University of Warwick, Coventry, England, July 22-28, 1990. (Presentation by T. A. Moore.)

“Mimicry of Photosynthetic Electron and Energy Transfer by a Synthetic Molecular Pentad,” D. Gust, T. A. Moore, A. L. Moore, S.J. Lee, E. Bittersmann, D. K. Luttrull, J. M. DeGraziano, X. C. Ma and F. Gao, XIIIth IUPAC Symposium on Photochemistry, University of Warwick, Coventry, England; Abstract No. P72 (1990).

“Multistep Photoinitiated Electron Transfer in Molecular Pentads, Tetrads, and Triads,” D. Gust, T. A. Moore, A. L. Moore, S.J. Lee, E. Bittersmann, D. K. Luttrull, J. M. DeGraziano, X. C. Ma, F. Gao and A. A. Rehms, International Conference on Photochemical Conversion and Storage of Solar Energy, Palermo, Italy, July, 1990.

“Mimicry of Photosynthetic Electron Transfer by a Synthetic Molecular Pentad,” D. Gust, T. A. Moore and A. L. Moore, Electron Donor-Acceptor Gordon Conference, New Hampshire, August, 1990.

“Mimicry of Photosynthetic Electron Transfer by a Synthetic Molecular Pentad,” D. Gust, T. A. Moore and A. L. Moore, XIX Latin-American Congress of Chemistry, Buenos Aires, Argentina, November 5-9, 1990; Abs. OR30 (1990).

“Long-Lived Photoinitiated Charge Separation in Carotene-Diporphyrin Triad Molecules,” J. DeGraziano, D. Gust, T. A. Moore, A. L. Moore, F. Gao, D. Luttrull, X. C. Ma, T. T. Trier, E. Bittersmann, G. R. Seely and S. Woodward, Western Regional Photosynthesis Conference, Tempe, Arizona, January, 1991.

“Photochemistry of Carotenoid-Porphyrin-Diquinone Tetrads,” S.J. Lee, P. A. Liddell, D. Barrett, L. O. Harding, X. C. Ma, F. Gao, G. Seely, D. Gust, T. A. Moore and A. L. Moore, Western Regional Photosynthesis Conference, Tempe, Arizona, January, 1991.

“Free Energy Dependence of Interporphyrin Electron Transfer, L. Leggett, P. Kerrigan, P. Craig, J. DeGraziano, T. A. Moore, A. L. Moore and D. Gust,” Western Regional Photosynthesis Conference, Tempe, Arizona, January, 1991.

“Molecular Pentads - Synthesis and Electron Transfer Studies,” A. Lopez, T. A. Moore, A. L. Moore, D. Gust, I. Gonni, J. DeGraziano, D. Luttrull and P. Kerrigan, Western Regional Photosynthesis Conference, Tempe, Arizona, January, 1991.

“Photochemistry of Porphyrin Monolayer Films,” D. Luttrull, T. A. Moore, A. L. Moore, D. Gust, J. M. DeGraziano and N. J. Boldt, Western Regional Photosynthesis Conference, Tempe, Arizona, January 10-13, 1991.

“Photoinitiated Electron Transfer in Synthetic Tetrads and Pentads,” D. Gust, T. A. Moore and A. L. Moore, Fifteenth DOE Solar Photochemistry Research Conference, Snowmass, Colorado, June 2-6, 1991. (Presentation by D. Gust).

“Photoinitiated Electron Transfer in Carotenoid-Diporphyrin Triad Molecules,” D. Gust, T. A. Moore, A. L. Moore, I. Gao, D. Luttrull, J. M. DeGraziano, X. C. Ma, L. R. Makings, S.-J. Lee, T. T. Trier, E. Bittersmann, G. R. Seely and S. Woodward, 19th Annual Meeting of the American Society for Photobiology, San Antonio, Texas, June 22-26, 1991. (Presentation by D. Gust.)

“Triplet State Photophysics and Reactivity of the Tetraphenylporphyrin Dication,” T. A. Moore, D. Gust, A. L. Moore, G. R. Seely, R. A. Nieman and X. C. Ma, 19th Annual Meeting of the American Society for Photobiology, San Antonio, Texas, June 22-26, 1991. (Presentation by T. A. Moore.)

“Electronic Effects in the Coupling Interaction Between Carotene and Tetrapyrrole Pigments,” A. L. Moore, D. Gust, T. A. Moore, P. A. Liddell, C. Devadoss, R. Hermant, J. M. DeGraziano and I. F. Gouni, 19th Annual Meeting of the American Society for Photobiology, San Antonio, Texas, June 22-26, 1991.

“Triplet State Photophysics and Reactivity of the Tetraphenylporphyrin Dication,” T. A. Moore, D. Gust, A. L. Moore, G. R. Seely, R. A. Nieman and X. C. Ma, Gordon Conference on Physico-Chemical Aspects of Photosynthesis, Hanover, New Hampshire, July 28-August 2, 1991.

“Mechanism of the Fluorescence Quenching of Tetrapyrroles by Carotenoids,” A. L. Moore, D. Gust, T. A. Moore, P. A. Liddell, C. Davadoss, R. Hermant, J. M. DeGraziano and I. F.

Gouni, Gordon Conference on Physico-Chemical Aspects of Photosynthesis, Hanover, New Hampshire, July 28-August 2, 1991.

“Photosynthesis by Organic Photochemists,” T. A. Moore, D. Gust and A. L. Moore, 3rd Latin American Meeting on Photochemistry and Photobiology, Mar del Plata, Argentina, October 21-24, 1991.

“Mechanisms of the Fluorescence Quenching of Porphyrins by Carotenoids,” A. Moore, D. Gust, T. A. Moore, C. Devadoss, P. A. Liddell, and R. Hermant, 3rd Latin American Meeting on Photochemistry and Photobiology, Mar del Plata, Argentina, October 21-24, 1991.

“Photoinitiated Energy and Electron Transfer in a Covalently Linked Porphyrin Dyad,” L. S. Leggett, D. Gust, T. A. Moore, A. Moore, G. Seely, J. DeGraziano, R. Hermant, T. Causgrove, R. Alden and P. Craig, 27th Western Regional ACS Meeting-FACSS/Pacific Conference, Anaheim, CA, October, 1991.

“Photoinitiated Electron Transfer in Porphyrin Dyads,” P. K. Kerrigan, A. L. Moore, T. A. Moore, D. Gust, G. Seely and Janice M. DeGraziano, 27th Western Regional ACS Meeting-FACSS/Pacific Conference, Anaheim, CA, October, 1991.

“Efficient Quenching of the Porphyrin Excited Singlet State by Carotenoid to Porphyrin Electron Transfer: Ultra Fast Charge Recombination,” R. M. Hermant, P. A. Liddell, R. Alden, A. L. Moore, T. A. Moore and D. Gust, Fourth Annual Conference of the Inter-American Photochemical Society, Clearwater Beach, FL, January, 1992.

“Formation of the Pigment Triplet States and Singlet Oxygen by Pyropheophorbide-prophyrin-carotene Triads,” A. A. Krasnovsky, Jr., A. L. Moore, T. A. Moore, D. Gust and P. A. Liddell, Gordon Conference on Carotenoids, Oxnard, CA, March, 1992.

“Mechanistic Studies of the Fluorescence Quenching of Porphyrins by Carotenoids,” A. L. Moore, D. Gust, T. A. Moore, R. M. Hermant and P. A. Liddell,” Gordon Conference on Carotenoids, Oxnard, CA, March, 1992.

“Resonance Raman Studies of Caroteno-tetra-tolylporphyrin Dyads,” M. H. Wall, A. L. Moore, T. A. Moore, D. Gust, P. A. Liddell and M. R. Ondrias, Phys 0042. 203rd ACS National Meeting, San Francisco, CA, April 5-10, 1992.

“Investigation of the Photovoltaic Response of Tetraarylporphyrins in Mixed Langmuir-Blodgett Films,” J. M. DeGraziano, L. Sereno, J. J. Silber, D. K. Luttrull, A. L. Moore, T. A. Moore and D. Gust, Twentieth Annual Meeting of the American Society for Photobiology, Marco Island, FL, June, 1992 (*Photochem. Photobiol.* **55**, 36S (1992)).

“Efficient Quenching of the Porphyrin Excited Singlet State by Carotenoid to Porphyrin Electron Transfer,” T. A. Moore, D. Gust, A. L. Moore, P. A. Liddell, R. M. Hermant and R. Alden, Twentieth Annual Meeting of the American Society for Photobiology, Marco Island, FL, June, 1992 (*Photochem. Photobiol.* **55**, 100S (1992)).

“Electron Photoconduction by Carotenoids,” A. L. Moore, D. Gust, T. A. Moore, L. Sereno, J. J. Silber, P. A. Liddell, P. Seta and E. Bienvenue, Twentieth Annual Meeting of the American Society for Photobiology, Marco Island, FL, June, 1992 (*Photochem. Photobiol.* **55**, 101S (1992)).

“Electronic Effects on Photoinitiated Electron Transfer in Multichromophoric Systems,” D. Gust, T. A. Moore, A. L. Moore, S.-J. Lee, J. M. DeGraziano, A. Lopez, I. F. Gouni and P. K. Kerrigan, Sixteenth DOE Solar Photochemistry Research Conference, Lake Geneva, WI, June, 1992.

“Synthesis of New Carotenoids for Photosynthetic Model Systems,” B.-L. Liu, D. Gust, T. A. Moore and A. L. Moore, Ninth International Congress on Photosynthesis, Nagoya, Japan, September, 1992 (*Photosynthesis Research*, **34**, 165 (1992)).

“Mechanistic Studies of the Fluorescence Quenching of Porphyrins by Carotenoids,” D. Gust, T. A. Moore, A. L. Moore, S. Lin, R. M. Hermant, P. A. Liddell and R. Alden, Ninth International Congress on Photosynthesis, Nagoya, Japan, September, 1992 (*Photosynthesis Research*, **34**, 165 (1992)).

“Synthesis and Photoinitiated Electron Transfer in Artificial Photosynthetic Molecules,” S.-J. Lee, D. Gust, T. A. Moore, A. L. Moore, E. Bittersmann, D. K. Luttrull, J. M. DeGraziano, X. C. Ma and F. Gao, International Symposium on Photochemistry, Photobiology and Photomedicine, Taejon, Korea, September, 1992.

“Mimicking the Photosynthetic Triplet Energy Transfer Relay,” D. Gust, T. A. Moore, A. L. Moore, A. A. Krasnovsky, P. A. Liddell, D. Nicodem, J. M. DeGraziano, P. Kerrigan, L. R. Makings and P. J. Pessiki, Fifth Interamerican Photochemical Society Conference, Clearwater Beach FL, January, 1993.

“Mimicking Carotenoid Quenching of Chlorophyll Fluorescence,” T. A. Moore, R. Hermant, P. Liddell, S. Lin, R. Alden, H. K. Kang, A. Moore and D. Gust, Western Regional Photosynthesis Conference, Asilomar, CA, January, 1993.

“Mimicking the Photosynthetic Triplet Energy Transfer Relay,” D. Gust, T. A. Moore, A. L. Moore, A. A. Krasnovsky, P. A. Liddell, D. Nicodem, J. M. DeGraziano, P. Kerrigan, L. R. Makings and P. J. Pessiki, Western Regional Photosynthesis Conference, Asilomar, CA, January, 1993.

“Photoconducting Properties of Carotenes in Monolayers,” I. Gouni, D. Gust, T. A. Moore and A. L. Moore, Western Regional Photosynthesis Conference, Asilomar, CA, January, 1993.

“Electron Transfer to Hydrogen Bonded Quinone Systems,” S. C. Hung, A. Moore, T. Moore, D. Gust, P. Kerrigan, Western Regional Photosynthesis Conference, Asilomar, CA, January, 1993.

“Molecular Motions of β -Carotene and Carotenoporphyrin Dyads in Solution,” S. Li, D. Gust, T. A. Moore, A. L. Moore, R. A. Nieman and S. Smith, Western Regional Photosynthesis Conference, Asilomar, CA, January, 1993.

“Protection from Porphyrin Photosensitization of Cells by Carotenoids,” P. K. Kerrigan, A. L. Moore, T. A. Moore, D. Gust, A. Hill and P. Moulinier, Western Regional Photosynthesis Conference, Asilomar, CA, January, 1993.

“Synthesis and Photoinitiated Electron Transfer of a Molecular Pentad,” S.-J. Lee, E.-J. Shin, J. M. DeGraziano, P. K. Kerrigan, A. Macpherson, T. A. Moore, A. L. Moore and D. Gust, 205th National Meeting of the American Chemical Society Denver, CO, March, 1993.

“Carotenoporphyrins in Cancer Detection,” P. K. Kerrigan, A. L. Moore, T. A. Moore, D. Gust, A. Iwamoto, A. Krasnovsky, A. G. Hill, P. Moulinier, G. Jori and E. Reddi, Twentyfirst Annual Meeting of the American Society for Photobiology, Chicago, IL, June, 1993 (*Photochem. Photobiol.* **57S**, 51S-52S (1993)).

“Carotenoids as Photoprotective and Localizing Agents in Tumor Imaging,” A. L. Moore, D. Gust, T. A. Moore, P. K. Kerrigan, E. Reddi and G. Jori, Tenth International Symposium on Carotenoids, Trondheim, Norway, June, 1993.

“Electron Transfer to Hydrogen Bonded Quinone Systems,” A. L. Moore, T. A. Moore, D. Gust, S.-C. Hung, A. Macpherson, P. K. Kerrigan and J. M. DeGraziano, Fourth Symposium on Photoinduced Charge Transfer, Rochester, NY, July, 1993.

“Synthesis and Photochemistry of a Molecular Triad. Electron Transfer to a Hydrogen Bonded Quinone System,” S.-C. Hung, A. N. Macpherson, P. K. Kerrigan, J. M. DeGraziano, A. L. Moore, T. A. Moore and D. Gust, 206th National Meeting of the American Chemical Society, Chicago, IL, 1993.

“Photophysics of Porphyrin-Quinone Molecules with Fixed Molecular Geometry,” P. Liddell, L. Lin, A. N. Macpherson, J. M. DeGraziano, G. Seely, A. L. Moore, T. A. Moore and D. Gust, XVIth International Conference on Photochemistry, Vancouver, Canada, August, 1993.

“Carotenoporphyrins: Models for the Carotenoid Function in Photosynthesis,” S. Cardoso, T. A. Moore, A. L. Moore and D. Gust, Third Annual Western Regional Photosynthesis Conference, Asilomar, CA, January, 1994.

“Spectroscopic Studies and Electrochemical Characterization of Photoconductive Carotenoids,” S. Li, A. L. Moore, T. A. Moore, D. Gust, L. Sereno and J. J. Silber, Third Annual Western Regional Photosynthesis Conference, Asilomar, CA, January, 1994.

“Mimicking Photosynthetic Electron and Energy Transfer,” Thomas A. Moore, Devens Gust and Ana L. Moore, IV Encuentro Latinoamericano/ I Iberoamericano de Fotoquímica y Fotobiología, Valparaíso, Chile, April 1994. (Invited, presented by T. A. Moore)

“Biomedical Applications of Carotenoporphyrins,” IV Encuentro Latinoamericano/ I Iberoamericano de Fotoquímica y Fotobiología, Valparaíso, Chile, April 1994. (Invited, presented by A. L. Moore)

“Molecular Approaches to Artificial Photosynthesis” Devens Gust, Thomas A. Moore and Ana L. Moore, IX Congreso Argentino de Fisicoquímica, San Luis, Argentina, Noviembre 1994. (Invited, presented by D. Gust)

“Photoelectrochemical Studies of Carotenoids in Langmuir-Blodgett Films.” F. Fungo, L. Otero, J. J. Silber, L. Sereno, A. Moore, T. Moore and D. Gust, IX Congreso Argentino de Fisicoquímica, San Luis, Argentina, Noviembre 1994.

“Electron Transfer to Hydrogen Bonded Quinone Systems,” Twentysecond Annual Meeting of the American Society for Photobiology, Scottsdale, Arizona, June, 1994. (Invited, presented by A. L. Moore)

“Ultrafast Photoinitiated Electron Transfer in a Carotenobuckminsterfullerene Dyad,” Ana L. Moore, Thomas A. Moore and Devens Gust, Second Gordon Research Conference on Carotenoids, Ventura, California. 5 - 9 February 1995.

“Photoinduced Electron and Proton Transfer in a Molecular Triad,” Su-Chun Hung, Alisdair N. Macpherson, Su Lin, Paul A. Liddell, Gilbert R. Seely, Ana L. Moore, Thomas A. Moore and Devens Gust, Symposium on Photochemistry and Radiation Chemistry, 209th American Chemical Society National Meeting, Anaheim, CA, April 2 -6, 1995.

“Photoinduced Electron Transfer in Porphyrin-Quinone Systems: New Strategies for Enhancing Quantum Yields,” Devens Gust, Thomas A. Moore and Ana L. Moore, Nineteenth DOE Solar Photochemistry Research Conference, Tamiment, Pennsylvania, June 4-8, 1995.

“Photoinduced Electron Transfer in a Carotenobuckminsterfullerene Dyad,” Thomas A. Moore, Devens Gust, Ana L. Moore, Hiroshi Imahori, Su Lin, Gilbert Seely, Juana Silber, Leonides Sereno, and Sergio Cardoso, Twentythird Annual Meeting of the American Society for Photobiology, Washington, DC, June 17-22, 1995 (*Photochem. Photobiol.* 61S, 98S (1995)).

“Carotenoids as Photoprotective and Localizing Agents in Tumor Imaging,” Ana L. Moore, Devens Gust, Thomas A. Moore, Paul A. Liddell, Jody M. Wissel, Elena Reddi, Anna Segalla, Giulio Jori, Katarina Svanberg, Sune Svanberg, and Jonas Johansson, 6th Congress of the European Society for Photobiology, 3-8 September, 1995, Churchill College, University of Cambridge, Cambridge, UK, II-1p/02.

“A Photobiochemical Model System for Solar Energy Conversion,” Thomas A. Moore, Ana L. Moore and Devens Gust, Quinto Simposium de Química: Medicina Molecular, Monterrey, Mexico, Septiembre 28-29, 1995.

“The conversion of solar energy to chemical potential in liposome-based artificial photosynthetic constructs,” V Encuentro Latinoamericano de Fotoquímica y Fotobiología, Septiembre 14 - 18, 1997, Los Cocos, Cordoba, Argentina. (Plenary lecture presented by A. L. Moore).

“Artificial Photosynthesis: Mimicking Biological Solar Energy Conversion,” Thomas A. Moore, Devens Gust and Ana L. Moore, 3rd Annual Nebraska Metallobiochemistry Retreat, Lincoln, Nebraska, 12 -14 April, 1996. (Presented by T. A. Moore).

“Solar Energy Conversion by Artificial Photosynthesis,” T. A. Moore, D. Gust and A. L. Moore, Primera Semana De La Facultad De Ciencias, Universidad Autonoma Del Estado De Morelos, Cuernavaca, Mexico, May 16, 1996. (Presented by T. A. Moore)

“Artificial Photosynthesis: Mimicking Biological Solar Energy Conversion,” T. A. Moore, A. L. Moore and D. Gust, 1996 Annual Meeting of the Korean Society of Photoscience, Taejon, Korea, June 6 - 8, 1996. (Presented by T. A. Moore)

“Photochemistry of Artificial Reaction Centers in Liposomes Transmembrane Proton Transfer,” G. Steinberg-Yfrach, P. A. Liddell, S-Ch. Hung, A. L. Moore, D. Gust, T. A. Moore, Twentieth DOE Solar Photochemistry Research Conference, French Lick, Indiana, June 8-12, 1996.

“Photochemistry of Artificial Reaction Centers in Liposomes. Transmembrane Proton Transfer.” G. Steinberg-Yfrach, P. A. Liddell, S-Ch. Hung, A. L. Moore, D. Gust, T. A. Moore, Twenty-fourth Annual Meeting of the American Society for Photobiology, Atlanta, GE, June 15-20, 1996 *Photochem. Photobiol.* 21S-22S (1996). (Presented by Gali Steinberg-Yfrach).

“ Stable Binding of Isothiocyanoporphyrins to Au(111): STM Studies W. Han, S. Li, E. N. Durantini, S. M. Lindsay, A. L. Moore, D. Gust and T. A. Moore, Twenty-fourth Annual Meeting of the American Society for Photobiology, Atlanta, GE, June 15-20, 1996 *Photochem. Photobiol.* 63S (1996).

“Carotenoporphyrins in Tumor Detection and Imaging,” A. L. Moore, D. Gust, T. A. Moore, P. A. Liddell, D. Tatman, E. Reddi, A. Segalla, G. Jori, Twenty-fourth Annual Meeting of the American Society for Photobiology, Atlanta, GE, June 15-20, 1996 *Photochem. Photobiol.* 97S (1996).

“Carotenoids in Tumor Detection and Imaging Drugs,” A. L. Moore, D. Gust, T. A. Moore, P. A. Liddell, D. Tatman, E. Reddi, A. Segalla, G. Jori, 11th International Symposium on Carotenoids (IUPAC), August 18-23 1996, Leiden, The Netherlands.

“Artificial Photosynthesis: Mimicking Biological Solar Energy Conversion,” A. L. Moore, D. Gust and T. A. Moore, 36th Brazilian Chemical Congress, September 1-5, 1996. (Plenary Lecture, presented by T. A. Moore).

