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Employment

2015 - Present: Associate Director, School of Molecular Sciences
2005 - Present: President's Professor, Arizona State University
2004 - 2005: Professor, Arizona State University
1998 - 2004: Assistant Professor, Arizona State University
1996 - 1998: Research Associate, Eastman Kodak Company
1988 - 1996: Senior Research Chemist, Eastman Kodak Company
1986 - 1988: Research Chemist, Eastman Kodak Company
1983 - 1986: Research Associate, Columbia University (with N. J. Turro)
1981 - 1983: Postdoctoral Researcher, Columbia University (with N. J. Turro)

Education

Ph.D. 1980, University of Manchester, England (with A. A. Gorman)
M.Sc. 1978, University of Manchester, England (with A. A. Gorman)
B.Sc. (Hons) First Class, 1977, University of Manchester, England

Research Interests

Organic photochemistry and photophysics, fundamental mechanisms of organic reactions, organic geochemistry, computational chemistry

Awards

1977 Organic Chemistry Prize (Manchester University)
1985 Gramatacakis Neumann Award (European Photochemical Association)
1990 C. E. K. Mees Award (Eastman Kodak Company)
1996 John van Geuns Lecturer (University of Amsterdam)
2001 Cottrell Teacher Scholar Award (Research Corporation)
2002 CLAS Distinguished Teaching Award (Arizona State University)
2005 President's Professor (Arizona State University)

Professional Activities

Organizing Committee, Inter-American Photochemical Society Meeting (1988)
Co-Chair, NSF Science and Technology Center Conference (1990)
Co-Group Leader, Rochester NSF Science and Technology Center (1991-1998)
Treasurer, Inter-American Photochemical Society (1991-1994)
Co-Chair, NSF Science and Technology Center Conference (1993)
Organizing Committee, Inter-American Photochemical Society Meeting (1997)
Co-Chair, NSF Science and Technology Center Conference (1997)
Vice-Chair, Organic Photochemistry Gordon Conference (1997)
Member Advisory Board, Inter-American Photochemical Society (1998 - 2002)
Member of DOE External Review Panel, Oak Ridge National Laboratory (1999)
Chair, Organic Photochemistry Gordon Conference (1999)
Chair, American Chemical Society, Central Arizona Section (2001)
Editorial Board Member, Journal of Photochemistry and Photobiology (2001 -)

Chair, Inter-American Photochemical Society Meeting (2002)
Member, DOE "Hydrogen Initiative" Review Panel (2005)
Member, DOE "Future Generation Solar Energy Systems" Review Panel (2007)