“Design and Synthesis of Supramolecular Structures for the Study of Electron Transfer processes,” 36th Brazilian Chemical Congress, September 1-5, 1996, São Paulo, Brazil. (Invited, presented by A. L. Moore)

“Photophysical Properties of Photosynthetic Pigments: Chlorophylls and Carotenoids,” 36th Brazilian Chemical Congress, September 1-5, 1996, São Paulo, Brazil. (Invited, presented by A. L. Moore)

“Photomedicine,” 36th Brazilian Chemical Congress, September 1-5, 1996, São Paulo, Brazil. (Invited, presented by A. L. Moore)

“Model Systems for Observing Photoredox Reactions of Carotenoids,” 11th International Symposium on Carotenoids (IUPAC), A. L. Moore, T. A. Moore, D. Gust, J. J. Silber, L. Sereno,

G. Steinberg-Yfrach, S-Ch. Hung and P. Liddell, August 18-23 1996, Leiden, The Netherlands. (Invited, presented by A. L. Moore).

“The Conversion Of Light Energy To Proton Potential In Liposomes By Artificial Photosynthetic Reaction Centers,” Gali Steinberg-Yfrach, Paul A. Liddell, Su-Chun Hung, Ana L. Moore, Devens Gust, Thomas A. Moore, 6th Western Regional Photosynthesis Conference, Asilomar Conference Center, Monterey, CA, January 9-12, 1997. (Plenary Lecture, presented by T. A. Moore).

“A Carotene-Porphyrin-Fullerene Triad: Photoinduced Charge Separation and Charge Recombination to a Triplet State,” D. Gust, T. A. Moore, A. L. Moore, P. A. Liddell, D. Kuciauskas, J. P. Sumida, B. Nash and D. Nguyen, 191st Meeting of the Electrochemical Society, Montreal, May, 1997. (Presented by D. Gust).

“The Conversion of Solar Energy to Chemical Potential in Liposome-Based Artificial Photosynthetic Constructs,” A. L. Moore, D. Gust and T. A. Moore, Proceedings of the Twenty-First DOE Solar Photochemistry Research Conference, Copper Mountain, CO, June 7-11, 1997. (Presented by T. A. Moore).

“Charge Separation and Energy Transfer in Fullerene Carotene Dyads,” Dereck Tatman, Edgardo Durantini, Ana L. Moore, Thomas A. Moore and Devens Gust, American Society for Photobiology 25th Annual Meeting, July 5 - 10, 1997, St Louis, Missouri. *Photochem. Photobiol.* **65S** 2s (1997) (Invited, presented by D. Tatman).

“Photochemistry of Reaction Center Models with Fullerenes as Primary Electron Acceptors,” Darius Kuciauskas, Paul A. Liddell, John P. Sumida, Boaz Nash, Ana L. Moore, Thomas A. Moore and Devens Gust, American Society for Photobiology 25th Annual Meeting, July 5 - 10, 1997, St Louis, Missouri. *Photochem. Photobiol.* **65S** 12s (1997) (Invited, presented by D. Kuciauskas)

“From light energy to redox potential to proton motive force: supramolecular assemblies that mimic photosynthetic energy conversion,” G. Steinberg-Yfrach, P.A. Liddell, S.-C. Hung, A.L. Moore, D. Gust and T.A. Moore, 7th Congress of the European Society for Photobiology, September 8 - 13, 1997, Stresa, Italy. (Invited, presented by T. A. Moore).

“The conversion of light energy to chemical potential in liposome-based artificial photosynthetic constructs,” Gali Steinberg-Yfrach, Paul A. Liddell, Su-Chun Hung, Ana L. Moore, Devens Gust, Thomas A. Moore, American Society for Photobiology 25th Annual Meeting, July 5 - 10, 1997, St Louis, Missouri. *Photochem. Photobiol.* **65S** 41s (1997) (Presented by T. A. Moore)

“Rapid Photoinduced Electron Transfer in a Rigid Porphyrin-Quinone Molecular Dyad,” John Sumida, Paul A. Liddell, Lori Noss, Gilbert R. Seely, Thomas A. Moore, Ana L. Moore and Devens Gust, American Society for Photobiology 25th Annual Meeting, July 5 - 10, 1997, St Louis, Missouri. *Photochem. Photobiol.* **65S** 29s (1997) (Presented by J. Sumida)

“Photoinduced Charge Separation and Charge Recombination to a Triplet State in a Carotene-Porphyrin-Fullerene Triad,” D. Gust, T. A. Moore, P. A. Liddell, D. Kuciauskas, J. P. Sumida,

B. Nash, D. Nguyen, D. Carbonera, M. Di Valentin, D. Corgaja, G. Agostini and G. Giacometti, 1997 Gordon Research Conference on Organic Photochemistry, Newport, RI, July, 1997. (Presented by D. Gust).

“Charge separation and energy transfer in fullerene carotene dyads and triads,” E.N. Durantini, D. Tatman, A.L. Moore, T.A. Moore and D. Gust, 7th Congress of the European Society for Photobiology, September 8 - 13, 1997, Stresa, Italy. (Presented by A. L. Moore).

“Charge Separation and Energy Transfer in Fullerene Carotene Dyads and Triads,” Edgardo N. Durantini, Dereck Tatman, Ana L. Moore, Thomas A. Moore and Devens Gust, V Encuentro Latinoamericano Fotoquímica y Fotobiología, Septiembre 14 - 18, 1997, Los Cocos, Cordoba, Argentina. (Presented by T. A. Moore).

“Photosynthetic Model Systems in which the Carotenoid Triplet State is Populated by Radical Pair Recombination,” T. A. Moore, A. L. Moore, D. Gust, P. A. Liddell, D. Kuciauskas, J. Sumida, B. Nash, G. Giacometti, D. Carbonera, M. di Valentin, C. Corvaja, and G. Agostini, Gordon Research Conference on Carotenoids, Ventura CA, January 1998.

“Ultrafast Singlet Energy Transfer from Carotenoids to Cyclic Tetrapyrroles in Biomimetic Models for Photosynthetic Antenna Function,” Alisdair N. Macpherson, Tomas Gillbro, Paul A. Liddell, Ernesto Mariño-Ochoa, Dereck Tatman, Edgardo Durantini, Devens Gust, Thomas A. Moore and Ana L. Moore, Tenth I-APS Winter Conference, Clearwater Beach, Florida, 1-4 January, 1998.

“Electrochemistry of 7'-Apo-7'(4-isothiocyanophenyl)- β -Carotene. Stable Langmuir-Blodgett Films on Au,” F. Fungo, L. Otero, J.J. Silber, L. Sereno, E. Durantini, A.L. Moore, T.A. Moore and D. Gust, Vina del Mar, Chile, March, 1998.

“The generation of proton motive force and ATP synthesis by an artificial photosynthetic membrane,” D. Gust, T. A. Moore and A. L. Moore, 10th European Bioenergetics Conference, Göteborg, Sweden, June, 1998 (Presented by T. A. Moore).

“Solar Energy Conversion in Artificial Photosynthetic Membranes,” D. Gust, A. L. Moore and T. A. Moore, 22nd Solar Photochemistry Research Conference, Chantilly, Virginia, June, 1998.

“Singlet Energy Transfer from Carotenoids to Cyclic Tetrapyrroles in Artificial Photosynthetic Antennas,” A.N. Macpherson, T. Gillbro, P.A. Liddell, E. Mariño-Ochoa, D. Tatman, E. Durantini, D. Gust, T.A. Moore and A.L. Moore, American Society for Photobiology 26th Annual Meeting, SnowBird, Utah, July 1998; *Photochem. Photobiol.* **67S** 30s (1998). (Presented by A. L. Moore)

“Function of Carotenoids in Plants Explored in Artificial Systems”, Carotenoids Gordon Conference, Ventura Beach, California, January 25-28, 1998. (Invited, presented by A. L. Moore)

"Energy Transduction by an Artificial Photosynthetic Membrane," G. Steinberg-Yfrach, H. Vanegas, W. D. Frasch, A. L. Moore, D. Gust and T. A. Moore, American Society for

Photobiology 26th Annual Meeting, SnowBird, Utah, July 1998; *Photochem. Photobiol.* **67S** 68s (1998). (Presented by T. A. Moore)

“An Artificial Photosynthetic Membrane,” D. Gust, T. A. Moore, and A. L. Moore, 12th International Conference on Photochemical Conversion and Storage of Solar Energy, Berlin, Germany, August, 1998. (Presented by D. Gust)

“Solar Energy Conversion in Artificial Photosynthetic Membranes,” T. A. Moore, A. L. Moore, D. Gust, W. Frasch, G. Steinberg-Yfrach and H. Vanegas, 11th International Congress on Photosynthesis, Budapest, Hungary, August, 1998. (Presented by T. A. Moore).

“Photoinduced electron transfer coupled to the generation of proton motive force and the synthesis of ATP in an artificial photosynthetic membrane.” T. A. Moore, A. L. Moore and D. Gust, Gordon Conference on Electron Donor-Acceptor Interactions, Newport, RI, August, 1998. (Presented by T. A. Moore).

“Ultrafast Singlet Energy Transfer from Carotenoids to Cyclic Tetrapyrroles in Biomimetic Models for Photosynthetic Antenna Function,” Alisdair N. Macpherson, Tomas Gillbro, Paul A. Liddell, Ernesto Mariño-Ochoa, Dereck Tatman, Edgardo Durantini, Devens Gust, Thomas A. Moore and Ana L. Moore, 11th International Congress on Photosynthesis, Budapest, Hungary, August 17-22, 1998. (Presented by A. L. Moore)

“Fotosíntesis Artificial,” T. A. Moore, D. Gust and A. L. Moore, Second International Congress in Electronics, Innovacion. Realidades del Mañana, ITESM Campus Guadalajara, Guadalajara, México, October, 1998. (Plenary lecture presented by A. L. Moore).

“An Artificial Photosynthetic Membrane,” D. Gust, T. A. Moore, and A. L. Moore, First International Symposium on Atom Scale Processing and Novel Properties in Nanoscopic Materials, Osaka, Japan, November, 1998. (Presented by D. Gust)

“Artificial Photosynthesis”, A. L. Moore, T. A. Moore and D. Gust, Symposium in Honor of Professor W. C. Herndon, Department of Chemistry, University of Texas at El Paso, El Paso, TX, December, 1998.

“Photoinduced electron transfer coupled to the generation of proton motive force and the synthesis of ATP in an artificial photosynthetic membrane,” A. Moore, T. A. Moore and D. Gust, 16th Enzyme Mechanisms Conference, Napa, California, January, 1999 (Invited, presented by A. L. Moore)

“Driving Force and Electronic Coupling Effects on the Dynamics of Photoinduced Electron Transfer in a Fullerene-Based Molecular Triad,” J. L. Bahr, D. Kuciauskas, P. A. Liddell, T. A. Moore, A. L. Moore, D. Gust, 218th Annual Meeting of the American Chemical Society, New Orleans, LA, August 1999. (Presented by J. Bahr)

“Mimicking Bacterial Photosynthesis,” D. Gust, T. A. Moore, A. L. Moore, Gordon Research Conference on Organic Photochemistry, New London, CT, July, 1999. (Presented by D. Gust)

“An Artificial Photosynthetic Membrane,” D. Gust, T. A. Moore, A. L. Moore, Gordon Research Conference on Chemistry of Supramolecules and Assemblies, Henniker, NH, August, 1999. (Presented by D. Gust)

“Fullerenes as Photosynthesis Mimics,” D. Gust, T. A. Moore, A. L. Moore, 218th Annual Meeting of the American Chemical Society, New Orleans, LA, August 1999. (Presented by D. Gust)

“Mimicking Bacterial Photosynthesis,” D. Gust, T. A. Moore and A. L. Moore, 4^o Encontro de Química Física da Sociedade Portuguesa de Química, Coimbra, October, 1999. (Presented by D. Gust)

“Photoinduced Energy and Electron Transfer Reactions of Fullerenes,” D. Gust, T. A. Moore and A. L. Moore, Groupe de Contact du FNRS, Louvain-la-Neuve, October, 1999. (Presented by D. Gust)

“Synthetic Reaction Centers and Proton Pumps in Artificial Photosynthetic Membranes,” T. A. Moore, D. Gust, A. L. Moore, Gordon Research Conference on Photosynthesis: Biochemical Aspects, Henniker, NH, 13-18 June, 1999. (Presented by T. A. Moore)

“Construcción de Membranas Fotosintéticas Artificiales para el Estudio de Procesos de conversión de Energía,” A. L. Moore, D. Gust and T. A. Moore. Fotociencias 99, University of La Havana, La Habana, Cuba, February 15–19, 1999. (Invited, presented by A. L. Moore)

“Artificial Photosynthesis,” A. L. Moore, D. Gust and T. A. Moore, Fourth Annual Maria Geoppart-Mayer Symposium. University of California at San Diego, La Jolla, CA, March 6, 1999. (Invited, presented by A. L. Moore)

“Singlet Energy Transfer from Carotenoids to Cyclic Tetrapyrroles in Artificial Photosynthetic Antennas,” A. N. Macpherson, T. Gillbro, P. A. Liddell, E. Mariño, E. Durantini, T. A. Moore, D. Gust and A. L. Moore, ACS 54th Northwest Regional Meeting, Portland, OR, June 20–23, 1999. (Presented by A. L. Moore)

“Solar Energy Conversion in an Artificial Photosynthetic Membrane,” T. A. Moore, A. L. Moore, D. Gust, W. Frasch, G. Steinberg, H. Vanegas and T. Harper, ACS 54th Northwest Regional Meeting, Portland, OR, June 20–23, 1999. (Invited, presented by T. A. Moore)

“An Artificial Photosynthetic Membrane,” D. Gust, T. A. Moore, A. L. Moore, Twenty-Third DOE Solar Photochemistry Research Conference, Granlibakken Conference center, Tahoe City, CA, June 6–9, 1999. (Invited, presented by D. Gust)

“Singlet Energy Transfer from Carotenoids to Cyclic tetrapyrroles in Artificial Antennas,” A. N. Macpherson, T. Gillbro, P. A. Liddell, E. Mariño, D. Gust, T. A. Moore, and A. L. Moore 12th International Carotenoid Symposium, Cairns, Australia, July 18–23, 1999. (Presented by A. L. Moore)

“Carotenoids in Artificial Photosynthesis,” A. L. Moore, T. A. Moore, D. Gust, H. Vanegas, P. A. Liddell, E. Mariño-Ochoa, T. Harper, A. N. Macpherson and T. Gillbro, 8th Congress of the

European Society for Photobiology, Granada, Spain, September 3–8, 1999. (Invited, presented by A. L. Moore)

“Singlet Energy Transfer from Carotenoids to Cyclic tetrapyrroles in Artificial Antennas,” A. N. Macpherson, T. Gillbro, P. A. Liddell, E. Mariño, D. Gust, T. A. Moore, and A. L. Moore, Interaction between Chlorophylls and Carotenoids in Photosynthesis, Workshop Sponsored by the European Science Foundation, Kemer-Antallya, Turkey, October, 7–11, 1999. (Invited, presented by A. L. Moore)

“Electron Transfer between Tetrapyrroles and Carotenoids,” T. A. Moore, A. L. Moore and D. Gust, Interaction between Chlorophylls and Carotenoids in Photosynthesis, Workshop Sponsored by the European Science Foundation, Kemer-Antallya, Turkey, October, 7–11, 1999. (Invited, presented by T. A. Moore)

“Artificial Photosynthesis,” T. A. Moore, A. L. Moore and D. Gust, Ninth Western Regional Photosynthesis Conference, Asilomar Conference Center, Pacific Grove, California, January 6–9, 2000. (Invited, presented by T. A. Moore)

“Progress towards Light-Driven Production of NAD^+ and t-NADPH Catalyzed by Transhydrogenase in an Artificial Photosynthetic Membrane: The Effect of NADH and t-NADP⁺ on the Artificial Proton Pump. T. F. Harper, H. Vanegas, J. Rydström, W. Frasch, A. L. Moore, D. Gust and T. A. Moore, Ninth Western Regional Photosynthesis Conference, Asilomar Conference Center, Pacific Grove, California, January 6–9, 2000. (Presented by T. F. Harper)

“Artificial Photosynthesis,” T. A. Moore, H. Vanegas T. F. Harper, A. Primak, P. A. Liddell, A. N. Macpherson, T. Gillbro, A. L. Moore, and D. Gust, Ninth Western Regional Photosynthesis Conference, Asilomar Conference Center, Pacific Grove, CA, January 6-9, 2000. (Presented by T. A. Moore)

“The synthesis of Fuel for Molecular Motors by an Artificial Photosynthetic Membrane,” T. A. Moore, A. L. Moore and D. Gust, Symposium CEA, Redox Proteins: Mechanisms and Catalysis, Paris, France, 4-5 May, 2000. (Presented by T. A. Moore)

“Artificial Photosynthesis,” T. A. Moore, A. L. Moore and D. Gust, Bioorganic Gordon Research Conference, Proctor Academy, Andover, NH, 18-23 June, 2000. (Presented by T. A. Moore)

“An Artificial Photosynthetic Membrane,” A. L. Moore, T. A. Moore, and D. Gust, 13th International Congress on Photobiology, San Francisco, CA, 1-6 July, 2000. (Presented by A. L. Moore)

“Design of a Photon-Assisted Green Battery,” T. A. Moore, A. L. Moore and D. Gust, First Joint Meeting on Modified Electrodes for Clean Energy Conversion, Matsushita Electric Industrial Co. Advanced Research Projects, Osaka, Japan, 5 June, 2000. (Presented by T. A. Moore)

“Synthesis of Photoactive Molecules for Photoelectrochemical Cells,” A. L. Moore, T. A. Moore and D. Gust, First Joint Meeting on Modified Electrodes for Clean Energy Conversion, Matsushita Electric Industrial Co. Advanced Research Projects, Osaka, Japan, 5 June, 2000. (Presented by A. L. Moore)

“Photoelectrochemical Cells Based on Photosynthetic Principles,” D. Gust, A. L. Moore and T. A. Moore, First Joint Meeting on Modified Electrodes for Clean Energy Conversion, Matsushita Electric Industrial Co. Advanced Research Projects, Osaka, Japan, 5 June, 2000. (Presented by D. Gust)

“Mimicking Bacterial Photosynthesis,” D. Gust, T. A. Moore and A. L. Moore, First International Conference on Porphyrins and Phthalocyanines, Dijon, June, 2000. (Presented by D. Gust.)

“Functional Nanostructures Based on Photosynthetic Concepts,” D. Gust, T. A. Moore, and A. L. Moore, Functional Nanostructures Symposium, 220th Annual Meeting of the American Chemical Society, Washington, August, 2000. (Presented by D. Gust.)

“Mimicry of Biological Energy Transduction Using Artificial Photosynthetic Membranes,” D. Gust, T. A. Moore, and A. L. Moore, Biological Electron Transfer Symposium, 220th Annual Meeting of the American Chemical Society, Washington, August, 2000. (Presented by D. Gust.)

“Molecular Photoelectrodes for Clean Energy Conversion,” D. Gust, T. A. Moore, and A. L. Moore, Second Joint Meeting on Modified Electrodes for Clean Energy Conversion, Matsushita Electric Industrial Co. Advanced Research Projects, Tempe, AZ, 29-30 October, 2000. (Presented by D. Gust)

“Photoactive materials based on photosynthetic concepts,” D. Gust, T. A. Moore, and A. L. Moore, Southeast/Southwest Combined Regional Meeting of the American Chemical Society, New Orleans, LA, December, 2000. (Presented by D. Gust.)

“Light-Driven Carbon Dioxide Fixation Catalyzed by an Artificial Photosynthetic Membrane,” D. Gust, K. Jardine, H. Vanegas, W. Frasc, A. L. Moore, and T. A. Moore, XVIII IUPAC Symposium on Photochemistry, Dresden, July, 2000.

“Light-Driven Carbon Dioxide Fixation Catalyzed by an Artificial Photosynthetic Membrane,” K. Jardine, H. Vanegas, W. Frasc, A. L. Moore, T. A. Moore and D. Gust, Thirteenth International Conference on Photochemical Conversion and Storage of Solar Energy, Snowmass, CO, July, 2000.

“Fullerenes and Artificial Photosynthesis,” D. Gust, T. A. Moore, A. L. Moore, P. A. Liddell, D. Kuciauskas, G. Kodis, J. Bahr, L. de la Garza, J. S. Lindsey, T. E. Johnson, and S. J. Weghorn, 221st National Meeting of the American Chemical Society, San Diego, CA, April, 2001. (Presented by D. Gust.)