Ian R. Gould : Publications : H-index = 47

1. Gorman, A. A.; Gould, I. R.; Hamblett, I. "The Triplet Sensitized Reaction of Singlet Oxygen with 2,5-Ditertiarybutylfuran: Yield Evidence for Inefficient Triplet Energy Transfer from Benzophenone to Oxygen" *Tetrahedron Lett.* **1980**, 1087.
2. Gorman, A. A.; Gould, I. R.; Hamblett, I. "Lifetimes and Energies of the Relaxed Triplet States of Cyclopentadiene and Tetramethylbutadiene. A Pulse Radiolysis and Pulsed Laser Study" *J. Am. Chem. Soc.* **1981**, 103, 4553.
3. Braun, A. M.; Krieg, M.; Turro, N. J.; Aikawa, M.; Gould, I. R.; Graf, G. A.; Lee, P. C.-C. "Photochemical Processes of Benzophenone in Microheterogeneous Systems" *J. Am. Chem. Soc.* **1981**, 103, 7312.
4. Turro, N. J.; Aikawa, M.; Gould, I. R. "The Laser vs. the Lamp. A Novel Laser-Induced Adiabatic Reaction and Luminescence of Benzophenone" *J. Am. Chem. Soc.* **1982**, 104, 856.
5. Gorman, A. A.; Gould, I. R.; Hamblett, I. "Time-Resolved Study of the Solvent and Temperature Dependence of Singlet Oxygen (1O_2) Reactivity toward Enol Ethers: Reactivity Parameters Typical of Rapid Reversible Exciplex Formation" *J. Am. Chem. Soc.* **1982**, 104, 7098.
6. Gorman, A. A.; Gould, I. R.; Hamblett, I. "Detection of the Triplet-Triplet Absorption of 1,3-Dienes by Pulse Radiolysis" *J. Photochem.* **1982**, 19, 89.
7. Turro, N. J.; Gould, I. R.; Baretz, B. H. "Absolute Rate Constants for Decarbonylation of Phenacetyl and Related Radicals" *J. Phys. Chem.* **1983**, 87, 531.
8. Moss, R. A.; Perez, L. A.; Turro, N. J.; Gould, I. R.; Hacker, N. P. "Hammett Analysis of Absolute Carbene Addition Rate Constants" *Tetrahedron Lett.* **1983**, 685.
9. Timpe, H.-J.; Israel, G.; Becker, H. G. O.; Gould, I. R.; Turro, N. J. "Photoinduced Electron Transfer Between Aromatic Hydrocarbons and Arene Diazonium Salts in Micellar Solutions" *Chem. Phys. Lett.* **1983**, 99, 275.
10. Turro, N. J.; Hrovat, D. A.; Gould, I. R.; Padwa, A.; Dent, W.; Rosenthal, R. J. "Kinetics of the Reaction of Electron Deficient Olefins with Nitrile Ylides Generated by Laser Flash Photolysis of Substituted Azirines" *Angew. Chem. Int. Ed. Engl.* **1983**, 22, 625.
11. Turro, N. J.; Zimmt, M. B.; Gould, I. R. "Dynamics of Micellized Radical Pairs. Measurement of Micellar Exit Rates of Benzylic Radicals by Time-Resolved Flash CIDNP and Optical Spectroscopy" *J. Am. Chem. Soc.* **1983**, 105, 6347.
12. Cox, D. P.; Gould, I. R.; Hacker, N. P.; Moss, R. A.; Turro, N. J. "Absolute Rate Constants for the Addition of Halophenylcarbenes to Alkenes; A Reactivity-Selectivity Relation" *Tetrahedron Lett.* **1983**, 5313.
13. Baumann, H.; Merckel, C.; Timpe, H.-J.; Graness, A.; Kleinschmidt, J.; Gould, I. R.; Turro, N. J. "The Laser vs. the Lamp: Reactivity of the Diphenylketyl Radical in the Ground and Excited States" *Chem. Phys. Lett.* **1984**, 103, 497.
14. Turro, N. J.; Tung, C.-H.; Gould, I. R.; Griffin, G. W.; Smith, R. L.; Manmade, A. "Cycloelimination Reactions of Cyclic Aryl Pinacol Sulfites and Carbonates via Photosensitized Reversible Electron Transfer" *J. Photochem.* **1984**, 24, 265.