“Artificial Photosynthesis,” A.L. Moore, T. A. More and D. Gust, XIIth Inter-American Photochemical Conference, Ascochinga, Cordoba, Argentina, 20-25 May 2001. (Presented by A. Moore)

“Function of Synthetic Carotenoid Pigments in Artificial Photosynthetic Reaction Centers,” T. Moore, A. L. Moore and T. A. Moore, Gordon Research Conference on Carotenoids, Ventura, CA, 14-19 Jan 2001. (Presented by T. Moore)

“Fullerenes and Artificial Photosynthesis,” D. Gust, T. A. Moore, A. L. Moore, P. A. Liddell, D. Kuciauskas, G. Kodis, J. Bahr, L. de la Garza, J. S. Lindsey, T. E. Johnson, and S. J. Weghorn,

221st National Meeting of the American Chemical Society, San Diego, CA, April, 2001.
(Presented by D. Gust)

“Molecular Modified Electrodes for Clean Energy Conversion,” D. Gust, T. A. Moore, A. L. Moore, Third Joint Meeting on Molecular Modified Electrodes for Clean Energy Conversion National Panasonic, Osaka, Japan, May, 2001. (Presented by D. Gust)

“Photoelectrodes II,” D. Gust, T. A. Moore, A. L. Moore, Third Joint Meeting on Molecular Modified Electrodes for Clean Energy Conversion National Panasonic, Osaka, Japan, May, 2001. (Presented by T. Moore)

“Design and Synthesis of Dyes for the Construction of Photoelectrodes for Clean Energy Conversion,” D. Gust, T. A. Moore, A. L. Moore, Third Joint Meeting on Molecular Modified Electrodes for Clean Energy Conversion National Panasonic, Osaka, Japan, May, 2001. (Presented by A. Moore)

“The Design and Synthesis of Artificial Photosynthetic Membranes”, T. A. Moore, A. L. Moore and D. Gust, 29th Annual Meeting of the American Society for Photobiology, Chicago, IL, 7-12 July, 2001. (Presented by T. Moore)

“Fullerenes as Components of Artificial Photosynthetic Constructs,” D. Gust, T. A. Moore, A. L. Moore, P. A. Liddell, G. Kodis, L. de la Garza, J. S. Lindsey and P. C. Clausen, 2001 Joint International Meeting of the Electrochemical Society and International Society of Electrochemistry, San Francisco, September, 2001, (Presented by D. Gust)

“Mimicking Photosynthetic Solar Energy Conversion,” 10th International Symposium on Novel Aromatics, San Diego, CA, August, 2001, (Presented by D. Gust)

“The Design and Synthesis of Artificial Photosynthetic Membranes,” 4th COE (Center of Excellence) International Symposium on Atomic Scale Processing and Novel Properties of Nanoscopic Materials, The Institute of Scientific and Industrial Research (ISIR), Osaka University, Osaka, Japan December 13-14, 2001. (Presented by T. Moore)

“Porphyrin-Fullerene Constructs as Artificial Antenna-Reaction Center Complexes”, D. Gust, T. A. Moore, A. L. Moore, International Conference on Tetrapyrrole Photoreceptors in Photosynthetic Organisms, Providence, RI July, 2001. (Presented by D. Gust.)

“Energy Conversion by Artificial Photosynthetic Membranes,” T. A. Moore, A. L. Moore and D. Gust, 12th International Congress on Photosynthesis, Brisbane, Australia, 19-23 August, 2001. (Plenary lecture presented by T. Moore.)

“Design and Function of Artificial Antennas,” A. N. Macpherson, P. A. Liddell, G. Kodis, E. Marino-Ochoa, T. E. Johnson, S. J. Weghorn, C. Clausen, T. Gillbro, J. Lindsey, D. Gust, T. A. Moore and A. L. Moore, 12th International Congress on Photosynthesis, Brisbane, Australia, 19-23 August, 2001. (Presented by A. Moore)

“Artificial Photosynthesis”, A. L. Moore, T. A. Moore, D. Gust, H. Vanegas Farfano, I. Bennett, A. Primak and P. A. Liddell, 9th Congress of the European Society for Photobiology, Lillehammer, Norway, 3-8 September, 2001, (Presented by A. Moore).

“The Design and Synthesis of Artificial Photosynthetic Antenna, Reaction Centers, and Membranes,” T. A. Moore, A. L. Moore, and D. Gust, Eleventh Western Regional Photosynthesis Conference, Asilomar Conference Center, Pacific Grove, CA, January 3-6, 2002. (Presented by T. A. Moore)

“Carotenoids in Artificial Photosynthesis”, A. N. Macpherson, P.A. Liddell, G. Kodis, E. Mariño-Ochoa, T Gillbro, X. D. Cui, A. Primak, X. Zárata, J. Tomfohr, G. Ramachandran, O. Sankey, S. M. Lindsay, D. Gust, T. A. Moore and A. L. Moore, Photo-Science 2002, La Habana, Cuba, January 28–February 2, 2002 (Plenary lecture, presented by A. Moore)

“Molecular Modified Electrodes for Clean Energy Conversion,” D. Gust, T. A. Moore, A. L. Moore, Joint Meeting on Molecular Modified Electrodes for Clean Energy Conversion National Panasonic, Osaka, Japan, June, 2002. (Presented by A. Moore)

"Photoelectrodes II," D. Gust, T. A. Moore, A. L. Moore, Joint Meeting on Molecular Modified Electrodes for Clean Energy Conversion National Panasonic, Osaka, Japan, June, 2002. (Presented by T. Moore)

“Photoelectrodes III,” D. Gust, T. A. Moore, A. L. Moore, Joint Meeting on Molecular Modified Electrodes for Clean Energy Conversion National Panasonic, Osaka, Japan, June, 2002. (Presented by D. Gust)

“Artificial Photosynthetic Antennas and Reaction Centers”, R. Palacios, E. Mariño-Ochoa, Ch. Herrero, G. Kodis, P. A. Liddell, A. N. Macpherson, D. Gust, T. A. Moore and A. L. Moore, VII Elafot, Viña del Mar, Chile, November 19–23, 2002 (Plenary lecture, presented by A. Moore)

“Hybrid Photoelectrochemical Cell”, A. L. Moore, D. Gust, T. A. Moore, T. Sotomura, L. de la Garza, G. Jeong and P. A. Liddell, 225th ACS National Meeting, New Orleans, Louisiana, March 23–27, 2003. (Presented by A. Moore)

“Artificial Photosynthesis I,” EPA Summer School, New Perspectives in Photochemistry, Egmond aan Zee, The Netherlands, 28 June–2 July, 2003 (Presented by T. Moore)

“Artificial Photosynthesis II,” EPA Summer School, New Perspectives in Photochemistry, Egmond aan Zee, The Netherlands, 28 June–2 July, 2003 (Presented by A. Moore)

“Artificial Photosynthesis III,” EPA Summer School, New Perspectives in Photochemistry, Egmond aan Zee, The Netherlands, 28 June–2 July, 2003 (Presented by A. Moore)

“Artificial Photosynthesis IV,” EPA Summer School, New Perspectives in Photochemistry, Egmond aan Zee, The Netherlands, 28 June–2 July, 2003 (Presented by T. Moore)

“Control of Energy and Electron Flow in Artificial Photosynthetic Antennas and Reaction Centers,” T. A. Moore, A. L. Moore, D. Gust, 10th Congress of the European Society for Photobiology, Vienna, Austria, 9 September, 2003. (Presented by T. Moore)

“Mimicking the Photosynthetic Function of Carotenoid Polyenes” Ana L. Moore, Gerdenis Kodis, Paul A. Liddell, Rodrigo Palacios, William Thompson, Stephanie Gould, John T. M. Kennis, Rienk van Grondelle, Alisdair N. Macpherson, Tomas GillbroThomas A. Moore and Devens Gust, 10th Congress of the European Society for Photobiology, Vienna, Austria, 6 September, 2003. (Presented by A. Moore).

“Mimicking Bacterial Photosynthetic Function” P. A. Liddell, G. Kodis, L. de la Garza, M. Hambourger, A. Brune, A. L. Moore, T. A. Moore, and D. Gust, Twenty-Seventh DOE Solar Photochemistry Research Conference, Warrenton, VA, 6–9 June, 2004. (Presented by D. Gust)

“Artificial Photosynthesis,” S. L. Gould, C. Herrero, R. E. Palacios, G. Kodis, P. A. Liddell, D. Gust, T. A. Moore, and A. L. Moore, 15th International Conference on Photochemical Conversion and Storage of Solar Energy, Paris, 4–9 July, 2004. (Presented by A. L. Moore)

“Artificial Photosynthesis and Bio-inspired Catalysis: Paradigms For Sustainable Energy Production,” T. A. Moore, A. L. Moore, and D. Gust, 32nd Annual Meeting American Society for Photobiology, Seattle, WA, 10–14 July, 2004. (President's Lecture presented by T. Moore)

“Bio-Inspired Energy Conversion” R. E. Palacios, S. L. Gould. C. Herrero, M. Hambourger, G. Kodis, P. A. Liddell, D. Gust, T. A. Moore and A. L. Moore, XX IUPAC Symposium on Photochemistry, Granada, Spain, 17–22 July, 2004. (Presented by A. Moore)

“Concatenation of Antenna Function and Photoinduced Electron Transfer in Porphyrin-Containing Molecular Systems,” D. Gust, T. A. Moore and A. L. Moore, 3rd International Conference on Porphyrins and Phthalocyanines, New Orleans, LA, July, 2004. (Presented by D. Gust)

“Energy and Electron Transfer in Artificial Photosynthesis,” A. L. Moore, T. A. Moore and D. Gust, Electron Donor Acceptor Gordon Research Conference, Newport, RI, 8–13 August, 2004. (Presented by A. Moore)

“Porphyrin-Based Molecules for Artificial Photosynthesis, Photonics and Optoelectronics,” D. Gust, T. A. Moore and A. L. Moore, 228th American Chemical Society Annual Meeting, Philadelphia, PA, August, 2004. (Presented by D. Gust)

“Photochromic Control of Photoinduced Electron Transfer,” D. Gust, T. A. Moore and A. L. Moore, 4th International Symposium on Photochromism, Photo-switchable Molecular Systems and Devices, Arcachon, France, September, 2004. (Presented by D. Gust)

“Photosensitive Molecules,” A. L. Moore, T. A. Moore, D. Gust, Open Workshop on Molecular Modified Electrodes for Clean Energy Conversion, National Panasonic, Tokyo, Japan, 1 October, 2004. (Presented by A. Moore)

“Photoelectrodes,” T. A. Moore, A. L. Moore, D. Gust, Open Workshop on Molecular Modified Electrodes for Clean Energy Conversion National Panasonic, Tokyo, Japan, 1 October, 2004. (Presented by T. Moore)

“Photobiohybrid Cell,” D. Gust, T. A. Moore, A. L. Moore, Open Workshop on Molecular Modified Electrodes for Clean Energy Conversion National Panasonic, Tokyo, Japan, 1 October, 2004. (Presented by D. Gust).

“Photosynthetic Mimics by Organic Chemistry,” A. L. Moore, T. A. Moore, and D. Gust, Accademia Nazionale dei Lincei Fondazione "Guido Donegani", Convegno International, Chemistry and Biology: The Transition Between the Two Centuries, Rome, 8–10 November, 2004. (Presented by A. Moore).

“Artificial Photosynthetic Reaction Centers with Porphyrins as Primary Electron Acceptors,” Rodrigo E. Palacios, Gerdenis Kodis, S. L. Gould, L. de la Garza, A. Brune, D. Gust, T. A. Moore, and A. L. Moore, Encuentro Latinoamericano de Fotoquímica y Fotobiología, La Plata, Argentina, 8–12 November (Presented by Rodrigo Palacios).

“Light-Harvesting and Photoprotective Functions of Carotenoids in Compact Artificial Photosynthetic Antenna Designs,” G. Kodis, C. Herrero, R. Palacios, E. Marino-Ochoa, J. T. M. Kennis, D. Gust, T. A. Moore and A. L. Moore, 15th Inter-American Photochemical Society, Tempe, AZ, 1–4 January 2004. (Presented by G. Kodis).

“Synthesis and Photophysics of Artificial Photosynthetic Reaction Centers with Porphyrins as Primary Electron Acceptors,” S. L. Gould, G. Kodis, R. Palacios, L. de la Garza, D. Gust, T. A. Moore and A. L. Moore, 15th Winter Conference of the Inter-American Photochemical Society, Tempe, AZ, 1–4 January 2004. (Presented by S. Gould).

“Photonic Switching of a Long-Lived Charge Separated State in a Dihydropyrene-Porphyrin-C60 Triad,” P. A. Liddell, G. Kodis, J. Andréasson, L. de la Garza, S. Bandyopadhyay, R. H. Mitchell, T. A. Moore, A. L. Moore and D. Gust, 15th Winter Conference of the Inter-American Photochemical Society, Tempe, AZ, 1–4 January 2004. (Presented by J. Andréasson).

“Photonic Control of Photoinduced Electron Transfer in a Porphyrin-Dihydroindolizine Dyad,” Y. Terazono, G. Kodis, J. Andréasson, G. Jeong, A. Brune, T. Hartmann, H. Dürr, A. L. Moore, T. A. Moore and D. Gust, 15th Winter Conference of the Inter-American Photochemical Society, Tempe, AZ, 1–4 January 2004. (Presented by Y. Terazono).

“A Novel Amphiphilic Fullerene-Porphyrin-Carotene Triad,” S. Straight, P. A. Liddell, A. L. Moore, T. A. Moore, D. Gust, 15th Winter Conference of the Inter-American Photochemical Society, Tempe, AZ, 1–4 January 2004. (Presented by S. Straight).

“Light-Harvesting and Photoprotective Functions of Carotenoids in Compact Artificial Photosynthetic Antenna Designs,” G. Kodis, C. Herrero, R. Palacios, E. Marino-Ochoa, J. T. M. Kennis, D. Gust, T. A. Moore and A. L. Moore, Gordon Research Conference on Carotenoids, Ventura, CA, 4–9 January 2004. (Presented by A. Moore).

“Design and synthesis of artificial reaction centers based on purpurins covalently attached to electron acceptors and donors,” S. Gould, G. Kodis, R. Palacios, P. A. Liddell, A. L. Moore T. A. Moore and D. Gust, ACS-PRF Summer School on Green Chemistry, Pittsburg, 31 July–7 August 2004 (Presented by S. Gould)

“Artificial Photosynthesis and Hydrogen Production: Strategies for Sustainable Energy Production,” T. A. Moore, A. L. Moore, D. Gust, M. Hambourger and A. Brune, 13th International Congress of Photosynthesis, Montréal, 29 August–3 September 2004. (Presented by T. Moore).

“Synthesis and Photophysics of Artificial Photosynthetic Reaction Centers with Porphyrins as Primary Electron Acceptors,” S. L. Gould, G. Kodis, R. Palacios, L. de la Garza, D. Gust, T. A. Moore and A. L. Moore, Open Workshop on Molecular Modified Electrodes for Clean Energy Conversion National Panasonic, Tokyo, Japan, 1 October 2004. (Presented by D. Gust, T. A. Moore and A. L. Moore).

“Artificial Photosynthesis and Bio-Inspired Catalysis: Paradigms for Sustainable Energy Production,” M. Hambourger, A. Brune, D. Gust, A. Moore, T. Moore, Open Workshop on Molecular Modified Electrodes for Clean Energy Conversion National Panasonic, Tokyo, Japan, 1 October 2004. (Presented by D. Gust, T. A. Moore and A. L. Moore).

“A Molecular Double-Throw Switch Based on Photochromic Control of Photoinduced Electron Transfer”, by S. Straight, J. Andreasson, G. Kodis, A. Moore, T. Moore and D. Gust, Symposium "Fullerenes, Nanotubes, and Carbon Nanostructures: Electron Transfer and Its Applications", of the 207th Meeting of The Electrochemical Society. Quebec City Convention Center, in Quebec City, Canada from May 15 to May 20, 2005. (Presented by S. Straight).

“Stepwise sequential and parallel photoinduced charge separation in a porphyrin-triquinone tetrad,” J. W. Springer, G. Kodis, L. de la Garza, A. L. Moore, T. A. Moore, D. Gust, Abstracts of Papers, 229th ACS National Meeting, San Diego, CA, March, 2005, ORGN-939. (Presented by J. Springer).

“Concatenation of antenna function and photoinduced electron transfer in porphyrin-containing molecular systems,” D. Gust, T. A. Moore, A. L. Moore, 6th International Conference on Tetrappyrrole Photoreceptors in Photosynthetic Organisms”, Lucerne, Switzerland, September, 2005. (Plenary lecture presented by D. Gust)

“Biomimetic approaches and role of biological processes as paradigms for solar to fuel,” T. Moore, A. Moore and D. Gust, LBNL Workshop “Solar to Fuel - Future Challenges and Solutions,” Berkeley, CA, 28-29 March 2005. (Presented by T. Moore)

“Photochemical Energy Conversion and Storage using Bioinspired Systems” T. Moore, A. Moore, and D. Gust, Panel 2A Bioinspired Assemblies for Photochemical Energy Conversion, DOE BES Solar Workshop, Washington DC, 18 April 2005. (Presented by T. Moore)

“Biomimetic approaches and role of biological processes as paradigms for solar to fuel,” T. Moore, A. Moore and D. Gust, SOLAR- H Workshop, Saint-Rémy-lès-Chevreuse, France, 17-20 May 2005. (Presented by T. Moore)

“Synthetic Carotenoids Reveal New Photophysics and Functions. The Role of Carotenoids in Artificial Photosynthesis and Bio-inspired Catalysis: Paradigms For Sustainable Energy Production,” T. Moore, A. Moore and D. Gust, International Carotenoid Society 2005 Symposium, Edinburgh, Scotland, 17-22 July 2005. (Presented by T. Moore)

“Energy Conversion Involving Carotenoid Polyenes,” A. Moore, T. Moore and D. Gust, 230th ACS National Meeting, Washington, DC, USA, August 28 – September 1, 2005. (Presented by A. Moore)

“From Photosynthesis to Photonic Molecular Switches Based on Fullerenes,” D. Gust, T. Moore, and A. Moore, 11th Congress of the European Society for Photobiology, Aix-les-Bains, France, September 3–8, 2005. (Presented by D. Gust)

“Energy Conversion Involving Carotenoid Polyenes,” A. Moore, T. Moore, and D. Gust, 11th Congress of the European Society for Photobiology, Aix-les-Bains, France, September 3–8, 2005. (Presented by A. Moore)

“Photophysical studies of synthetic carotenoid pigments incorporated into dyads and triads,” T. Moore, A. Moore, D. Gust, G. Kodis, R. Palacios, C. Herrero, R. Berera, J. Kennis, Pacificchem 2005 Congress, Honolulu, HI, December, 2005. (Presented by J. Kennis)

“Molecular Logic Gates Based on Manipulation of Porphyrin Fluorescence,” S. D. Straight, J. Andreasson, G. Kodis, P. A. Liddell, Y. Terazono, S. Bandyopadhyay, R. H. Mitchell, A. L. Moore, T. A. Moore and D. Gust, Pacificchem 2005 Congress, Honolulu, HI, December, 2005. (Presented by S. D. Straight)

“Artificial photosynthetic antenna-reaction center complexes,” D. Gust, T. A. Moore, A. L. Moore, Y. Terazono, P. A. Liddell, G. Kodis, and V. Garg, Pacificchem 2005 Congress, Honolulu, HI, December, 2005. (Presented by D. Gust)

“Molecular AND and INHIBIT gates based on photochromic control of porphyrin fluorescence,” S. D. Straight, J. Andreasson, G. Kodis, S. Bandyopadhyay, R. H. Mitchell, A. L. Moore, T. A. Moore, and D. Gust, Pacificchem 2005 Congress, Honolulu, HI, December, 2005. (Presented by S. Straight)

“Exploring paradigms of natural photosynthesis: energy and electron transfer in artificial antenna-reaction center complexes,” G. Kodis, Y. Terazono, P. A. Liddell, V. Garg, C. Herrero, R. E. Palacios, M. Hamburger, R. Berera, J. T. M. Kennis, T. A. Moore, A. L. Moore, D. Gust, 40th Western Regional Meeting of the American Chemical Society, Anaheim, CA, January, 2006. (Presented by G. Kodis). Contributed.

“Synthesis and Characterization of Biomimetic Models for the electron transfer between P680 and Tyrosine Z,” G. F. Moore, M. Hamburger, G. Kodis, P. A. Liddell, D. Gust, A. L. Moore and D. Gust, Western Photosynthesis Conference, Pacific Grove, California, 5–8 January, 2006. (Presented by G. F. Moore). Invited

“Photochemical Hydrogen Evolution: Bio-Hybrid Catalysis,” M. Hambourger, Wes Giron, R. Mehlhorn, A. Brune, P. A. Liddell, D. Gust, A. L. Moore and T. A. Moore, Western Photosynthesis Conference, Pacific Grove, California, 5–8 January, 2006. (Presented by M. Hambourger). Invited

“Energy Conversion Involving Carotenoid Polyenes,” Gerdenis Kodis, Yuichi Terazono, John Kennis, Paul A. Liddell, Rudi Berera, Rodrigo Palacios, Stephanie Gould, Christian Herrero, Rienk van Grondelle, Tom Moore, Devens Gust and Ana L. Moore, 15th Western Photosynthesis Conference, 5–8 January, 2006, Pacific Grove, California. (Presented by A. Moore). Invited–symposium organizer.

“Transitions to Sustainable Energy Systems,” T. A. Moore, A. L. Moore and D. Gust, Inter-Academy Council Workshop on Energy, Lawrence Berkeley National Laboratory, Berkeley, C., 5–6 January 2006. (Presented by T. Moore). Invited.

“Bio-inspired constructs for solar energy conversion,” T. A. Moore, A. L. Moore, and D. Gust, American Physical Society March Meeting, Baltimore, MD, 14 March 2006. (Presented by T. Moore). Invited.

“Molecular Switches and Logic Gates Based on Photochromes,” D. Gust, T. A. Moore, A. L. Moore, XXI IUPAC Symposium on Photochemistry, Kyoto, Japan, April, 2006. (Presented by D. Gust). Invited.

“Photonic Switching of Energy Transfer in a Photochromic Triad. Molecule-Based Half-Adder,” J. Andréasson, S. D. Straight, B. Albinsson, T. A. Moore, A. L. Moore, D. Gust, XXI IUPAC Symposium on Photochemistry, Kyoto, Japan, April, 2006. (Presented by J. Andréasson).

“Concatenation of Antenna Function and Photoinduced Electron Transfer in Artificial Photosynthetic Molecules,” D. Gust, T. A. Moore, A. L. Moore, 2006 Materials Research Society Spring Meeting, San Francisco, April, 2006. (Presented by D. Gust). Invited.

“Transitions to Sustainable Energy Systems: Combining Technology with Biology for Efficient Solar Energy Conversion,” T. Moore, A. Moore and D. Gust, SOLAR- H Workshop, Gelsenkirchen, Germany, April, 2006. (Presented by T. Moore). Invited.

“Photochemical Switches and Logic Gates,” D. Gust, T. A. Moore, A. L. Moore, 7th International Symposium on Functional π -Electron Systems, Osaka, Japan, May, 2006. (Presented by D. Gust). Invited

“Concatenation of Antenna Function and Photoinduced Electron Transfer in Porphyrin-Containing Molecular Systems,” D. Gust, T. A. Moore, A. L. Moore, 28th DOE Solar Photochemistry Research Conference, Airlie, VA, June, 2006. Invited.

“Photochemistry of Artificial Photosynthetic Antenna-Reaction Center Complexes,” D. Gust. T. A. Moore, A. L. Moore, 17th Inter-American Photochemical Society Winter Conference, Salvador, Bahia, Brazil, June, 2006. (Presented by D. Gust). Invited

“Biomimetic Modeling of Electron Transfer Between P680 and Tyrosine Z in PSII,” Gary F. Moore, Michael Hambourger, Gerdenis Kodis, Miguel Gervaldo, Devens Gust, Thomas A. Moore and Ana L. Moore. 17th Inter-American Photochemical Society Winter Conference June 11–16, 2006, Salvador, Bahia, Brazil. (Presented A. Moore). Contributed.

“A Hybrid Photobioelectrochemical Cell Producing Either Electricity or Hydrogen,” M. Hambourger, W. Giron, P. Liddell, D. Gust, A. Moore, T. Moore, 17th Inter-American Photochemical Society Winter Conference, 11–16 June 2006, Salvador, Bahia, Brazil. (Presented by T. Moore). Contributed.

“Artificial Photosynthesis and Bio-inspired Constructs for Solar Energy Conversion,” T. A. Moore, A. L. Moore, D. Gust, 16th International Conference on Photochemical Conversion and Storage of Solar Energy, Uppsala, Sweden, July, 2006. (Presented by T. Moore). Invited.

“Bioinspired Energy Conversion Schemes,” Ana L. Moore, Gary F. Moore, Michael Hambourger, Gerdenis Kodis, Miguel Gervaldo, Paul Liddell, Devens Gust and Thomas A. Moore. 20th International Symposium on Radical Ion Reactivity, July 2–6, 2006, Rome, Italy. (Presented by A. Moore). Invited.

“Porphyrin-based molecular switches and logic gates,” D. Gust, T. A. Moore, A. L. Moore, 4th International Conference on Porphyrins and Phthalocyanines, Rome, Italy, July, 2006. (Presented by D. Gust). Contributed.

“Bioinspired Energy Conversion Schemes,” Gary F. Moore, Michael Hambourger, Gerdenis Kodis, Miguel Gervaldo, Paul Liddell, Devens Gust, Thomas A. Moore and Ana L. Moore, 33rd ASP Meeting, July 8–13, 2006, Puerto Rico. (Presented by A. Moore). Invited.

“A Discussion of Bio and Bio-inspired Solutions to Provide Global-Scale Sustainable Energy for Human Use,” T. A. Moore, A. L. Moore, D. Gust, ASP Photobiology School, 33rd Meeting of the American Society for Photobiology, San Juan, Puerto Rico, 8–12 July 2006. (Presented by T. Moore). Invited.

“Bioinspired Energy Conversion Schemes,” Ana L. Moore, Thomas A. Moore and Devens Gust, GRC on Chemistry and Biology of Tetrapyrroles, July 23–28, 2006, Salve Regina, Newport, Rhode Island. (Presented by A. Moore). Invited.

“Synthesis and Characterization of Biomimetic Models for the electron transfer between P680 and Tyrosine Z,” G. F. Moore, M. Hambourger, G. Kodis, P. A. Liddell, D. Gust, A. L. Moore and D. Gust, Electron Donor Acceptor Interactions Gordon Research Conference, August, 2006, Salve Regina, Newport, Rhode Island. (Presented by G. F. Moore). Contributed.

“Integrated Artificial Photosynthetic Antennas and Reaction Centers,” D. Gust, Y. Terazono, P. A. Liddell, G. Kodis, V. Garg, J. Andréasson, M. Hambourger, T. A. Moore, and A. L. Moore, 62nd Southwest Regional Meeting of the American Chemical Society, Houston, TX, October, 2006. (Presented by D. Gust). Invited.

“Light-Driven Proton Pumping Across Planar Supported Lipid Bilayers,” K. S. Orosz, T. W. McBee, C. Ge, L. Wang, Z. Sui, A. L. Moore, D. Gust, T. A. Moore, N. R. Armstrong, and S. S.

Saavedra, 19th Rocky Mountain Regional Meeting of the American Chemical Society, Tucson, AZ, October, 2006. Contributed.

“Molecular Logic Based on Porphyrins, Fullerenes and Photochromes,” D. Gust, T. A. Moore, A. L. Moore, POLYMEX 2006, Huatulco, Mexico, November, 2006. (Presented by D. Gust). Invited.

“Bioinspired Energy Conversion Schemes,” Gary F. Moore, Michael Hambourger, Gerdenis Kodis, Miguel Gervaldo, Paul Liddell, Devens Gust, Thomas A. Moore and Ana L. Moore, 233rd ACS National Meeting Chicago, March 25–29, 2007. (Presented by A. L. Moore). Invited.

“Supramolecular Structures for Photochemical Energy Conversion,” D. Gust, T. A. Moore and A. L. Moore, 29th DOE Solar Photochemistry Research Conference, Airlie, VA, June 10–13, 2007. (Presented by D. Gust and A. L. Moore). Invited.

“Bioinspired Energy Conversion Schemes,” A. L. Moore, T. A. Moore, and D. Gust, Photochemistry Gordon Research Conference, Bryant University, Smithfield, RI, July 8–13, 2007. (Presented by A. L. Moore). Invited.

“Photoelectrochemical Hydrogen Generation: The Effect of Redox Poise on Biocatalyst Interfaces,” M. Hambourger, M. Gervaldo, D. Svedruzic, P. W. King, D. Gust, M. Ghirardi, A. L. Moore and T. A. Moore, 2007 Western Photosynthesis Conference, Asilomar, CA, January 4–7, 2007. (Presented by M. Hambourger).

“Artificial Photosynthesis: Combining Technology with Biology for Efficient Solar Energy Conversion,” T. A. Moore, M. Hambourger, G. F. Moore, A. L. Moore and D. Gust, Gordon Research Conference on Renewable Energy: Solar Fuels, January 21–26, 2007, Ventura, CA. (Presented by T. Moore). Invited.

“Photochemical Switches and Logic Gates,” D. Gust, J. Andréasson, S. D. Straight, T. A. Moore, A. L. Moore, International Conference on Molecular Machines and Sensors, Shanghai, China, May, 2007. (Presented by D. Gust). Invited.

“Artificial Photosynthesis: Combining Technology with Biology for Efficient Solar Energy Conversion,” T. A. Moore, A. L. Moore and D. Gust, Chemical Sciences Roundtable – Bioinspired Fundamental Chemistry for Energy, Board of Chemical Sciences and Technology, National Academies of Science, Washington, May 14–15, 2007. (Presented by T. Moore). Invited

“Artificial Photosynthesis: Combining Technology with Biology for Efficient Solar Energy Conversion,” T. A. Moore, A. L. Moore and D. Gust, Solar Energy and Artificial Photosynthesis, The Royal Society, London, July 17–19, 2007. (Presented by T. Moore). Invited.

“Photochemical Switches and Logic Gates,” D. Gust, J. Andréasson, S. D. Straight, T. A. Moore, A. L. Moore, 13th International Conference on Unconventional Photoactive Systems, Evanston, IL, August, 2007. (Presented by D. Gust). Invited.

“Hydrogen Production in a Hybrid Photoelectrochemical Biofuel Cell,” T. A. Moore, A. L. Moore and D. Gust, The 8th International Hydrogenase Conference, Breckenridge, CO, August 5–10, 2007. (Presented by T. Moore). Invited.

“Solar Power Plants: What Photosynthesis Can Teach Us About Energy Conversion,” D. Gust, T. A. Moore, A. L. Moore, ISOF Bologna, Italy, September, 2007. (Presented by D. Gust). Invited.

“Artificial Photosynthesis: Combining Technology with Biology for Efficient Solar Energy Conversion,” T. A. Moore, A. L. Moore and D. Gust, Energy and Climate Change Workshop, San Juan de Puerto Rico, September 14, 2007. (Presented by T. A. Moore). Invited.

“Artificial Photosynthesis,” T. A. Moore, A. L. Moore and D. Gust, Energy and Climate Change Workshop, San Juan de Puerto Rico, September 14, 2007. (Presented by A. L. Moore). Invited.

“Molecular Logic Elements via Photochromic Manipulation of Energy Transfer,” D. Gust, S. D. Straight, J. Andreasson, G. Kodis, C.-D. Park, Y. Terazono, M. Hambourger, M. Gervaldo, A. L. Moore, T. A. Moore, 7th International Symposium on Photochromism, Vancouver, BC, October, 2007. (Presented by D. Gust). Invited.

“Bioinspired constructs that mimic the electron transfer between P680 and the OEC,” A. L. Moore, G. Moore, T. A. Moore, D. Gust, Rudi Berera Symposium, November 26, 2007 Vrije Universiteit, Amsterdam. (Presented by A. Moore). Invited.

“Artificial Photosynthesis: Combining Technology with Biology for Efficient Solar Energy Conversion,” T. A. Moore, A. L. Moore, and D. Gust, Rudi Berera Symposium, Vrije Universiteit, Amsterdam, November 26, 2007. (Presented by T. Moore). Invited.

“Immobilization of Fe-Fe Hydrogenase on Carbon: Electrochemical Characterization and Photoelectrochemical Hydrogen Generation,” M. Hambourger, D. Svedruzic, M. Gervaldo, P. W. King, P. A. Liddell, D. Gust, M. Ghirardi, A. L. Moore, T. A. Moore, Gordon Research Conference on Renewable Energy: Solar Fuels, Ventura, California, January 21–26, 2007. (Poster presentation by M. Hambourger). Contributed.

“[FeFe]-Hydrogenase in a Photoelectrochemical Cell,” M. Hambourger, M. Gervaldo, D. Svedruzic, P. W. King, D. Gust, M. Ghirardi, A. L. Moore, T. A. Moore, 8th International Hydrogenase Conference, Breckenridge, Colorado, August 5–9, 2007. (Poster presentation by M. Hambourger). Contributed.

“Bioinspired Constructs that Mimic the Electron Transfer Between P680^{•+} and Tyrosine Z in Photosystem II,” G. F. Moore, M. Hambourger, G. Kodis, A. Keirstead, M. Gervaldo, D. Gust, A. L. Moore, T. A. Moore, 17th Western Photosynthesis Conference, Asilomar Conference Center Pacific Grove, California 3–6 January, 2008. (Poster presentation by G. Moore). Contributed

“Bioinspired Energy Conversion Schemes,” G. F. Moore, M. Hambourger, G. Kodis, M. Gervaldo, P. Liddell, D. Gust, T. A. Moore, A. L. Moore, 17th Western Photosynthesis Conference, Asilomar Conference Center Pacific Grove, California 3–6 January, 2008. (Presented by A. L. Moore). Invited.

“Energy Conversion Schemes Inspired by Photosynthesis,” G. F. Moore, M. Hambourger, G. Kodis, M. Gervaldo, A. Keirstead, P. Liddell, D. Gust, T. A. Moore and A. L. Moore, 91st Canadian Chemistry Conference, Edmonton, Alberta, Canada, 24–28 May, 2008. (Presented by A. L. Moore). Invited.

“Bioinspired Energy Conversion Schemes,” G. F. Moore, M. Hambourger, G. Kodis, M. Gervaldo, A. Keirstead, P. Liddell, D. Gust, T. A. Moore and A. L. Moore, ICPP-5 Moscow, Russia, 6–11 July, 2008. (Presented by A. L. Moore). Invited.

“Artificial Photosynthesis: Combining Technology with Biology for Efficient Solar Energy Conversion,” T. A. Moore, A. L. Moore, D. Gust, M. Hambourger, G. Moore, Amy Keirstead, Miguel Gervaldo, Division of Industrial & Engineering Chemistry: Session NanoPower: Creating Energy for the Future, 235th American Chemical Society National Meeting, New Orleans, LA, April 6, 2008. (Presented by T. Moore). Invited.

“Artificial Photosynthesis and Bio-Inspired Chemistry: Combining Technology with Biology for Efficient Solar Energy Conversion” A. L. Moore, D. Gust, T. A. Moore, AVS 55th International Symposium & Exhibition, Biomaterial Interfaces Symposium, Boston, MA, October 19, 2008. (Presented by T. Moore). Invited.

“A Bioinspired Construct that Mimics the Proton Coupled Electron Transfer Between P680⁺ and the TyrZ-His190 Pair of Photosystem II,” G. F. Moore, M. Hambourger, M. Gervaldo, A. Keirstead, G. Kodis, O. G. Poluektov, T. Rajh, D. Gust, T. A. Moore, and A. L. Moore, 2008 DOE Solar Photochemistry Research Conference, Wintergreen, VA, June, 2008. Invited.

“Bioinspired Approaches to Photovoltaics,” D. Gust, T. A. Moore, A. L. Moore, PV 2008 Workshop on Photovoltaics, Rio Rico, AZ, October, 2008. (Presented by D. Gust). Invited

“Bioinspired Approaches to Solar Energy Conversion,” D. Gust, T. A. Moore, A. L. Moore, Arizona Workshop on Renewable Energy, Tempe, AZ, November, 2008. (Presented by D. Gust). Invited

“Design of a Photoelectrochemical Biofuel Cell for Hydrogen Production,” A. L. Moore, T. A. Moore, D. Gust, Arizona Workshop on Renewable Energy, Tempe, AZ, November, 2008. (Presented by A. L. Moore). Invited

“Bioinspired Approaches to Solar Energy Conversion”, D. Gust, T. A. Moore, A. L. Moore, Securing Our Energy Future: Next Generation Photovoltaics and Solar Fuels, University of North Carolina at Chapel Hill, Chapel Hill, NC, January, 2009. (Presented by D. Gust). Invited

“Porphyrin-Based Hole Conducting Electropolymer,” M. Gervaldo, P. Liddell, J. Bridgewater, A. Keirstead, S. Lin, T. Moore, A. Moore, D. Gust, 213th ECS Meeting, Phoenix, AZ, May, 2008. (Presented by M. Gervaldo.)

“Integration of [FeFe]-Hydrogenase into a Photoelectrochemical Biofuel Cell,” M. Hambourger, M. Gervaldo, D. Svedruzic, P. King, D. Gust, M. Ghirardi, A. Moore, T. Moore, 213th ECS Meeting, Phoenix, AZ, May, 2008. (Presented by M. Hambourger.)

“Light-driven proton transport across planar supported lipid bilayers on a poly(aniline)-based pH sensor,” K. Orosz, T. McBee, C. Ge, A. L. Moore, D. Gust, T. A. Moore, N. R. Armstrong, S. S. Saavedra, Pittcon 2008, New Orleans LA, March, 2008.

“Design of Catalyst-Sensitizer Assemblies for Visible Light Water Photolysis,” T. A. Moore, D. Gust and A. L. Moore, US-Argentina Workshop on Nanomaterials, Bariloche, Argentina, March 15–17, 2009. (Presented by A. L. Moore). Invited

“Artificial Photosynthesis,” A. L. Moore, D. Gust and T. A. Moore, Conferencia: Energía y Cambio Climático, Universidad Complutense de Madrid, Madrid, España, 6 March 2009. (Presented by A. L. Moore). Invited

“72 Billion People on Earth? You must be crazy - J. Diamond. Energy, Finite Resources and Near-Infinite Technology,” A. L. Moore, D. Gust and T. A. Moore, Conferencia: Energía y Cambio Climático, Universidad Complutense de Madrid, Madrid, España, 6 March 2009. (Presented by T. Moore). Invited

“Biological, Hybrid, & Bio-Inspired Materials for Efficient Energy Conversion,” A. L. Moore, D. Gust and T. A. Moore, US-Argentina Workshop on Nanomaterials, Bariloche, Argentina, March 15–17, 2009. (Presented by T. Moore). Invited

“Engineering Stability and Adaptability into Solar Cells,” J. Zaks, D. Gust, A. Moore, T. Moore and G. Fleming, Helios SERC retreat, Berkeley CA, 27 March 2009. (Presented by T. Moore). Invited

“Bioinspired Solar Energy Conversion: What We Can Learn from Photosynthesis,” D. Gust, T. A. Moore and A. L. Moore, Energy for the 21st Century Symposium, University of Rochester, Rochester, NY, April, 2009 (Presented by D. Gust). Invited

“Biological, Hybrid, & Bio-Inspired Systems for Efficient Energy Conversion,” A. L. Moore, D. Gust and T. A. Moore, 2nd Annual ANSER Solar Energy Symposium Northwestern University, 5–6 May 2009. (Presented by T. Moore). Invited

“The Long-Term Future of Artificial Photosynthesis,” A. L. Moore, D. Gust and T. A. Moore, Workshop sponsored by DOE Basic Energy Sciences, “What is the Efficiency of Photosynthesis?” Albuquerque, NM, May 23–24, 2009. (Presented by T. Moore). Invited

“Bioenergy I: Hydrogen,” A. L. Moore, D. Gust and T. A. Moore, Gordon Research Conference on Photosynthesis, Bryant University, Smithfield, RI, 28 June–3 July, 2009. (Introductory lecture to session on biohydrogen presented by T. Moore). Invited

“Combining Biology with Technology for the Sustainable Production and Use of Fuels,” D. Gust, A. L. Moore and T. A. Moore, Federation of European Biochemical Societies (FEBS 2009), Prague, Czech Republic, 5 July 2009. (Presented by T. Moore). Invited

“Synthetic Photosynthesis,” T. A. Moore, A. L. Moore and D. Gust, Synthetic Biology Workshop, Danish-American collaboration on Synthetic Biology, Berkeley, CA, 23-25 July 2009. (Presented by T. Moore)

“Photoinduced Electron Transfer and Its Regulation in Synthetic Molecular Systems,” A. L. Moore, D. Gust and T. A. Moore, 215th ECS meeting, San Francisco, May 24–29, 2009. (Presented by A. L. Moore). Invited

“Artificial Photosynthetic Constructs for Fuel Production,” A. L. Moore, D. Gust and T. A. Moore Gordon Research Conference on Photosynthesis, Bryant University Smithfield, RI, June 28-July 3, 2009. (Presented by A. L. Moore). Invited

“Biology and Technology Combined to Meet Human Energy Needs,” T. A. Moore, A. L. Moore and D. Gust, 42nd IUPAC Congress, Glasgow, UK, 2-7 August 2009. (Keynote address in symposia Energy and Environment presented by T. Moore). Invited

“Bioinspired Energy Conversion Schemes,” A. L. Moore, T. A. Moore, D. Gust, G. F. Moore, M. Hambourger, W. J. Youngblood and T. E. Mallouk, 42nd IUPAC Congress, Glasgow, UK, 2–7 August 2009. (Presented by A. Moore). Invited

“Mimicking Control and Energy Converting Functions of Photosynthesis,” T. A. Moore, A. L. Moore, D. Gust, S. Straight and Y. Terazono, 238th ACS National Meeting, Washington, DC, 16–20 August 2009. (Presented by T. Moore). Invited

“Design of a Photoelectrochemical Cell for Hydrogen Production,” A. L. Moore, T. A. Moore, D. Gust, G. F. Moore and M. Hambourger, 13th Congress of the European Society for Photobiology, Wroclaw, Poland, 5-10 September 2009. (Presented by A. Moore). Invited

“Bio-Inspired Solar Fuel Production,” D. Gust, T. A. Moore, A. L. Moore DOE ARPA-E Workshop on Novel Approaches to Direct Solar Fuels, Arlington, VA, October, 2009. (Presented by D. Gust). Invited

“Balancing Earth's Energy Budget - Pay Now or Pay Later. A lecture about energy, finite resources and near-infinite technology,” T. A. Moore, A. L. Moore and D. Gust, Energy and Climate Change Conference, Universidad Austral de Chile, Valdivia, Chile, 27 November 2009. (Presented by T. Moore). Invited

“Esquemas de Conversion de Energia Inspiradas en la Fotosintesis,” A. L. Moore, T. A. Moore and D. Gust, Energy and Climate Change Conference, Universidad Austral de Chile, Valdivia, Chile, 27 November 2009. (Presented by A. Moore). Invited

“Porphyrin-Fullerene Dyad Electropolymers,” D. Gust, P. A. Liddell, B. Brennan, J. Bridgewater, M. Gervaldo, G. Kodis, C. R. Johnson, A. L. Moore and T. A. Moore, Polymat 2009, Huatulco, Mexico, November, 2009 (presented by D. Gust). Invited

“Artificial Photosynthesis – from Light Absorption to Solar Fuels,” D. Gust, T. A. Moore and A. L. Moore, 1st International Symposium of Emergence of Highly Elaborated π -Space and Its Function,” Osaka, Japan, December, 2009 (Presented by D. Gust). Invited

“Bioinspired Mediators: Probing the Effects of Nanostructure on Redox Behavior”. G. F. Moore, M. Hambourger, W. Michl, D. Gust, T. A. Moore and A. L. Moore. US-Argentina Workshop on Nanomaterials. Hotel Amancay, Bariloche, Argentina. March 15–17, 2009. (Poster presented by G. F. Moore).