15. Das, P. K.; Muller, A. J.; Griffin, G. W.; Gould, I. R.; Tung, C.-H.; Turro, N. J. "Photosensitization via Charge Transfer or Reversible Electron Transfer. Oxirane Isomerization and Sulfur Dioxide Extrusion" *Photochem. Photobiol.* **1984**, *39*, 281.
16. Gould, I. R.; Tung, C.-H.; Turro, N. J.; Givens, R. S.; Matuszewski, B. "Mechanistic Studies of the Photodecomposition of Arylmethyl Sulfones in Homogeneous and Micellar Solution" *J. Am. Chem. Soc.* **1984**, *106*, 1789.
17. Sung, C. S. P.; Gould, I. R.; Turro, N. J. "Pulsed Laser Spectroscopic Study of the Photoisomerization of Azo Labels at Three Different Locations on a Polystyrene Chain" *Macromolecules* **1984**, *17*, 1447.
18. Padwa, A.; Rosenthal, R. J.; Dent, W.; Filho, P.; Turro, N. J.; Hrovat, D. H.; Gould, I. R. "Steady-State and Laser Photolysis Studies of Substituted 2H-Azirines. Spectroscopy, Absolute Rates, and Arrhenius Behaviour for the Reaction of Nitrile Ylides with Electron Deficient Olefins" *J. Org. Chem.* **1984**, *49*, 3174.
19. Gould, I. R.; Turro, N. J.; Zimmt, M. B. "Magnetic Field and Isotope Effects on the Products of Organic Reactions" *Adv. Physical Organic Chem.* **1984**, *20*, 1.
20. Gorman, A. A.; Gould, I. R.; Hamblett, I.; Standen, M. C. "Reversible Exciplex Formation Between Singlet Oxygen, 1O_2 , and Vitamin E. Solvent and Temperature Effects" *J. Am. Chem. Soc.* **1984**, *106*, 6956.
21. Eisenthal, K. B.; Turro, N. J.; Sitzmann, E. V.; Gould, I. R.; Hefferon, G.; Langan, J.; Cha, Y. "Singlet-Triplet Interconversion of Diphenylmethane. Energetics, Dynamics, and Reactivities of Different Spin States" *Tetrahedron* **1985**, *41*, 1543.
22. Gould, I. R.; Turro, N. J.; Butcher, J., Jr.; Doubleday, C., Jr.; Hacker, N. P.; Lehr, G. F.; Moss, R. A.; Cox, D. P.; Guo, W.; Munjal, R. C.; Perez, L. A.; Fedorynski, M. "Time-Resolved Flash Spectroscopic Investigations of the Reactions of Singlet Arylhalocarbenes" *Tetrahedron* **1985**, *41*, 1587.
23. Gould, I. R.; Kuo, P.-L.; Turro, N. J. "Quenching of Pyrene Fluorescence by Cesium Ions in Micellar Systems" *J. Phys. Chem.* **1985**, *89*, 3030.
24. Gould, I. R.; Zimmt, M. B.; Turro, N. J.; Baretz, B. H.; Lehr, G. F. "Dynamics of Radical Pair Reactions in Micelles" *J. Am. Chem. Soc.* **1985**, *107*, 4607.
25. Turro, N. J.; Zimmt, M. B.; Gould, I. R.; Mahler, W. "Triplet Energy Transfer as a Probe of Surface Diffusion Rates: A Time-Resolved Diffuse Reflectance Transient Absorption Spectroscopy Study" *J. Am. Chem. Soc.* **1985**, *107*, 5826.
26. Turro, N. J.; Gould, I. R.; Zimmt, M. B.; Cheng, C.-C. "Ketone Photochemistry on Solid Silica. A Diffuse Reflectance Laser Flash Photolysis Study" *Chem. Phys. Lett.* **1985**, *119*, 484.
27. Turro, N. J.; Cha, Y.; Gould, I. R.; Padwa, A.; Gasdaska, J. R.; Tomas, M. "Carbene and Silicon Routes toward a Simple Nitrile Ylide. Spectroscopic, Kinetic, and Chemical Characterization" *J. Org. Chem.* **1985**, *50*, 4415.
28. Zimmt, M. B.; Doubleday, C., Jr.; Gould, I. R.; Turro, N. J. "Nanosecond Flash Photolysis Studies of Intersystem Crossing Rate Constants in Biradicals: Structural Effects Brought About by Spin-Orbit Coupling" *J. Am. Chem. Soc.* **1985**, *107*, 6724.
29. Turro, N. J.; Lei, X. G.; Gould, I. R.; Zimmt, M. B. "External Magnetic Field Dependent Influence of Lanthanide Ions on the Chemistry of Radical Pairs in Micelles" *Chem. Phys. Letts.* **1985**, *120*, 387.