“Understanding the Role of Tyr_Z-His190 Pair in Water Oxidation.” G. F. Moore, M. Hambourger, W. Michl, D. Gust, T. A. Moore and A. L. Moore. Renewable Energy: Solar Fuels Gordon Research Conference. Four Points Sheraton / Holiday Inn Express, Ventura, CA. February 1–6, 2009. (Poster presented by G. F. Moore).

“Understanding the Role of Tyr_Z-His190 Pair in Water Oxidation.” G. F. Moore, M. Hambourger, W. Michl, D. Gust, T. A. Moore and A. L. Moore. Renewable Energy: Solar Fuels Gordon Research Symposium for students. Ventura Beach Marriott, Ventura, CA. January 31-February 1, 2009. (Poster presented by G. F. Moore, selected oral presentation).

“Proton Coupled Electron Transfer in Bioinspired Mediators.” G. F. Moore, M. Hambourger, W. Michl, D. Gust, T. A. Moore and A. L. Moore. 18th Western Photosynthesis Conference. Pacific Grove, California. January 8–11, 2009. (Poster and oral presentation by G. F. Moore).

“Effects of the Protonation State on a Bioinspired Tyrosine-Histidine Redox Mediator,” G. F. Moore, M. Hambourger, W. Michl, D. Gust, T. A. Moore, and A. L. Moore, Gordon Research Conference on Photosynthesis, Bryant University Smithfield, RI, June 28–July 3, 2009. (Poster presented by G. F. Moore).

“Porphyrin-Fullerene Electropolymers for Solar Energy Conversion,” D. Gust, T. A. Moore, A. L. Moore, P. A. Liddell, M. Gervaldo, G. Kodis, B. Brennan and J. Bridgewater, 31st DOE Solar Photochemistry Research Meeting, Annapolis, MD, June 7–10, 2009. (Poster). Invited

"Omega Lecture: Intelligent Design of Light Energy Conversion Systems," T. A. Moore, A. L. Moore, D. Gust, International Conference on Tetrapyrrole Photoreceptors of Photosynthetic Organisms (ICTPPO 2009) Asilomar Conference Center, Pacific Grove, CA, 26-31 July 2009. (Presented by T. Moore) Invited

“Photochromic Control of Photochemical Processes: From Photosynthesis to Molecule-Based Signal Transduction,” D. Gust, T. A. Moore and A. L. Moore, Photochemistry Gordon Research Conference, Smithfield, RI, July, 2009. (Presented by D. Gust). Invited

“Photonic Modulation of Electron Transfer with Switchable Phase Inversion,” J. Frey, G. Kodis, S. Straight, A. L. Moore, T. A. Moore and D. Gust, Inter-American Photochemical Society Meeting, 2009, St. Pete Beach, FL, January, 2009. (Presented by D. Gust, poster).

“Overall Water Splitting Using Visible Light in a Molecular Photoelectrochemical System,” W. Youngblood, S. Hyun, A. Lee, P. Hoertz, Y. Kobayashi, T. E. Mallouk, T. A. Moore, A. L.

Moore and D. Gust, 18th Western Photosynthesis Conference, Asilomar Conference Grounds, Pacific Grove, CA, 8-11 January 2009. (Presented by T. Moore, poster).

“Design of Photoelectrochemical Cells for the Splitting of Water to Hydrogen and Oxygen,” G. F. Moore, M. Hambourger, S. Pillai, J. Bergkamp, J. Tomlin, B. Sherman, E. Mariño-Ochoa, M. Videa, D. Gust, T. A. Moore and A. L. Moore, Inter-American Photochemistry Society 20th Winter Conference, St. Pete Beach, Florida, 2-5 January 2010. (Presented by A. L. Moore). Invited.

“Controlling Light with Light,” D. Gust, A. L. Moore, T. A. Moore, Inter-American Photochemistry Society, 20th Winter Conference, St. Pete Beach, FL, January, 2010 (Presented by D. Gust). Invited.

“Artificial Photosynthesis,” T. A. Moore, A. L. Moore, and D. Gust, The Artificial Leaf Workshop, Lorentz Center, Leiden, The Netherlands, 1-5 February 2010. (Presented by T. Moore). Invited.

“Combining Biology with Technology for Efficient Energy Conversion,” T. A. Moore, A. L. Moore, and D. Gust, 54th Annual Meeting, Biophysical Society, San Francisco, CA, 20-24 February 2010. (Presented by T. Moore). Invited.

“High and Low Potential Sensitizers for Splitting Water to Hydrogen and Oxygen Using Solar Energy,” B. Sherman, S. Pilla, J. Bergkamp, D. Patterson, G. Kodis, A. L. Moore, D. Gust, and T. A. Moore, 217th Meeting of the Electrochemical Society, Vancouver, Canada, 25 March 2010. (Presented by B. Sherman). Invited.

“Combining Technology with Biology for Efficient Energy Production and Use,” T. A. Moore, A. L. Moore, and D. Gust, 2010 OCU International Symposium on the Foundation of Environmental Research, The Integrated Advanced Research Institute of Osaka City University, Awaji Yumebutai International Conference Center, 8-9 March, 2010. (Presented by T. Moore). Invited.

“Design of Photoelectrochemical Cells for Water Splitting and Fuel Production,” G. F. Moore, M. Hambourger, B. Sherman, S. Pillai, J. Bergkamp, D. Patterson, J. Tomlin, E. Mariño-Ochoa, M. Videa, D. Gust, T. A. Moore and A. L. Moore, 2010 OCU International Symposium on the Foundation of Environmental Research, The Integrated Advanced Research Institute of Osaka City University, Awaji Yumebutai International Conference Center, 8-9 March, 2010. (Presented by A. L. Moore). Invited.

“Bio-Inspired Catalysts for Efficient Energy Conversions,” T. A. Moore, A. L. Moore, and D. Gust, Catalysis for Sustainability. Photocatalysis for Fuel Synthesis: Molecular and Hybrid Systems, ACS National Meeting and Exposition, San Francisco, CA, 21-25 March 2010. (Presented by T. Moore). Invited.

“Artificial Photosynthesis – from Light Absorption to Solar Fuels,” D. Gust, T. A. Moore and Ana L. Moore, Seventh U.S.-Korea Forum on Nanotechnology: Nanomaterials and Systems for Nano Energy, Seoul, Korea, April, 2010 (Presented by D. Gust). Invited.

“Combining Technology with Biology for Efficient Energy Conversion,” T. A. Moore, A. L. Moore, and D. Gust, CASE-Helios Workshop, Co-catalysis in photochemical fuel production, Technical University of Denmark, Lyngby Copenhagen, Denmark, 17-18 May 2010. (Presented by T. Moore). Invited.

“Carotenoid Photoprotection in Artificial Photosynthetic Antennas,” S. Pillai, M. K. Kloz, G. Kodis, J. T. M. Kennis, R. van Grondelle, D. Gust, T. A. Moore and A. L. Moore, 32nd DOE Solar Photochemistry Research Meeting, Annapolis, MD, 6-9 June 2010. (Poster Presented by A. Moore). Invited.

“Porphyrin-Fullerene Polymers for Solar Energy Conversion,” D. Gust, T. A. Moore, A. L. Moore, P. A. Liddell, G. Kodis, B. Brennan and J. Bridgewater, 32nd DOE Solar Photochemistry Research Meeting, Annapolis, MD, 6-9 June 2010. (Poster presented by D. Gust). Invited.

“Small-Molecule Sensing Using Porphyrin Monolayers and Polymers,” D. Gust, B. R. Takulapalli, G. M. Laws, P. A. Liddell, J. Andréasson, T. J. Thornton, B. Brennan, J. Bridgewater, M. Gervaldo, T. A. Moore, A. L. Moore, 6th International Conference on Porphyrins and Phthalocyanines, Santa Ana, New Mexico, July, 2010. (Presented by D. Gust). Invited.

“Combining Technology with Biology for Efficient Energy Conversion,” T. A. Moore, A. L. Moore and D. Gust, Sixth International Conference on Porphyrins and Phthalocyanines ICPP-6, Santa Ana, NM, 4-9 July 2010. (Presented by T. Moore). Invited.

“Design of Photoelectrochemical Cells for Water Splitting and Fuel Production,” G. F. Moore, M. Hambourger, B. Sherman, S. Pillai, J. Bergkamp, D. Patterson, J. Tomlin, E. Mariño-Ochoa, M. Videa, D. Gust, T. A. Moore^a and A. L. Moore, Sixth International Conference on Porphyrins and Phthalocyanines ICPP-6, Santa Ana, NM, 4-9 July 2010. (Presented by A. Moore). Invited.

“Artificial Photosynthesis – Combining Technology with Biology for Efficient Energy Conversion I,” T. A. Moore, A. L. Moore and D. Gust, The Science of Biofuels and Energy Harvesting Materials, Rise to the Challenge, Sandia National Laboratory, Albuquerque, NM, 12 July 2010. (Presented by T. Moore). Invited.

“Artificial Photosynthesis – Combining Technology with Biology for Efficient Energy Conversion II,” T. A. Moore, A. L. Moore and D. Gust, The Science of Biofuels and Energy Harvesting Materials, Rise to the Challenge, Sandia National Laboratory, Albuquerque, NM, 12 July 2010. (Presented by A. Moore). Invited.

“Controlling Light with Light: From Photosynthesis to Molecule-Based Signal Transduction,” D. Gust, T. A. Moore, A. L. Moore, XXIII IUPAC Symposium on Photochemistry, Ferrara, Italy, July, 2010. (Presented by D. Gust). Invited.

“Bio-Inspired Approaches to Solar Hydrogen Production,” D. Gust, T. A. Moore, A. L. Moore, Artificial Photosynthesis Workshop, Sogang University, Seoul, Korea, July, 2010. (Presented by D. Gust). Invited.

“Bio-Inspired Solar Energy Conversion,” D. Gust, T. A. Moore, A. L. Moore, 18th International Conference on Photoconversion and Storage of Solar Energy,” Seoul, Korea, July, 2010. (Presented by D. Gust). Invited.

“Bio-Inspired Approaches to Solar Hydrogen Production,” D. Gust, T. A. Moore, A. L. Moore, Solar Fuels Symposium, Pohang University, Pohang, Korea, July, 2010. (Presented by D. Gust). Invited.

“Artificial Photosynthesis – Combining Technology with Biology for Efficient Energy Conversion I,” T. A. Moore, A. L. Moore and D. Gust, Radicals in the Rockies, Telluride Science Research Center, Telluride, CO, 18 – 23 July 2010. (Presented by T. Moore). Invited.

“Artificial Photosynthesis – Combining Technology with Biology for Efficient Energy Conversion II,” T. A. Moore, A. L. Moore and D. Gust, Radicals in the Rockies, Telluride Science Research Center, Telluride, CO, 18 – 23 July 2010. (Presented by A. Moore). Invited.

“Artificial Photosynthesis – Combining Technology with Biology for Efficient Energy Conversion,” T. A. Moore, A. L. Moore and D. Gust, Gordon Research Conference on Electron Donor-Acceptor Interactions, Salve Regina, Newport, RI, 8-13 August 2010. (Presented by A. Moore). Invited.

“Catalytic Turnover of [FeFe]-Hydrogenase Based on Single Molecule Imaging,” C. Madden, M. D. Vaughn, I. Díez-Pérez, K. A. Brown, P. W. King, D. Gust, M. Ghirardi, N. J. Tao, A. L. Moore and T. A. Moore, Gordon Research Conference on Electron Donor-Acceptor Interactions, Salve Regina, Newport, RI, 8-13 August 2010. (Presented by T. Moore). Contributed poster.

“Solar Energy Conversion in Molecular Photoelectrochemical Cells,” T. A. Moore, A. L. Moore and D. Gust, 15th International Congress of Photosynthesis (PS2010), Photosynthesis Research for Food, Fuel and the Future, Beijing, China, 22-27 August. (Presented by T. Moore). Invited.

“Artificial Photosynthetic Antennas: Light Absorption and Control Mechanisms,” S Pillai, M. K. Kloz, Y. Terazono, G. Kodis, J. T. M. Kennis, R. van Grondelle, G. R. Fleming, D. Gust, T. A. Moore and A. L. Moore, 15th International Congress of Photosynthesis (PS2010), Photosynthetic light-harvesting Satellite Workshop, Nankai University, Tianjing, China, 18-21 August 2010. (Presented by A. Moore). Invited.

“Imagine Photosynthesis Where Human Ingenuity Supersedes Evolution,” T. A. Moore, D. Gust and A. L. Moore, BBSRC/NSF Photosynthesis Ideas Lab, Asilomar, CA, 14 September 2010. (Presented by T. Moore). Invited.

“Catalytic Turnover of [FeFe]-Hydrogenase Based on Single Molecule Imaging,” T. A. Moore, A. L. Moore and D. Gust, Fourth International Meeting of the Institute of Metals in Biology of Grenoble, Grenoble at Villard-de-Lans, France, 25-28 September 2010. (Presented by T. Moore). Invited.

“Combining Biology and Technology for Solar Energy Conversion.” A. L. Moore, D. Gust and T. A. Moore, Fourth International Meeting of the Institute of Metals in Biology of Grenoble, Grenoble at Villard-de-Lans, France, 25-28 September 2010. (Presented by A. Moore). Invited.

“Combining Biology and Technology for Solar Energy Conversion.” Part I,” A. L. Moore, T. A. Moore and D. Gust, Advanced Courses of the Institute of Metals in Biology of Grenoble at Villard-de-Lans (France) 28-30 September 2010. (Presented by T. Moore). Invited.

“Combining Biology and Technology for Solar Energy Conversion.” Part II,” A. L. Moore, T. A. Moore and D. Gust, Advanced Courses of the Institute of Metals in Biology of Grenoble at Villard-de-Lans (France) 28-30 September 2010. (Presented by A. Moore). Invited.

“Design of Photoelectrochemical Cells for Water Splitting and Fuel Production,” G. F. Moore, M. Hambourger, B. Sherman, S. Pillai, J. Bergkamp, E. Mariño-Ochoa, M. Videá, D. Gust, T. A. Moore and A. L. Moore, X ELAFOT, La Serena, Chile, 10-14 October 2010. (Presented by A. Moore). Invited.

“Solar Fuels via Artificial Photosynthesis,” D. Gust, T. A. Moore, A. L. Moore, General Electric Solar Fuels Symposium 2010, Niskayuna, NY, November, 2010. (Presented by D. Gust). Invited.

“Artificial Photosynthesis - Human Ingenuity Supersedes Evolution,” A. L. Moore, D. Gust and T. A. Moore, State of Pará Foundation for Research Development, International Meeting on Science and Technology, Belém do Pará, Brazil, 16 December 2010. (Presented by T. Moore). Invited.

“Artificial Photosynthesis,” A. L. Moore, D. Gust and T. A. Moore, State of Pará Foundation for Research Development, International Meeting on Science and Technology, Belém do Pará, Brazil, 16 December 2010. (Presented by A. Moore). Invited.

“Combining Technology with Biology for Efficient Energy Production and Use,” A. L. Moore, D. Gust and T. A. Moore, Zing Conference on Solar Fuels and Photochemistry, Puerto Morelos, Mexico, 1–4 December 2010. (Presented by T. Moore). Invited.

“Design of Photoelectrochemical Cells for Water Splitting and Fuel Production,” A. L. Moore, D. Gust and T. A. Moore, Zing Conference on Solar Fuels and Photochemistry, Puerto Morelos, Mexico, 1–4 December 2010. (Presented by A. L. Moore). Invited.

“Imagine Photosynthesis Where Human Ingenuity Supersedes Evolution,” T. A. Moore, A. L. Moore, and D. Gust, The First Annual Research Corporation for Science Advancement Scialog Conference, Biosphere 2, Oracle, AZ, 12-15 October 2010. (Presented by T. Moore). Invited.

“Catalytic turnover of [FeFe]-Hydrogenase Based on Single Molecule Imaging,” C. Madden, M. D. Vaughn, I. Díez-Pérez, K. A. Brown, P. W. King, D. Gust, M. Ghirardi, N. J. Tao, A. L. Moore, and T. A. Moore, 9th International Hydrogenase Conference, 27 June – 2 July 2010, Uppsala, Sweden, (Presented by C. Madden).

“Solar Power Plants: What Photosynthesis Can Teach Us About Energy Conversion,” D. Gust, T. A. Moore, A. L. Moore, *Frontiers in Artificial Photosynthesis: From Solar Fuels to Photodynamics*, Ben-Gurion University of the Negev, Be’er Sheva, Israel, March, 2011. (Presented by D. Gust)

“Bio-Inspired Solar Energy Conversion,” D. Gust, T. A. Moore, A. L. Moore, *Solar Power as an Alternative Energy Source*, 241st ACS National Meeting, Anaheim, CA, March, 2011. (Presented by D. Gust)

"Engineered and Artificial Photosynthesis - *human ingenuity supersedes evolution*," T. A. Moore, A. L. Moore and D. Gust, American Physical Society March Meeting, Dallas, TX, March 2011. (Presented by T. Moore)

"Optimizing Light Absorption and Controlling Energy Flow in Artificial and Natural Photosynthesis - *human ingenuity supersedes evolution*," T. A. Moore, A. L. Moore and D. Gust, The 3rd International Conference of the OCU Advanced Research Institute for Natural Science and Technology (OCARINA), Osaka, Japan, March 2011. (Presented by T. Moore)

"Design of Photoelectrochemical Cells for the Splitting of Water and Production of Fuel," T. A. Moore, A. L. Moore and D. Gust, The 3rd International Conference of the OCU Advanced Research Institute for Natural Science and Technology (OCARINA), Osaka, Japan, March 2011. (Presented by A. Moore)

"Optimizing Light Absorption and Controlling Energy Flow in Artificial and Natural Photosynthesis," T. A. Moore, A. L. Moore and D. Gust, *Light Harvesting Processes 2011*, Kloster Banz, Bad Staffelstein, Germany, April 2011. (Presented by T. Moore)

"Design of Photoelectrochemical Cells for the Splitting of Water and Production of Fuel," T. A. Moore, A. L. Moore and D. Gust, *ImagineNano*, Bilbao, Spain, April 2011. (Presented by A. Moore).

“Comparing Photosynthetic and Photovoltaic Efficiencies and Recognizing the Potential for Improvement,” T. A. Moore, A. L. Moore and D. Gust, *Inter-American Photochemical Society Pre-conference Workshop*, Mendoza, Argentina, May 2011. (Presented by T. Moore)

“A Two-Junction Artificial Leaf: Optimizing Artificial Antennas and Reaction Centers for Solar-Driven Water to Hydrogen Redox Processes,” A. L. Moore, T. A. Moore, D. Gust, A. Antoniuk-Pablant, J. Bergkamp, G. Kodis, M. Koepf, J. Megiatto, D. Méndez, S. Pillai, B. Sherman, Y. Terazono, DOE EFRC Summit, Washington, D. C., 24-27 May 2011. (Presented by T. Moore and A. Moore)

“Bidirectional Energy Transfer and Excitonic Coupling in Carotenoid Tetrapyrrole Dyads,” S. Pillai, M. K. Kloz, G. Kodis, J. T. M. Kennis, R. van Grondelle, P. J. Walla, P.-N. Liao, D. Gust, T. A. Moore and A. L. Moore, DOE Solar Photochemistry Research Meeting, Wintergreen, VA, June, 2011.

“Imagine photosynthesis where human ingenuity supersedes evolution,” T. A. Moore, A. L. Moore and D. Gust, Gordon Research Conference on Bioorganic Chemistry, Proctor Academy,

Andover, NH, June 2011. (Presented by T. Moore)

“Photosynthesis in the Anthropocene” T. A. Moore, A. L. Moore, and D. Gust, Photosynthetic Antenna Research Center (PARC) all-hands meeting, St Louis, MO, June 2011. (Presented by T. Moore)

“Comparing Photosynthesis With Photovoltaics to Set the Stage for Sustainable energy Production and Use Through Bio-Inspired Technology,” T. A. Moore, A. L. Moore, and D. Gust, Arizona Nanotechnology Cluster, Tempe, AZ, June 2011. (Presented by T. Moore)

“Bio-Inspired Solar Fuel Production,” D. Gust, T. A. Moore and A. L. Moore, International Symposium on Advances in Photovoltaics and Photocatalysis, Technische Universität München, Munich, Germany, July, 2011. (Presented by D. Gust)

“Using Ingenuity to Improve Photosynthesis - Nature Left us Plenty of Room,” T. A. Moore, A. L. Moore, and D. Gust, Challenges in Renewable Energy (ISACS4), Boston, MA, July 2011. (Presented by T. Moore)

“Comparing Photovoltaics with Photosynthesis to Define Some Challenges for Photochemists,” T. A. Moore, A. L. Moore and D. Gust, Photochemistry Gordon-Kenan Research Seminar, Stonehill College, Easton, MA. 9-10 July 2011. (Presented by T. Moore)

“Imagine Photosynthesis by Rational Design Rather than Evolution,” T. A. Moore, A. L. Moore and D. Gust, Photochemistry Gordon Research Conference, Stonehill College, Easton, MA July 2011. (Presented by T. Moore)

“Using Ingenuity to Improve Photosynthesis - Nature Left Us Plenty of Room,” T. A. Moore, A. L. Moore and D. Gust, 43rd IUPAC World Chemistry Congress, San Juan, Puerto Rico, July – August 2011. (Presented by T. Moore)

“Artificial Photosynthesis – Part I,” T. A. Moore, A. L. Moore and D. Gust, Solar Solutions to Energy and Environmental Problems, Telluride Science Research Center, Telluride, CO, August 2011. (Presented by T. Moore)

“Artificial Photosynthesis – Part II,” T. A. Moore, A. L. Moore and D. Gust, Solar Solutions to Energy and Environmental Problems, Telluride Science Research Center, Telluride, CO, August 2011. (Presented by A. Moore)

“Imagining Catalysis and Photosynthesis Where Human Ingenuity Supersedes Evolution,” T. A. Moore, A. L. Moore and D. Gust, Topsøe Catalysis Forum, catalysis and future energy, Munkerupgaard, Denmark, August 2011. (Presented by T. Moore)

“Design of Photoelectrochemical Cells for the Splitting of Water and Production of Fuel,” A. L. Moore, J. D. Meggiato, J. Bergkamp, B. D Sherman, S. Pillai, D. Mendez, T. A Moore and D. Gust, 242nd ACS National Meeting and Exposition, Denver CO, August 2011. (Presented by A. Moore)

“Bio-Inspired Approaches to Solar Hydrogen Production,” D. Gust, T. A. Moore and A. L. Moore, SPIE Optics + Photonics, San Diego, CA, August, 2011. (Presented by D. Gust)

“Realizing Artificial Photosynthesis,” D. Gust, T. A. Moore, A. L. Moore, Faraday Discussion 155: Artificial Photosynthesis, Edinburgh, Scotland, September, 2011. (Presented by D. Gust)

“Combining Biology and Technology for Solar Energy Conversion,” T. A. Moore, Ana L. Moore and Devens Gust, Two Lectures in Advanced Course “Big Issues in Energy Materials, Biological Materials,” Department of Physics and Astronomy, Vrije Universiteit, Amsterdam, The Netherlands, October 2011. (Presented by T. Moore)

“Imagine Photosynthesis by Rational Design Rather than Evolution,” T. A. Moore, A. L. Moore and D. Gust, Delft-Amsterdam BioSolar Cells Project Symposium, Amsterdam, The Netherlands, October 2011. (Presented by T. Moore)

“Bio-Inspired Solar Energy Conversion,” D. Gust, T. A. Moore, A. L. Moore, Département de Chimie Moléculaire, Université Joseph Fourier, Grenoble, France, October, 2011. (Presented by D. Gust)

“Bio-Inspired Science and Technology for Sustainable Solar Energy Conversion,” T. A. Moore, A. L. Moore, and D. Gust, At the Interface of Natural and Artificial Photosynthesis Symposium, Rensselaer Polytechnic Institute, Troy, NY, November 2011. (Presented by T. Moore)

“The Photoanode of Photoelectrochemical Cells for the Splitting of Water and Production of Fuel,” T. A. Moore, A. L. Moore, and D. Gust, At the Interface of Natural and Artificial Photosynthesis Symposium, Rensselaer Polytechnic Institute, Troy, NY, November 2011. (Presented by A. Moore)

“Synthetic Mimics of Photosynthetic Photoregulatory Mechanisms,” D. Gust, T. A. Moore and A. L. Moore, Photochemistry Gordon Research Conference, Easton, MA, July, 2011. (Presented by D. Gust)

“Catalytic Turnover of [FeFe]-Hydrogenase Based on Single Molecule Imaging,” Madden, C.; Vaughn, M. D.; Díez-Pérez, I.; Brown, K. A.; King, P. W.; Ghirardi, M. L.; Tao, N. J.; Gust, D.; Moore, A. L.; Moore, T. A., Gordon Research Conference: Renewable Energy, Solar Fuels. Ventura, CA. Jan 16-21, 2011. (Poster presented by C. Madden)

“Design of porphyrin-based ligands for the assembly of Mn-Ca bimetallic centers for electrocatalytic water oxidation,” Matthieu Koepf, Jesse J. Berkamp, Ana L. Moore, Devens Gust and Thomas A. Moore, DOE EFRC Summit, Washington, D. C., 24-27 May 2011. (Poster presented by M. Koepf)

“Proton-coupled electron transfer in artificial photosynthetic models for light-driven water oxidation,” Jackson D. Megiatto, Jr., Benjamin D. Sherman, Antaeres Antoniuk-Pablant, Gerdenis Kodis, Ana L. Moore, Thomas A. Moore and Devens Gust, DOE EFRC Summit, Washington, D. C., 24-27 May 2011. (Poster presented by J. Megiatto)

“Electrocatalytic activity of cobalt oxide incorporated into ATO electrodes,” Teillout, A.-L.;

Chauvin, J.; Volosin, A. M.; Sharma, S.; Seo, D.-K., Gust, D., Moore A. L.; and Moore, T. A., First International Conference on Proton-Coupled Electron Transfer (PCET 2011), Val de Loire, France, 9-11 October 2011. (Poster presented by L. Teillout)

“Design of porphyrin-based ligands for the assembly of Mn-Ca bimetallic centers for electrocatalytic water oxidation,” Matthieu Koepf, Jesse J. Bergkamp, Ana L. Moore, Devens Gust and Thomas A. Moore, First International Conference on Proton-Coupled Electron Transfer (PCET 2011), Val de Loire, France, 9-11 October 2011. (Poster presented by M. Koepf)

“Bio-inspired Science and Technology for Sustainable Solar Energy Conversion,” T. A. Moore, D. Gust, and A. L. Moore, 21st Western Photosynthesis Conference, Asilomar, CA, 7 January 2012. (Presented by T. Moore)

“Bio-inspired Science and Technology for Sustainable Solar Energy Conversion,” T. A. Moore, D. Gust, and A. L. Moore, XIIIth Netherlands' Catalysis and Chemistry Conference, Noordwijkerhout, Netherlands, 5 March 2012. (Presented by T. Moore)

“Imagine* Photosynthesis Where Human Ingenuity Supersedes Evolution (*John Lennon),” T. A. Moore, A. L. Moore, and D. Gust, PAC Symposium 2012, “Breaking Boundaries,” Leiden, Netherlands, 8 March 2012. (Presented by T. Moore)

“Catalytic turnover of [Fe-Fe] hydrogenase based on single molecule imaging,” Christopher Madden, Michael D. Vaughn, Ismael Díez-Pérez, Katherine A. Brown, Paul W. King, Devens Gust, Ana L. Moore, and Thomas A. Moore, American Chemical Society March Meeting, San Diego, CA, 27 March 2012. (Presented by C. Madden)

“Bio-Inspired Solar Energy Conversion,” Devens Gust, Thomas A. Moore, and Ana L. Moore, 2012 Annual Meeting of the Japanese Chemical Society, Tokyo, Japan, March, 2012. (Presented by D. Gust)

“Imagine* Photosynthesis Where Human Ingenuity Supersedes Evolution (*John Lennon),” T. A. Moore, A. L. Moore, and D. Gust, Materials Research Society Spring Meeting, San Francisco, CA, 11 April 2012. (Presented by T. Moore)

“The Photoanode of Photoelectrochemical Cells for the Splitting of Water and Production of Fuel,” Devens Gust, Thomas A. Moore and Ana L. Moore, Nano-Bio Interfaces: From Materials Design to Complex Systems, APS/CNM/EMC Users Meeting, Argonne National Laboratory, Lemont, IL, May, 2012. (Presented by A. Moore)

“Porphyrin Polymers for Solar Energy Harvesting,” Paul A. Liddell, Gerdenis Kodis, Michael Kenney, Robert A. Schmitz, Bradley J. Brennan, Devens Gust, Thomas A. Moore, Ana L. Moore, DOE 34th Solar Photochemistry Program Research Meeting, Annapolis, MD, 3-7 June 2012.

“High and Low Potential Artificial Photosystems for the Photoredox of Water to Hydrogen and Oxygen,” Devens Gust, Thomas A. Moore, Ana L. Moore, 16th Annual ACS Green Chemistry & Engineering Conference, Washington DC, June, 2012. (Presented by A. Moore)

“Bio-Inspired Solar Energy Conversion,” Devens Gust, Thomas A. Moore, Ana L. Moore, XXIV IUPAC Symposium on Photochemistry, Coimbra, Portugal, July 2012. (Presented by D. Gust) Contributed. Won poster prize.

“Making and Breaking Chemical Bonds with Light,” Devens Gust, Graeme Copley, Jason Gillmore, Jeff Crisman, Natia Frank, Thomas A. Moore and Ana L. Moore, Breaking and Making Bonds with Light, Telluride, CO, July, 2012. (Presented by D. Gust)

“Synthesis of meso-Ethoxycarbonylporphyrins and their Derivatives,” Yuichi Terazono, Emily North, Thomas A. Moore, Ana L. Moore and Devens Gust,” Conference on Porphyrins and Phthalocyanines, Cheju, Korea, July, 2012. (Presented by Y. Terazono).

“Combining Artificial Photosynthesis, Biology and Technology for Efficient Energy Conversion,” Thomas A. Moore, Devens Gust and Ana L. Moore, Gordon Research Conference on Photosynthesis, Davidson, NC, 8-13 July 2012. (Presented by T. Moore)

“Artificial Photosynthesis,” Devens Gust, Thomas A. Moore and Ana L. Moore, Photosynthesis Gordon Research Conference, Davidson College, Davidson, NC, July, 2012. (Presented by A. Moore)

“Bio-Inspired Design of a Solar Water Splitting System,” Devens Gust, Thomas A. Moore, Ana L. Moore and Thomas E. Mallouk, 2012 American Chemical Society Fall Meeting, Philadelphia, PA, August 2012. (Presented by D. Gust)

“Bio-Inspired Solar Fuel Production,” Devens Gust, Thomas A. Moore and Ana L. Moore, International Conference on Photochemical Conversion and Storage of Solar Energy,” Caltech, Pasadena, CA, August, 2012. (Presented by D. Gust)

“Photoelectrochemical Cells for the Splitting of Water and Production of Fuel,” Devens Gust, Thomas A. Moore and Ana L. Moore, 244th American Chemical Society National Meeting Philadelphia, PA, August, 2012. (Presented by A. Moore)

“Bio-Inspired EDA Systems (There’s Plenty of Room in Biology)*,” Thomas A Moore, Devens Gust and Ana L. Moore, Gordon Research Conference on Electron Donor Acceptor Interactions, Salve Regina University, Newport, RI, 5–10 August 2012 *Apologies to Feynman. (Presented by T. Moore)

“Artificial Photosynthesis Combines Biology with Technology for Sustainable Energy Transformation,” Thomas A Moore, Devens Gust and Ana L. Moore, Nobel Symposium number 153 Nanoscale Energy Converters, Örenäs Castle, Sweden, 12–16 August 2012. (Presented by T. Moore)

“Analog and Digital Control of Molecular Function by Photochromes,” Devens Gust, Graeme Copley, Jason Gillmore, Jeff Crisman, Natia Frank, Thomas A. Moore and Ana L. Moore, EuCheMS, Prague, August, 2012. (Presented by D. Gust)

“The Challenge of Solar Energy Production from the Context of the Biosphere: Does Earth Have

an Abundance of Solar Energy?” Thomas A Moore, Ana L. Moore and Devens Gust, International Forum on Energy and Revision of Public Policies for Sustainable Development, Efficiency and Energy Transition, Universidad Nacional Autónoma de México, México City, México, 27 September 2012. (Presented by T. Moore)

“The Challenge of Solar Energy Production from the Context of the Biosphere: Does Earth Have an Abundance of Solar Energy?” Thomas A. Moore, Ana L. Moore, and Devens Gust, First EuroSolarFuels Meeting, Buchanan Arms, Drymen, Glasgow, Scotland, 29-31 October 2012. (Presented by T. Moore)

“Artificial Photosynthesis: Pursuing Ciamician’s Dream,” D. Gust, T. A. Moore and A. L. Moore, The Photochemistry of the Future, 100 Years Later, University of Bologna, Bologna, IT, October, 2012. (Presented by D. Gust)

“Artificial Photosynthetic Constructs for the Production of Fuel,” Devens Gust, Thomas A. Moore and Ana L. Moore, 2012 Scialog Conference, Research Corporation, Biosphere 2, Oracle, AZ, October, 2012. (Presented by A. Moore)

“Photoelectrochemical Cells for the Splitting of Water,” Devens Gust, Thomas A. Moore and Ana L. Moore, XI Encuentro Latinoamericano de Fotoquímica y Fotobiología (ELAFOT XI), Córdoba, Argentina, October, 2012. (Presented by A. Moore)

“Making Fuels by Artificial Photosynthesis,” D. Gust, T. A. Moore and A. L. Moore, Carbon Dioxide Workshop, Princeton, NJ, November, 2012. (Presented by D. Gust)

“The Challenge of Solar Energy Production from the Context of the Biosphere: Does Earth Have an Abundance of Solar Energy?” Thomas A Moore, Ana L. Moore and Devens Gust, Harvesting Light Symposium, Amsterdam, the Netherlands, 6–7 December 2012. (Presented by T. Moore)

“Bio-Inspired Solar Energy Conversion,” Devens Gust, Thomas A. Moore and Ana L. Moore, PARC, Washington University, Saint Louis, MO, December, 2012. (Presented by D. Gust)

“Organic-Dye Based Approach to Photoelectrochemical Water Splitting,” Benjamin D. Sherman, Jesse J. Bergkamp, Smitha Pillai, Gerdenis Kodis, Dalvin Mendez, Devens Gust, Ana L. Moore and Thomas A. Moore, 21st Western Photosynthesis Conference, Asilomar Conference Grounds, Pacific Grove, CA, January 7th, 2012. (Presented by B. Sherman)

“Balancing Spectroscopic and Redox Properties in a Dye-Sensitized Tandem Junction Cell for the Photolysis of Water,” Benjamin D. Sherman, Jesse J. Bergkamp, Smitha Pillai, Yixin Zhao, Gerdenis Kodis, Jackson Megiatto, Dalvin Mendez, Thomas E. Mallouk, Devens Gust, Ana L. Moore and Thomas A. Moore. Gordon Research Seminar on Photosynthesis, Biofuels, and Artificial Photosynthesis, Davidson College, Davidson, NC, July 7th, 2012. (Presented by B. Sherman)

“Design and Characterization of Photosensitizers for Water Oxidation and Hydrogen Production,” Dalvin D. Méndez-Hernández, Jackson D. Megiatto, Pilarisetty Tarakeshwar, Oleg G. Poluektov, Tijana Rajh, Devens Gust, Thomas A. Moore, Vladimiro Mujica and Ana L.

Moore, Gordon Research Seminar on Renewable Energy: Solar Fuels, Barga, Lucca, Italy, May, 2012. (Poster presented by D. Méndez)

“Design and Characterization of Photosensitizers for Water Oxidation and Hydrogen Production,” Dalvin D. Méndez-Hernández, Jackson D. Megiatto, Pilarisetty Tarakeshwar, Oleg G. Poluektov, Tijana Rajh, Devens Gust, Thomas A. Moore, Vladimiro Mujica and Ana L. Moore, Gordon Research Conference on Renewable Energy: Solar Fuels, Barga, Lucca, Italy, 13–18 May 2012. (Poster presented by D. Méndez)

“PCET Involving Tyrosine-Histidine Models of PSII,” Jackson D. Megiatto, Dalvin D. Méndez-Hernández, Oleg G. Poluektov, Tijana Rajh, Devens Gust, Thomas A. Moore, Vladimiro Mujica and Ana L. Moore, Electron Donor Acceptor Interaction, Gordon Research Conference, Salve Regina University, Newport, RI, August, 2012. (Poster presented by A. Moore)

“A DFT-Aided Design and Experimental Characterization of Unsymmetrical Phthalocyanines with Phosphonic Acid as Photosensitizers for Hydrogen Production in Solar Cells,” D. D. Méndez-Hernández, P. Tarakeshwar, D. Gust, T. A. Moore, A. L. Moore and V. Mujica, Summer Talks at Santiago III: Recent Developments in Quantum Chemistry, Universidad Católica de Chile, Santiago, Chile, January, 2012. (Poster presented by D. Méndez)

“Synthesis, Characterization and DFT-Aided Design of Unsymmetrical Phthalocyanines to be Used as Photosensitizers for Hydrogen Production”, D. D. Méndez-Hernández, P. Tarakeshwar, D. Gust, T. A. Moore, V. Mujica and A. L. Moore, MGE@MSA Conference, Arizona State University, Tempe, AZ, February, 2012. (Poster presented by D. Méndez)

“Synthesis, Characterization and DFT-Aided Design of Unsymmetrical Phthalocyanines to be Used as Photosensitizers for Hydrogen Production,” D. D. Méndez-Hernández, P. Tarakeshwar, D. Gust, T. A. Moore, V. Mujica and A. L. Moore, ASU-U of A Student Conference on Renewable Energy Science, Arizona State University, Tempe, AZ, April 19–20th. (Poster presented by D. Méndez)

“Design and Synthesis of Dyes Capable of Driving the Oxidation of Water and Reduction of Protons to Form Hydrogen Gas” and “Information about the NSF-Graduate Research Fellowship Program,” Dalvin D. Méndez-Hernández, Jackson D. Megiatto, Pilarisetty Tarakeshwar, Oleg G. Poluektov, Tijana Rajh, Devens Gust, Thomas A. Moore, Vladimiro Mujica and Ana L. Moore, Universidad Metropolitana (UMET), San Juan, Puerto Rico, December, 2012. (Poster presented by D. Méndez)

“Synthesis and Application of Porphyrin and Phthalocyanine Chromophores for Photoelectrochemical Water Splitting,” Jesse J. Bergkamp, Benjamin D. Sherman, Matthieu Koepf, Chelsea L. Brown, Smitha Pillai, Edgar Reyes, Manuel José Llansola Portolés, Thomas A. Moore, Devens Gust and Ana L. Moore, Gordon Research Seminar/Conference, Photosynthesis. Davidson, NC. July 7–13, 2012. (Poster presented by J. Bergkamp)

“Synthesis of Porphyrin and Phthalocyanine Dyes for Photoelectrochemical Water Splitting,” Jesse J. Bergkamp, Benjamin D. Sherman, Matthieu Koepf, Smitha Pillai, Gerdenis Kodis, Chelsea L. Brown, Thomas A. Moore, Devens Gust, and Ana L. Moore, ASU-U of A Student

Conference on Renewable Energy Science, Arizona State University, Tempe, AZ, April 19–20, 2012. (Poster presented by J. Bergkamp)

“Synthesis and Use of Porphyrin and Phthalocyanine Chromophores in Solar Energy Conversion,” Jesse J. Bergkamp, Benjamin D. Sherman, Matthieu Koepf, Gerdenis Kodis, Chelsea L. Brown, Edgar Reyes, Joseph A. Laureanti, Thomas A. Moore, Devens Gust and Ana L. Moore, 21st Western Photosynthesis Conference, Pacific Grove, CA. January 5–8, 2012. (Poster presented by J. Bergkamp)

“Dye-Iridium Oxide Constructs for Light Driven Water Oxidation,” Benjamin D. Sherman, Jesse J. Bergkamp, Smitha Pillai, Jackson D. Megiatto Jr., Gerdenis Kodis, Yixin Zhao, Thomas E. Mallouk, Devens Gust, Ana L. Moore, and Thomas A. Moore, 21st Western Photosynthesis Conference, Asilomar Conference Grounds, Pacific Grove, CA., January 5–8th, 2012. (Poster presented by B. Sherman)

“Dye-Iridium Oxide Constructs for Light Driven Water Oxidation,” Benjamin D. Sherman, Jesse J. Bergkamp, Smitha Pillai, Jackson D. Megiatto Jr., Gerdenis Kodis, Dalvin Mendez, Antaeres’ Antoniuk-Pablant, Yixin Zhao, Thomas E. Mallouk, Devens Gust, Ana L. Moore and Thomas A. Moore, ASU-UA Student Conference on Renewable Energy Science, ASU, Tempe, AZ, April 19–20th, 2012. (Poster presented by B. Sherman)

“Balancing Spectroscopic and Redox Properties in a Dye-Sensitized Tandem Junction Cell for the Photolysis of Water,” Benjamin D. Sherman, Jesse J. Bergkamp, Smitha Pillai, Yixin Zhao, Gerdenis Kodis, Jackson Megiatto, Dalvin Mendez, Thomas E. Mallouk, Devens Gust, Ana L. Moore and Thomas A. Moore, Gordon Research Conference on Photosynthesis, Biofuels, and Artificial Photosynthesis, Davidson College, Davidson, NC, July 8–13th, 2012. (Poster presented by B. Sherman)

“Electron transfer beats energy transfer,” Janneke Ravensbergen, Raoul Frese, Devens Gust, Tom Moore, Ana Moore and John Kennis, Physics @ FOM Veldhoven, Veldhoven, The Netherlands, January 17–18, 2012. (Poster presented by Janneke Ravensbergen)

“Electron Transfer Beats Energy Transfer,” Janneke Ravensbergen, Smitha Pillai, Antaeres Antoniuk-Pablant, Raoul Frese, Devens Gust, Tom Moore, Ana Moore and John Kennis, International Conference on Nanostructured Systems for Solar Fuel Production (NanoGe Conference), Mallorca, Spain, March 25–27, 2012. (Poster presented by Janneke Ravensbergen)

“Electron Transfer Beats Energy Transfer,” Janneke Ravensbergen, Smitha Pillai, Antaeres Antoniuk-Pablant, Raoul Frese, DevensGust, Tom Moore, Ana Moore and John Kennis, Gordon Research Seminar on Renewable Energy: Solar Fuels, Barga, Lucca, Italy, May 12–13, 2012. (Poster presented by Janneke Ravensbergen)

“Electron Transfer Beats Energy Transfer,” Janneke Ravensbergen, Smitha Pillai, Antaeres Antoniuk-Pablant, Raoul Frese, DevensGust, Tom Moore, Ana Moore and John Kennis, Gordon Research Conference on Renewable Energy: Solar Fuels, Barga, Lucca, Italy, May 13–18, 2012. (Poster presented by Janneke Ravensbergen)

“Ultrafast Energy Transfer in an Artificial Photosynthetic Antenna,” M. Maiuri, J. J.