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31. Padwa, A.; Gadaska, J. R.; Tomas, M.; Turro, N. J.; Cha, Y.; Gould, I. R. "Carbene and Silicon Routes as Methods for the Generation and Dipolar Cycloaddition Reactions of Methyl Nitrile Ylide" *J. Am. Chem. Soc.* **1986**, *108*, 6739.
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33. Alt, R.; Gould, I. R.; Staab, H.; Turro, N. J. "Structural Control of Triplet/Singlet Equilibrium in Cyclophane Diarylcarbenes" *J. Am. Chem. Soc.* **1986**, *108*, 6911.
34. Gould, I. R.; Baretz, B. H.; Turro, N. J. "Primary Processes in the Type I Photocleavage of Dibenzyl Ketones. A Pulsed Laser Photolysis and Photochemically Induced Dynamic Nuclear Polarization Study" *J. Phys. Chem.* **1987**, *91*, 925.
35. Wahab, A.; Doss, S. H.; Dürr, H.; Gould, I. R.; Turro, N. J. "Mechanistic Investigations of the Cycloaddition Reactions of Thioxanthenylidene-S,S- Dioxide" *J. Org. Chem.* **1987**, *52*, 429.
36. Doss, S. H.; Wahab, A.; Frühof, E.; Dürr, H.; Gould, I. R.; Turro, N. J. "Carbenadibenzocycloheptane: Steady-State and Time-Resolved Spectroscopic Laser Studies" *J. Org. Chem.* **1987**, *52*, 434.
37. Turro, N. J., Cha, Y.; Gould, I. R. "Reactivity and Intersystem Crossing of Singlet Methylene in Solution" *J. Am. Chem. Soc.* **1987**, *109*, 2101.
38. Moss, R. A.; Lawrynowicz, W.; Hadel, L. M.; Hacker, N. P.; Turro, N. J.; Gould, I. R.; Cha, Y. "Are Phenylhalocarbenes Ambiphilic?" *Tetrahedron Lett.* **1986**, *27*, 4125.
39. Kumar, C. V.; Barton, J. K.; Turro, N. J.; Gould, I. R. "Time-Resolved Resonance Raman Spectra of Polypyridyl Complexes of Ru(II)" *Inorg. Chem.* **1987**, *26*, 1455.
40. Turro, N. J.; Cha, Y.; Gould, I. R.; Moss, R. A. "Direct Photochemical Population of Triplet Diazirines: Comparison of Triplet Energies by Direct Excitation and by Energy Transfer" *J. Photochem.* **1987**, *37*, 81.
41. Fanghänel, E.; Orfman, W.; Behrmann, K.; Wilscher, S.; Turro, N. J.; Gould, I. R. "Photochemical Primary Processes of Xanthene Dyes. VII. Xanthene Dyes as Probes for the Characterization of Anionic Micelles" *J. Phys. Chem.* **1987**, *91*, 3700.
42. Gould, I. R.; Ege, D.; Mattes, S. L.; Farid, S. "Return Electron Transfer Within Geminate Radical Ion Pairs. Observation of the Marcus Inverted Region" *J. Am. Chem. Soc.* **1987**, *109*, 3794.
43. Turro, N. J.; Zimmt, M. B.; Lei, X. G.; Gould, I. R.; Nitsche, K. S.; Cha, Y. "Additive Effects on the CIDNP, Cage Effect and Exit Rate of Micellized Radical Pairs" *J. Phys. Chem.* **1987**, *91*, 4544.
44. Turro, N. J.; Okamoto, M.; Gould, I. R.; Moss, R. A.; Lawrynowicz, W.; Hadel, L. M. "Volumes of Activation for the Cycloaddition Reactions of Phenylhalocarbenes to Alkenes" *J. Am. Chem. Soc.* **1987**, *109*, 4973.
45. Turro, N. J.; Zimmt, M. B.; Gould, I. R. "Magnetic Field and Isotope Dependence of the Reaction Rates of Micellized Triplet Radical Pairs" *J. Phys. Chem.* **1988**, *92*, 433.

46. Kumar, C. V.; Barton, J. K.; Gould, I. R.; Turro, N. J. "Energy Redistribution and Localization in the Excited States of Ru(II) Polypyridyl Complexes" *Inorg. Chem.* **1988**, *27*, 648.
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53. Corin, A. F.; Gould, I. R. "Photo-induced Electron Ejection from the Reduced Copper of *Pseudomonas aeruginosa* Azurin" *Photochem. Photobiol.* **1989**, *50*, 413.
54. Turro, N. J.; Gould, I. R.; Liu, J.; Jenks, W. S.; Staab, H.; Alt, R. "Investigations of the Influence of Molecular Geometry on the Spectroscopic and Photochemical Properties of α -Oxo[1,*n*]paracyclophanes (Cyclophanebenzophenones)" *J. Am. Chem. Soc.* **1989**, *111*, 6378.
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60. Kellett, M. A.; Whitten, D. G.; Gould, I. R.; Bergmark, W. R., "Surprising Differences in the Reactivity of Cyanoaromatic Radical Anions Generated by Photoinduced Electron Transfer" *J. Am. Chem. Soc.* **1991**, *113*, 358.
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Reorganization Energies for Charge-Transfer and Locally-Excited States", *J. Chem. Phys.* **1998**, *109*, 10958.

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