Snellenburg, I. H. M. van Stokkum, S. Pillai, D. Gust, T. A. Moore, A. L. Moore, R. van Grondelle, G. Cerullo, D. Polli, Ultrafast Phenomena, July 8–13, 2012, Lausanne, Switzerland. (Presented by M. Maiuri)

“Faculty Doctoral Institute: Making a Difference,” March 4, 2013, Arizona State University, Tempe, Arizona. (Presented by A. Moore)

“Carotenoids in Artificial Photosynthesis and Energy Transduction.” Ana L. Moore, T. A. Moore and D. Gust, Carotenoid Gordon Conference, January 6–11, 2013, Ventura Beach, California. (Presented by A. Moore)

“Bio-Inspired Design of a Solar Water Splitting System,” Devens Gust, Thomas A. Moore and Ana L. Moore, 2013 KCAP Conference on Artificial Photosynthesis, Sogang University, Seoul, May, 2013. (Presented by D. Gust)

“Interchromophore Interactions in Artificial Photosynthesis,” Ana L. Moore, Thomas A. Moore and Devens Gust, 35th DOE Solar Photochemistry Research Meeting, Annapolis, MD, June, 2013. (Presented by D. Gust).

“Limiting Photochemical Damage in Artificial Photosynthesis,” D. Gust, A. L. Moore, T. A. Moore, Solar Solutions to Energy and Environmental Problems, Telluride, CO, August, 2013. (Presented by D. Gust)

“Artificial Photosynthesis,” D. Gust, T. A. Moore, A. L. Moore, XIV Congresso Brasileiro de Fisiologia Vegetal, Pocos de Caldas, Brasil, September, 2013. (Presented by D. Gust)

“Molecular Mimicry of Photosynthetic Photoprotection and Photoregulation,” D. Gust, T. A. Moore, A. L. Moore, 23rd Western Regional Photosynthesis Conference, Asilomar, CA, January, 2014. (Presented by D. Gust)

“The Photoanode of Photoelectrochemical Cells for the Splitting of Water and Production of Fuel,” Ana L. Moore, Dalvin Méndez-Hernández, Antaeres Antoniuk-Pablant, Marely Tejada-Ferrari, Gerdenis Kodis, Manuel Llansola-Portelés, Tijana Rajh, Oleg Poluektov, Thomas A. Moore and Devens Gust, 23rd Western Regional Photosynthesis Conference, Asilomar, CA, January, 2014. (Poster, presented by A. Moore).

“Involvement of Carotenoids in Photosynthetic Regulation and Photoprotection.” Thomas A. Moore, Devens Gust and Ana L. Moore, GRAFOB II, Ciudad de Córdoba, Argentina, October 22–25, 2013. (Presented by A. Moore).

“Photoregulation by Carotenoids in Artificial Antennas.” Thomas A. Moore, Devens Gust and Ana L. Moore, 35th DOE Solar Photochemistry Research Meeting, Annapolis, MD, June, 2013. (Presented by A. Moore).

“A Bio-Inspired Photoelectrochemical Cell for Water Splitting.” Thomas A. Moore, Devens Gust and Ana L. Moore, Perspect-H₂O, Supramolecular Photocatalytic Water Splitting, COST ACTION CN1202, Autrans, Vercors Mountain, France, 2–4 October, 2013. (Presented by A. Moore).

“A Bio-Inspired Photoelectrochemical Cell for Water Splitting.” Thomas A. Moore, Devens Gust and Ana L. Moore, The 16th International Congress on Photosynthesis Research, St. Louis, MO, August 11–16, 2013. (Presented by A. Moore).

“Bio-Inspired Photoelectrochemical Cells for Water Splitting.” Dalvin D. Méndez-Hernández, Benjamin D. Sherman, Jesse J. Bergkamp, John Tomlin, Marely Tejada-Ferrari, Chelsea Brown, Manuel J. Llansola-Portolés, Jackson D. Megiatto Jr.,¹ Gerdenis Kodis, Vladimiro Mujica, Tijana Rajh, Oleg G. Poluektov, Thomas A. Moore, Devens Gust, and Ana L. Moore, The 16th International Congress on Photosynthesis Research, St. Louis, MO, August 11–16, 2013. (Poster, presented by A. Moore).

“Bio-Inspired Photoelectrochemical Tandem Cells,” Dalvin D. Méndez-Hernández, Vladimiro Mujica, Thomas A. Moore, Devens Gust and Ana L. Moore, Gordon Research Conference on Renewable Energy: Solar Fuels, January 2014, Ventura, Cal. (Poster presented by D. Méndez).

“Bio-Inspired Photoelectrochemical Tandem Cells,” Dalvin D. Méndez-Hernández, Vladimiro Mujica, Thomas A. Moore, Devens Gust and Ana L. Moore, Department of Energy, Energy Frontier Research Centers, Principal Investigators Meeting, Washington, D.C.; July 2013. (Poster presented by D. Méndez).

“Design, Synthesis and Characterization of Dyes for Bio-Inspired Electrochemical Solar Cells, Dalvin D. Méndez-Hernández, Vladimiro Mujica, Thomas A. Moore, Devens Gust and Ana L. Moore, Gordon Research Conference on Nanomaterials for Applications in Energy Technology, Ventura, Cal., January 2013. (Poster presented by D. Méndez).

“The Challenge of Solar Energy Production from the Context of the Biosphere: Does Earth Have an Abundance of Solar Energy?” Thomas A Moore, Ana L. Moore and Devens Gust, 22st Western Photosynthesis Conference, Asilomar Conference Grounds, Pacific Grove, CA, January 7th, 2013. (Introductory lecture by session chair, T. Moore).

“Does Earth Have an Abundance of Solar Energy? Artificial Photosynthesis Addresses the Challenge of Solar Energy Production from the Context of the Biosphere,” Thomas A. Moore, Ana L. Moore, Devens Gust, Renewable Energy Meeting, Umeå, Sweden, 25-27 February 2013. (Presented by T. Moore).

“Design of Bio-Inspired Photoelectrochemical Cells for Water Oxidation and Reduction,” Thomas A. Moore, Ana L. Moore, Devens Gust, 2013 Materials Research Society Spring Meeting, San Francisco, CA, 1–5 April 2013. (Presented by T. Moore).

“Artificial Photosynthesis Combines Biology with Technology for Sustainable Energy Transformation,” Thomas A. Moore, Ana L. Moore, Devens Gust, Weed Lecture, University of Arizona, Tucson, AZ, 13 April 2013. (Presented by T. Moore).

“Does Earth Have an Abundance of Solar Energy? Artificial Photosynthesis and the Challenge of Solar Energy Production from the Context of the Biosphere,” T. A. Moore, A. L. Moore and

Thomas A. Moore, Wissenschaftskolleg zu Berlin, On Coherent Quantum Effects in Biology, Berlin, Germany, 2–3 May 2013. (Presented by T Moore).

“Reengineering Photosynthesis to Better Meet Human Needs,” T. A. Moore, A. L. Moore and D. Gust, Workshop on Redesigning Photosynthesis – Identifying Opportunities and Novel Ideas, Banbury Center, Cold Spring Harbor Laboratory, Cold Spring Harbor, NY, May 13–16, 2013. (Presented by T. Moore).

“Carotenoids and Super Photoprotection in Oxygenic Photosynthetic Organisms,” T. A. Moore, Ana L. Moore, D. Gust and Katie WongCarter, Understanding supramolecular architectures in photosynthesis by space and time resolved spectroscopy, Annual Meeting, Human Frontiers Scientific Program Project, Arizona State University, Tempe, AZ, 24 May 2013. (Presented by T. Moore)

“Artificial Photosynthetic Molecules for Solar Energy Collection and Protection,” T. A. Moore, Ana L. Moore, D. Gust and Katie WongCarter, Understanding Supramolecular Architectures in Photosynthesis by Space and Time Resolved Spectroscopy, Annual Meeting, Human Frontiers Scientific Program Project, Arizona State University, Tempe, AZ, 24 May 2013. (Presented by Katie WongCarter).

“Carotenoids in Artificial Photosynthesis and Energy Transduction,” T. A. Moore, Ana L. Moore, D. Gust and Katie WongCarter, Understanding Supramolecular Architectures in Photosynthesis by Space and Time Resolved Spectroscopy, Annual Meeting, Human Frontiers Scientific Program Project, Arizona State University, Tempe, AZ, 24 May 2013. (Presented by A. Moore).

“Artificial Photosynthesis and Bio-Inspired Solar-to-Fuel Strategies,” Thomas A. Moore, Devens Gust, Ana L. Moore, Thomas E. Mallouk, 246th ACS National Meeting & Exposition, Indianapolis, IN, 8-12 September 2013. (Presented by B. Sherman).

“Artificial Photosynthesis - Helping Nature Regain Control of the Global Carbon Cycle,” T. A. Moore, A. L. Moore and D. Gust, Lorentz Center Workshop on [Responsive Matrices for Solar Fuels](#), Leiden, The Netherlands, 28 Oct–1 Nov 2013. (Presented by T. Moore).

“Triplet State Interchromophore Interactions in Photosynthesis and Artificial Photosynthesis,” T. A. Moore, A. L. Moore and D. Gust, Thirty-Fifth DOE Solar Photochemistry Research Meeting, Annapolis, MD, USA, 2–5 June 2013. (Presented T. Moore).

“The Challenge of Solar Energy Production from the Context of the Biosphere: Does Earth have a Surfeit of Solar Energy?” Thomas A. Moore, Devens Gust and Ana L. Moore, Gordon Research Conference on Photochemistry, Stonehill College, Easton, MA United States, 14-19 July 2013. (Poster presented by T. Moore).

“Carotenoid Triplet Formation in Artificial Photosynthetic Antenna,” Denise Galzerano, [†]Smitha Pillai, Katie Wong-Carter, Thomas Moore, Ana Moore, Devens Gust and Bruno Robert, Gordon Research Conference on Carotenoids, Ventura, CA, 6–11 January 2013. (Poster presented by Denise Galzerano).

“Bio-Inspired Photoelectrochemical Cells for Water Splitting,” Dalvin D. Méndez-Hernández, Benjamin D. Sherman, Jesse J. Bergkamp, Marely Tejada-Ferrari, Manuel J. Llansola-Portolés, Jackson D. Megiatto Jr., Gerdenis Kodis, Tijana Rajh, Oleg G. Poluektov, Thomas A. Moore, Devens Gust, and Ana L. Moore, 2013 Scialog Conference, Biosphere 2, Tucson, AZ, 15-18 October 2013. (Poster Presented by A. Moore).

“Photosynthesis in the Anthropocene,” Thomas A Moore, Ana L. Moore, Devens Gust, Benjamin Sherman, Michael Vaughn, Jesse Bergkamp, 2013 Scialog Conference, Biosphere 2, Tucson, AZ, 15-18 October 2013. (Poster Presented by T. Moore).

“Photosynthesis in the Anthropocene,” Thomas A Moore, Ana L. Moore, Devens Gust, Benjamin Sherman, Michael Vaughn, Jesse Bergkamp, WG1-WG2 Workshop, Perspect-H₂O Supramolecular Photocatalytic Water Splitting, Autrans, France, 2-4 October 2013. (Poster Presented by T. Moore).

“Molecular Mimicry of Photosynthetic Photoprotection and Photoregulation,” D. Gust, T. A. Moore, A. L. Moore, 23rd Western Regional Photosynthesis Conference, Asilomar, CA, January, 2014. (Presented by D. Gust)

“Artificial Photosynthesis – Helping Nature (Photosynthesis) Regain Control of the Global Carbon Cycle,” Thomas A. Moore, Devens Gust and Ana L. Moore, Biology Energy Technology Workshop, Toronto, Canada, 25-27 January 2014 (Presented by T. Moore)

“Photosynthesis for the Anthropocene – Combining Technology with Biology to Optimize a Limited Resource,” Thomas A. Moore, Devens Gust and Ana L. Moore, 247th American Chemical Society National Meeting, Dallas, TX 16-20 March 2014 (Presented by T. Moore)

“A Bioinspired Photoelectrochemical Cell for Water Splitting,” Ana L Moore, Devens Gust and Thomas A Moore, 247th American Chemical Society National Meeting, Dallas, TX 16-20 March 2014 (Presented by A. Moore)

“A Tandem Photoelectrochemical Cell for Water Splitting,” Part 1, Report on the Center for Bio-Inspired Solar Fuel Production, Devens Gust, James Allen, Petra Fromme, Giovanna Ghirlanda, Anne Jones, Yan Liu, Ana Moore, Thomas Moore, Vladimiro Mujica, Kevin Redding, Don Seo, Ryan Trovitch and Hao Yan, Thirty-Sixth DOE Solar Photochemistry Research Meeting, 1-4 June 2014, Annapolis, MD (Presented by T. Moore)

“A Tandem Photoelectrochemical Cell for Water Splitting,” Part 2, Report on the Center for Bio-Inspired Solar Fuel Production, Devens Gust, James Allen, Petra Fromme, Giovanna Ghirlanda, Anne Jones, Yan Liu, Ana Moore, Thomas Moore, Vladimiro Mujica, Kevin Redding, Don Seo, Ryan Trovitch and Hao Yan, Thirty-Sixth DOE Solar Photochemistry Research Meeting, 1-4 June 2014, Annapolis, MD (Presented by A. Moore)

“Artificial Photosynthesis – Helping Nature (Photosynthesis) Regain Control of the Global Carbon Cycle,” Thomas A. Moore, Ana L. Moore and Devens Gust, 17th International Symposium on Carotenoids, 29 June – 4 July, 2014, Park City, UT, USA. (Presented by T. Moore)

“Involvement of Carotenoids in Photosynthetic Regulation and Photoprotection,” Ana L. Moore, Thomas A. Moore, and Devens Gust, 17th International Symposium on Carotenoids, 29 June – 4 July, 2014, Park City, UT, USA. (Presented by A. Moore)

“Artificial Photosynthesis (Part 1),” Thomas A. Moore, Ana L. Moore, Devens Gust, Telluride Science Research Center Summer School on Fundamental Science for Alternative Energy, 24-28 July 2014, Telluride, CO. (3 lectures presented by T. Moore)

“Artificial Photosynthesis (Part 2),” Ana L. Moore, Thomas A. Moore, Devens Gust, Telluride Science Research Center Summer School on Fundamental Science for Alternative Energy, 24-28 July 2014, Telluride, CO. (3 lectures presented by A. Moore)

“Mimics of the Tyr_y-His Redox Relay of Photosystem II,” Ana L. Moore, Thomas A. Moore, Devens Gust, Manuel J. Llansola-Portolés, Gerdenis Kodis, Dalvin Méndez-Hernández and John Tomlin, 248th American Chemical Society National Meeting, San Francisco, CA, 10-14 August 2014 (Presented by A. Moore)

“Artificial Photosynthesis-Helping Nature Regain Control of the Global Carbon Cycle,” Thomas A. Moore, Ana L. Moore, Devens Gust, 16th International Congress on Photobiology, Cordoba, Argentina, 7-12 September 2014 (Presented by T. Moore)

“A Bio-Inspired Photoanode for a Water Splitting Photoelectrochemical Cell,” Ana L. Moore, Thomas A. Moore, Devens Gust, 16th International Congress on Photobiology, Cordoba, Argentina, 7-12 September 2014 (Presented by A. Moore)

“Designing High Efficiency Photoelectrochemical (PEC) Cells,” Thomas A. Moore, Devens Gust and Ana L. Moore, Workshop “*Energizing Photochemistry*” Universidad National de Córdoba, Córdoba, Argentina, 7 Sept 2014 (Presented by T. Moore)

“The Electrodes for Tandem Photoelectrochemical Cells for the Production of Hydrogen,” Ana L. Moore, Thomas A. Moore, Devens Gust, Workshop “*Energizing Photochemistry*” Universidad National de Córdoba, Córdoba, Argentina, 7 Sept 2014 (Presented by A. Moore)

“Bio-Inspired Solar Fuel Production,” D. Gust, T. A. Moore, A. L. Moore, International Conference on Bio Energy, Torremolinos, Spain, June, 2014. (Presented by D. Gust)

“Bio-Inspired Systems for Solar Fuels,” D. Gust, T. A. Moore, A. L. Moore, International Conference on Artificial Photosynthesis, Awaji Island, Japan, November, 2014. (Presented by D. Gust)

“The Photoanode of Photoelectrochemical Cells for the Splitting of Water and Production of Fuel,” Ana L. Moore, Dalvin Méndez-Hernández, Antaeres Antoniuk-Pablant, Marely Tejada-Ferrari, Gerdenis Kodis, Manuel Llansola-Portelés, Tijana Rajh, Oleg Poluektov, Thomas A. Moore and Devens Gust, 23rd Western Regional Photosynthesis Conference, Asilomar, CA, January, 2014. (Poster, presented by A. Moore).

“Systems Integration: Implementing Molecular Photo/Catalytic Components into an Overall

Water-Splitting Tandem Cell,” D. Méndez-Hernández, M. Tejeda, E. Reyes, J. Tomlin, M. Chavarot-Kerlidou, V. Artero, T. A. Moore, A. L. Moore, D. Gust, M. Fournier, N. Kaeffer, SOFI Solar Fuels Institute Meeting, Ventura, CA, 25-26 Jan 2014. (Poster presented by M. Fournier and N. Kaeffer)

“Photosynthesis in the Anthropocene,” Thomas A. Moore, Ana L. Moore and Devens Gust, Alternative Energy Gordon Research Conference, Venture, CA, 19-24 January 2014. (Poster presented by T. Moore)

“Artificial Photosynthesis-Helping Nature Regain Control of the Global Carbon Cycle,” Thomas A Moore, Ana L. Moore and Devens Gust, 24th Western Regional Photosynthesis Conference, Pacific Grove, CA., 8-11 January 2015. (Presented by T. Moore)

“Photo-Injection of High Potential Holes into Cu₅Ta₁₁O₃₀ Nanoparticles by Porphyrin Dyes” Ian Sullivan, Chelsea Brown, Manuel J. Llansola-Portoles, Miguel Gervaldo, Gerdenis Kodis, Thomas A. Moore, Devens Gust, Ana Moore, and Paul Maggard, Thirty-Seventh DOE Solar Photochemistry P.I. Meeting, Marriott Washington Center, Gaithersburg, MD, 31 May to 3 June 2015. (Invited poster presented by D. Gust, A. Moore and T. Moore)

“Complex Photochemistry in a Molecular Artificial Photosynthetic Reaction Center,” Antaeres Antoniuk-Pablant, Gerdenis Kodis, Ana L. Moore, Thomas A. Moore, and Devens Gust, Thirty-Seventh DOE Solar Photochemistry P.I. Meeting, Marriott Washington Center, Gaithersburg, MD, 31 May to 3 June 2015. (Invited poster presented by D. Gust, A. Moore and T. Moore)

“Mimicking Photosynthetic Photoprotection,” D. Gust, T. A. Moore, A. L. Moore, G. R. Fleming, 27th International Conference on Photochemistry, Jeju, Korea, June, 2015. (Presented by D. Gust)

“Light Harvesting and Fuel Production in Artificial Photosynthesis” Ana L. Moore, Thomas A Moore and Devens Gust, Photosynthesis Gordon Research Conference, Bentley University Waltham, MA, June 28–July 3, 2015. (Presented by A. Moore)

“Complex Photochemistry in a Molecular Artificial Photosynthetic Reaction Center,” A. Antoniuk-Pablant, G. Kodis, A. L. Moore, T. A. Moore, D. Gust, Time- and Space-resolved Spectroscopic Investigations on Various Molecular Systems,” Yonsei University, Seoul, Korea, July, 2015. (Presented by D. Gust)

“Complex Photochemistry in a Molecular Artificial Photosynthetic Reaction Center,” A. Antoniuk-Pablant, G. Kodis, A. L. Moore, T. A. Moore, D. Gust, 2015 World Fullerene Conference, Hohhot, Mongolia, August, 2015. (Invited poster presented by René Bensasson)

“Mimicking Photosynthetic Electron, Energy and Proton Transfer,” D. Gust, T. A. Moore, A. L. Moore, 250th American Chemical Society National Meeting & Exposition, Boston, MA, 16–20 August 2015. (Presented by D. Gust)

“Artificial Photosynthesis-Helping Nature Regain Control of the Global Carbon Cycle,” Thomas A Moore, Ana L. Moore and Devens Gust, 250th American Chemical Society National Meeting

& Exposition, Boston, MA, 16–20 August 2015. (Presented by T. Moore)

“Mimics of the Tyr_y-His Redox Relay of Photosystem II in Water Splitting Schemes,” Ana L. Moore, Thomas A Moore and Devens Gust, 250th American Chemical Society National Meeting & Exposition, Boston, MA, 16–20 August 2015. (Presented by A. Moore)

“Artificial Photosynthesis-Helping Nature Regain Control of the Global Carbon Cycle,” Thomas A Moore, Ana L. Moore and Devens Gust, International workshop on: Charge, Heat and Energy Transport in Molecular Junctions, Copenhagen, Denmark, 24–26 August 2015. (Presented by T. Moore)

“Bio-Inspired Schemes for Solar Energy Conversion,” Ana L. Moore, Thomas A Moore and Devens Gust, International workshop on: Charge, Heat and Energy Transport in Molecular Junctions, Copenhagen, Denmark, 24–26 August 2015. (Presented by A. Moore)

“Bio-Inspired Solar Fuel Production,” D. Gust, T. A. Moore, A. L. Moore, Doppler Symposium on Solar Fuels, Cambridge, UK, September, 2015. (Presented by D. Gust)

“Artificial Photosynthesis-Helping Nature Regain Control of the Global Carbon Cycle,” Thomas A Moore, Ana L. Moore and Devens Gust, 4th International Workshop on Energy Conversion and Storage, CICATA-IPN, México City, México, 25-16 Oct 2015. (Plenary, Presented by T. Moore)

“Artificial Photosynthesis,” Ana L. Moore, Thomas A Moore and Devens Gust, 4th International Workshop on Energy Conversion and Storage, CICATA-IPN, México City, México, 25-16 Oct 2015. (Plenary, Presented by A. Moore)

“Light Harvesting and Fuel Production in Artificial Photosynthesis,” Ana L. Moore, Thomas A Moore and Devens Gust, Lights on Chemistry Symposium, Tarragona, Spain, 1–2 October. (Presented by A. Moore)

“Sustainability, the Global Carbon Cycle and Solar Energy,” Thomas A. Moore, Ana L. Moore and Devens Gust, Science for Sustainability, Inspiration for global change from the Desmond Tutu Programme, Amsterdam, The Netherlands, 26-27 November, 2015. (Presented by T. Moore)

“Light Harvesting and Photoinduced Electron Transfer in Artificial Photosynthetic Constructs,” Ana l. moore, Thomas A. Moore, Devens Gust, Marely E. Tejada, Ann-Lucie Teillout, Sharon Hammes-Schiffer and Mioy Huynh, 251st American Chemical Society National Meeting, San Diego, CA, March 13–17, 2016, (Presented by A. Moore)

“Biographical Introduction, Lecture 1” TSRC Summer School on Fundamental Science for Alternative Energy, Telluride, Colorado, June 21–25, 2016. (Presented by A. Moore)

“Natural/Artificial Light Harvesting, Lecture 2” TSRC Summer School on Fundamental Science for Alternative Energy, Telluride, Colorado, June 21–25, 2016. (Presented by A. Moore)

“Natural/Artificial Light Harvesting, Lecture 3” TSRC Summer School on Fundamental Science for Alternative Energy, Telluride, Colorado, June 21–25, 2016. (Presented by A. Moore)

“Artificial Photosynthetic Constructs that Mimic the PCET process of the Tyr_z-His relay of PSII,” Ana L. Moore, Thomas A. Moore and Devens Gust, 25th IAPS Meeting Santiago, Chile, May 24–27, 2016. (Presented by A. Moore)

“Artificial Photosynthetic Constructs that Mimic the PCET Process of the Tyr_z-His Relay of PSII,” Center for Bioenergy & Photosynthesis Seminar Series, Arizona State University, April 28, 2016. (Presented by A. Moore)

“Artificial Photosynthetic Constructs that Mimic the PCET Process of the Tyr_z-His Relay of PSII,” Ana L. Moore, Thomas A. Moore, Devens Gust, Marely E. Tejada, Ann-Lucie Teillout, Sharon Hammes-Schiffer and Mioy Huynh, 79th Harden Conference: Oxygen Evolution and Reduction Common Principles, Grauer Bär, Innsbruck, Austria, 16–20 April 2016. (Presented by A. Moore)

“Proton-Coupled Electron Transfer in Models Inspired by Photosynthesis,” Ana L. Moore, Thomas A. Moore and Devens Gust, GRC Electron Donor-Acceptor Interactions, Salve Regina University Newport, RI, August 7–12, 2016. (Keynote, presented by A. Moore)

“Components of an Artificial Photosynthetic Solar Fuel System,” Devens Gust, Thomas A. Moore and Ana L. Moore, 38th DOE Solar Photochemistry P. I. Meeting, Marriott Washingtonian Center Gaithersburg, Maryland June 6–9, 2016. (Presented by D. Gust, T. Moore and A. Moore)

“Proton Coupled Electron Transfers in Artificial Photosynthetic Constructs,” A. L. Moore, T. A. Moore, D. Gust, S. J. Mora, M. Villalba, A.-L. Teillout, M. Huynh and S. Hammes-Schiffer, The 26th Western Photosynthesis Conference Marconi Conference Center, Marshall, CA, January 5–8, 2017. (Presented by A. Moore)

“Proton-Coupled Electron Transfer in Models Inspired by Photosynthesis.” A. L. Moore, T. A. Moore and D. Gust, RISE Symposium, University of Puerto Rico at Cayey. Cayey, Puerto Rico January 28, 2017. (Presented by A. Moore)

“Helping Nature Regain Control of the Global Carbon Cycle,” Thomas A Moore, Ana L. Moore and Devens Gust, James Flack Norris Award in Physical Organic Chemistry: Symposium in honor Juan C. Scaiano, 251th American Chemical Society National Meeting & Exposition, San Diego, CA, 13-17 March 2016. (Presented by T. Moore)

“Helping Nature Regain Control of the Global Carbon Cycle,” Thomas A. Moore, Ana L. Moore and Devens Gust, 25th Inter-American Photochemical Society, Santiago, Chile, 24-27 May 2016. (Presented by T. Moore)

“Helping Nature Regain Control of the Global Carbon Cycle,” Thomas A. Moore, Ana L. Moore and Devens Gust, Dialogs on Human Ecology Conference, Pontificia Universidad Católica de Chile, Santiago, Chile, 11 August 2016. (Video contribution by T. Moore)

“Helping Nature Regain Control of the Global Carbon Cycle,” Thomas A. Moore, Ana L. Moore and Devens Gust, RISE Symposium, University of Puerto Rico at Cayey. Cayey, Puerto Rico, January 28, 2017. (Presented by T. Moore)

“Concerted One-Electron Two-Proton Transfer Processes in Models Inspired by the Tyr-His Couple of Photosystem II,” Mioy T. Huynh, S. Jimena Mora, Matias Villalba, Marely E. Tejada-Ferrari, Paul A. Liddell, Anne-Lucie Teillout, Charles W. Machan, Clifford P. Kubiak, Devens Gust, Thomas A. Moore, Sharon Hammes-Schiffe and Ana L. Moore, 39th DOE Solar Photochemistry P. I. Meeting, Marriott Washingtonian Center Gaithersburg, Maryland, June 5–8, 2016. (Poster presented by D. Gust, T. Moore and A. Moore)

“Concerted One-Electron Two-Proton Transfer (E2PT) Processes in Models Inspired by Photosynthesis,” Jimena Mora, Mioy Huynh, Matias Villalba, Marely Tejada-Ferrari, Paul Liddell, Anne-Lucie Teillout, Charles Machan, Clifford Kubiak, Devens Gust, Thomas Moore, Sharon Hammes-Schiffer and Ana L. Moore. XX Congreso Argentino de Fisicoquímica y Química Inorgánica. Carlos Paz, Córdoba, Argentina, May 16–19, 2017. (Presented by T. Moore)

“Concerted One-Electron Two-Proton Transfer (E2pt) Processes in Models Inspired by Photosynthesis,” S. Jimena Mora, Mioy T. Huynh, Matias Villalba, Paul A. Liddell, Anne-Lucie Teillout, Clifford P. Kubiak, Devens Gust, Thomas A. Moore, Sharon Hammes-Schiffer and Ana L. Moore. XX Congreso Argentino de Fisicoquímica y Química Inorgánica. Carlos Paz, Córdoba, Argentina, May 16–19, 2017. (Poster presented by A. Moore)

“One-Electron Two-Proton Transfer Processes in Models Inspired by the Tyr-His Couple of Photosystem II,” Ana L. Moore, Sharon Hammes-Schiffer, Thomas A. Moore, Devens Gust, Clifford P. Kubiak, Mioy T. Huynh, S. Jimena Mora, Matias Villalba, Paul A. Liddell and Anne-Lucie Teillout. 2nd International Conference on Hydrogen Atom Transfer (iCHAT 2017). Monteporzio Catone (Rome), Italy, 2–6 July 2017. (Presented by A. Moore)

INVITED LECTURES AT UNIVERSITIES AND OTHER RESEARCH INSTITUTIONS
(Presented by A. L. Moore):

“Artificial Photosynthesis: Synthesis and Photochemical Studies of a Molecular Pentad,” California State University, Long Beach, CA, April 25, 1990.

“Synthesis and Photochemical Studies of Model Systems for Photosynthesis,” Oregon Graduate Institute of Science and Technology, Beaverton, Oregon, May 18, 1990.

“Photodriven Electron Transfer in Model Photosynthetic Systems,” Federal University of Rio de Janeiro, Rio de Janeiro, Brazil, Nov. 13, 1990.

“Model Systems for Photosynthesis”, Institute of Biochemical Research, Fundación Campomar, Buenos Aires, Argentina, Nov. 16, 1990.

“Using Strategies From Photosynthesis to Suppress Drug Phototoxicity,” M. D. Anderson, Cancer Center, Houston, Texas, January 27, 1995.

“Photosynthesis in Artificial Systems,” Instituto Tecnológico de Estudios Superiores de Monterrey, Monterrey, México, February 1, 1995.

“Electron Transfer in Photosynthetic Artificial Systems,” Facultad de Ciencias Exactas, Universidad Nacional de Buenos Aires, Buenos Aires, Argentina, July 4, 1995.

“Carotenoids as Photoprotective and Localizing Agents in Tumor Imaging,” Quinto Simposium de Química: Medicina Molecular. Instituto Tecnológico de Estudios Superiores de Monterrey, Monterrey, México, September 28-29, 1995.

“Photoinduced Electron Transfer and Correlated Proton Transfer in Supramolecular Devices,” Ana L. Moore, Devens Gust and Thomas A. Moore, 3rd Annual Nebraska Metallobiochemistry Retreat, Lincoln, Nebraska, 12 -14 April, 1996.

“Carotenofluorophores: Imaging Agents for Diagnosis of Neoplastic Disease,” A. L. Moore, D. Gust and T. A. Moore, Primera Semana De La Facultad DeCiencias, Universidad Autonoma Del Estado De Morelos, Cuernavaca, Mexico, May 16-17, 1996.

“Carotenofluorophores: Imaging Agents for Diagnosis of Neoplastic Disease,” Laser Centre, Academic Medical Centre, Amsterdam, August 15, 1996.

“Carotenofluorophores: Imaging Agents for Diagnosis of Neoplastic Disease,” Department of Clinical Physics, Daniel den Hoed Cancer Centre, Rotterdam, August 16, 1996.

“Electron Transfer in Artificial Photosynthetic Systems”, Texas Tech University, October 2, 1996, Lubbock, Texas.

“Conversion of solar energy to chemical potential in artificial photosynthetic constructs”, University of Redlands, California, October 28, 1997.

“Conversion of solar energy to chemical potential in artificial photosynthetic constructs”, California State University - Los Angeles, November 4, 1997.

“Conversion of solar energy to chemical potential in artificial photosynthetic constructs”, California State University - Fresno, November 11, 1997.

“Conversion of solar energy to chemical potential in artificial photosynthetic constructs”, University of Florida, Gainesville, Florida, January 5, 1998.

“Photosynthesis Explored in Artificial Systems”, University of Pennsylvania, Philadelphia, Pennsylvania, February 10, 1998.

“Conversion of solar energy to chemical potential in artificial photosynthetic constructs”, California State University at Northridge, Northridge, California, February 25, 1998.

“The Function of Carotenoids: Photosynthetic and Photomedical Aspects”, Weizmann Institute of Science, Rehovot, Israel, May 26, 1998.

“The Function of Carotenoids: Photosynthetic and Photomedical Aspects”, Department of Chemistry, Yale University, New Haven, CT, 23 September 1998.

“Artificial Photosynthesis”, Department of Physical Sciences, New Mexico Highlands University, Las Vegas, NM, January 29, 1999.

“Artificial Photosynthesis”, Department of Chemistry and Biochemistry, University of Maryland Baltimore County, Baltimore, MD, April 6, 1999.

“Artificial Photosynthesis”, Department of Biochemistry, University of Arizona, Tucson, AZ, September 17, 1999.

“Fotosíntesis Artificial,” University of Autónoma de Tamaulipas, Nuevo Laredo, México, September 24, 1999.

“Artificial Photosynthesis”, Department of Chemistry and Biochemistry, San Francisco State University, San Francisco, CA, November 5, 1999.

“Artificial Photosynthesis”, Department of Chemistry and Biochemistry, University of California at Santa Cruz, Santa Cruz, CA, November 15, 1999.

“Design of an Artificial Photosynthetic Membrane,” Department of Chemistry, Evergreen State University, Olympia, WA, 7 February, 2000.

“Artificial Photosynthesis,” Department of Chemistry, San José State University, San José, California, 3 October, 2000.

“Artificial Photosynthesis,” Department of Chemistry, Baylor University, Waco, Texas, January 12, 2001.

“Artificial Photosynthesis,” Department of Chemistry, University of Washington, Seattle, Washington, April 13, 2001.

“Artificial Photosynthesis,” Department of Chemistry and Physics, University of Río Cuarto, Río Cuarto, Córdoba, Argentina, May 29, 2001.

“Artificial Photosynthesis,” Department of Chemistry & Biochemistry, University of Portland, Portland, Oregon, October 5, 2001.

“Artificial Photosynthesis,” The Scripps Research Institute Graduate Program Distinguished Lecturer Series, La Jolla, California, October 17, 2001.

“Artificial Photosynthesis,” Department of Chemistry & Biochemistry, California State University at San Bernardino, San Bernardino, California, October 25, 2001.

“Carotenoids in Artificial Photosynthesis,” Department of Chemistry, University of Illinois, Urbana, Illinois, February 28, 2002.

“Function of Carotenoids in Artificial Photosynthesis,” Department of Chemistry, University of Texas, Austin, Texas, March 28, 2002.

“Function of Carotenoids in Artificial Photosynthesis,” Max Planck Institute for Radiation Chemistry, Mülheim, Germany, April 19, 2002.

“Artificial Photosynthesis,” Department of Chemistry, University of Colorado, Boulder, Colorado, April 23, 2002.

“Fotosíntesis Artificial,” Instituto Tecnológico de Estudios Superiores de Monterrey, Monterrey, México, March 5, 2003.

“Membranas Fotosintéticas,” Instituto Tecnológico de Estudios Superiores de Monterrey, Monterrey, México, March 5, 2003.

“How to Choose Your Doctoral Mentor and Why This Is Critical to Your Success”, CIMD (Coalition to Increase Minority Degrees) Arizona State University, Tempe, Arizona, April 1, 2003.

“Artificial Photosynthesis a Paradigm for Sustainable Energy production”, Portland State University, Portland, Oregon, October 24, 2003.

“Artificial Photosynthesis”, Tulane University, New Orleans, Louisiana, February 16, 2004.

“How to Choose Your Doctoral Advisor”, CIMD (Coalition to Increase Minority Degrees) Arizona State University, Tempe, Arizona, March 29, 2004.

“Biomimetic Energy Conversion”, Max-Planck-Institut für Bioanorganische Chemie, Mülheim, Germany, July 15, 2004.

“Bio-Inspired Energy Conversion”, LSAMP Bridges to the Doctorate Students (Coalition to Increase Minority Degrees) Arizona State University, Tempe, Arizona, October 29, 2004.

“Bio-Inspired Energy Conversion”, WAESO/Bridge to the Doctorate Fellowship students Arizona State University, Tempe, Arizona, September 23, 2005.

“Energy Conversion Involving Carotenoid Polyenes” UCLA, October 27, 2005.

“Bioinspired Energy Conversion Schemes” Universidad de Puerto Rico Río Piedras, San Juan, 31 January, 2007.

“Perspectives on Successfully Mentoring More Underrepresented Postdoctoral Researchers: Strategies and Tactics that Work.” Arizona State University, Tempe, Arizona, April 23, 2007.

“Bioinspired Energy Conversion Schemes”, WAESO/Bridge to the Doctorate Fellowship students Arizona State University, Tempe, Arizona, August 9, 2007.

“Bioinspired Energy Conversion Schemes” Monterrey Tec., Monterrey, Mexico, 12 November, 2007.

“Phenol Radicals in Model Systems of PSII Reaction Center” University of Ottawa, Ottawa, Canada, 30 May, 2008.

“Artificial Photosynthetic Designs for Fuel Production” Rice-Houston Alliance for Graduate Education & the Professoriate, University of Houston, Texas, 31 July, 2009.

“Bioinspired Energy Conversion Schemes” University of Connecticut, Storrs, Connecticut, 14 October, 2009.

“Artificial Photosynthesis” Universidad Autónoma de Madrid, 24 June, 2011.

“Bioinspired Photoelectrochemical Cells for Water Splitting,” University of Colorado at Denver, Denver, Colorado, 21 March 2014.

“Light Harvesting and Fuel Production in Artificial Photosynthetic Systems,” Chemistry Colloquium, Uppsala University, Uppsala, Sweden, June 11, 2015.

“Sintesis of Biomimetic Systems for Proton and Electron Transfer Reactions in the Ground and Excited State,” Dissertation Presentation and Examination of Giovanni A. Parada. Uppsala University, Uppsala, Sweden, June 12, 2015.

“Light Harvesting and Fuel Production in Artificial Photosynthetic Systems,” Chemistry Colloquium, University of Buenos Aires, Buenos Aires, Argentina, July 15, 2015.

Mentoring (2016):

Postdoctoral Associates (in collaboration with D Gust and T. Moore):

Gerdenis Kodis
Matias Villalba
Sabrina J. Mora

Graduate Students:

Marely Tejeda-Ferrari (graduated, August 2016)

Undergraduate Students:

Juan José Romero (Fulbright fellow from Argentina)
Uma Vrudhula (Honors College)
Morgan Davis (Honors College)
Jasmin Rand
Spencer Bayless

Honors Contract (2016)

The organic chemistry courses CHM 233 and 234 taught by Dr. Pillai, Prof. G. Moore and Prof. Stephanopoulos offered Honors Enrichment Contracts. The requirements for the contract consisted of active participation in biweekly meetings of approximately one hour to discuss assigned papers in an informal setting. The discussions were moderated by Prof. Ana Moore, who also was in charge of choosing the subject of the discussions. The discussions were centered on applications of organic chemistry to recent scientific and industrial developments primarily related to sustainability.

The assigned papers were from the primary scientific literature (*Science* and *Nature*, etc.) and also from the popular literature (*New York Times*, *National Geographic*, *New Yorker Magazine*, *Chemical and Engineering News*, etc.).

The meetings took place in ISTB5 room 151 on Wednesdays at 6 PM and on Tuesdays at 3 PM. Each semester, approximately 30 students signed for the contract.

Research Grant

The grant entitled “Supramolecular Structures for Photochemical Energy Conversion” US Department of Energy (BES), has been funded for three years.

International collaborations. The Netherlands (Rienk van Grondelle and John Kennis, both at Vrije Universiteit, Amsterdam); France (Bruno Robert at CEA, Saclay); Argentina (Mónica Gonzalez, Universidad Nacional de La Plata and Rodrigo Palacios, Universidad Nacional de Río Cuarto).

Service. Faculty mentoring committee (member). Undergraduate programs and awards (member).

Participate in the activities of WAESO at ASU (Western Alliance to Expand Student Opportunities) program supported by the NSF.

Reviewer of journals.