

CURRICULUM VITAE

DONG-KYUN (DON) SEO

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EDUCATION

- 1998 – 2001 Postdoctoral Associate
Ames Laboratory – US DOE
Department of Chemistry
Iowa State University
Advisor: Professor John D. Corbett
- 1997 – 1998 Postdoctoral Associate
Department of Chemistry and Chemical Biology, Cornell University
Advisor: Professor Roald Hoffmann (Nobel laureate)
- 1994 – 1997 PhD in Inorganic Chemistry
Department of Chemistry, North Carolina State University
Thesis advisor: Professor Myung-Hwan Whangbo
- 1990 – 1992 MS in Inorganic Chemistry
Department of Chemistry, Seoul National University, Korea
Thesis advisor: Professor Jin-Ho Choy
- 1986 – 1990 BS in Chemistry
Department of Chemistry, Seoul National University, Korea

EMPLOYMENT

- 2007 – **present** Associate Professor (with tenure)
School of Molecular Sciences (formerly, Department of Chemistry and Biochemistry)
Arizona State University
- 2013 – **present** Founder/CEO, Remylop, LLC, Arizona
- 2011 – 2013 Chief Technology Officer (CTO), Mattium Corporation, Arizona
- 2001 – 2007 Assistant Professor
School of Molecular Sciences (formerly, Department of Chemistry and Biochemistry)
Arizona State University
- 1992 – 1994 Undergraduate Teaching Laboratory Manager
Department of Chemistry
Korea Advanced Institute of Science and Technology (KAIST), Korea

AWARDS AND HONORS

- 2008 Invited Professor, École Polytechnique de l'Université de Nantes, France
- 2007 Invited Professor, University of Nantes, France – Jean Rouxel Institute of Materials.
- 2006 – 2011 Camille Dreyfus Teacher-Scholar Award (The Camille and Henry Dreyfus Foundation)
- 2003 – 2008 NSF CAREER Award (DMR)
- 1995 NATO Advanced Study Institute Fellowship on Physics and Chemistry of Low-Dimensional Inorganic Conductors (Les Houches, France)
- 1994 – 1997 GAANN Electronic Materials Fellowship (U. S. Department of Education)

I. TEACHING

The following table summarizes the courses that I have taught at the undergraduate and graduate levels.

A. Lecture Courses Taught

2016

N/A

B. Laboratory Research Instruction

2016

CHM 452 Inorganic Chemistry Laboratory

C. Graduate Student Mentoring

I have graduated 7 PhD students and 5 MS students as an advisor or co-advisor.

<i>Graduate Student</i>	<i>Degree</i>	<i>Grad Date</i>	<i>Role</i>	<i>Current Position</i>
Iancu, Nora	MS	5/2005	Advisor	President/CEO at i-TEK Solutions, LLC, AZ
Santra, Sanjitarani	MS	8/2007	Advisor	Founder, Kaivalya School of Odissi, OR
Kim, Sanghwan	PhD	12/2007	Advisor	Senior Research Investigator, DuPont
Ladd, Danielle Marie	PhD	8/2012	Advisor	Department Chair, Science, The Early College of Arvada, CO
Mesgar, Milad	MS	8/2012	Advisor	PhD student, U. Houston, TX
Volosin, Alex Michael	PhD	8/2012	Advisor	Chemist, Leccel, LLC, AZ
Konar, Sumit	MS	12/2012	Co-Advisor	Postdoctoral Research Associate at The University of Edinburgh
Puhakainen, Kati A	PhD	8/2013	Co-Advisor	Patent Analyst, Global Patent Solutions LLC, AZ
Jeon, Kiwan	PhD	12/2013	Advisor	Postdoctoral Research Associate at POSTECH, Korea
MedPELLI, Dinesh	PhD	5/2015	Advisor	Process Engineer at Lam Research, CA
Curcuru, Joseph	MS	1/2016	Advisor	Patent Engineer/Agent at IBM, New York
Mieritz, Daniel Gustav	PhD	12/2016	Advisor	
Abeysooriya, Shanika	MS	Present	Advisor	
Chen, Shaojiang	PhD	Present	Advisor	

D. Postdoctoral Fellow Mentoring

I have trained 10 postdoctoral fellows.

<i>Postdoctoral Fellow</i>	<i>Year</i>	<i>Current Position</i>
Wu, Liming	2001 – 2004	Professor at Beijing Normal University
Wang, Qiangbin	2004 – 2006	Principal Investigator at Suzhou Institute of Nano-Tech and Nano-Bionics, Chinese Academy of Sciences
Yu, Hongtao	2010 – 2011	Scientist at Philips, Shanghai, China
Sharma, Sudhanshu	2011 – 2013	Assistant Professor at Indian Institute of Technology, Gandhinagar, Gujarat
Skorina, Taisiya	2011 – 2012	Materials Chemist (inorganic synthesis), 3M, Minneapolis
Das, Barun	2013 – 2014	Lead Scientist, Cookson India Private Limited, Vaishnavi, India

Jeon, Kiwan	2013 – 2014	Postdoctoral Research Associate at POSTECH, Korea
Volosin, Alex Michael	2012 – 2015	Chemist, Leccel, LLC
Renaud, Adele	2014 – 2015	Researcher, Jean Rouxel Institute of Materials in Nantes, France
Zhang, Haojie	2015 – present	

F. Foreign Exchange Students/Scholars

<i>Exchange Student</i>	<i>Institute</i>	<i>Year</i>	<i>Current Position</i>
Daub, Kathrin	U. Köln, Germany	2007 – 2008	
Hörtz, Christian	U. Mainz, Germany	2010 – 2011	PhD at U. Mainz, Germany
Schmitt, Dominick	U. Mainz, Germany	2010 – 2011	PhD at U. Mainz, Germany
Chekmarev, Anton	Kazan State Univ., Russia	2011 – 2012	Head, Technological Testing Department of Central Scientific Research Institute of Geology of Industrial Minerals, Kazan, Russia
Khabibulin, Shamil	U. Tomsk, Russia	2016	Engineer – National Research Tomsk Polytechnic University, Tomsk, Russia
Sorge, Lukas	U. Mainz, Germany	2016 – present	

G. Member of Dissertation/Thesis Committee for graduate students from other labs

<i>Graduate Student</i>	<i>Degree</i>	<i>Grad Date</i>	<i>Department</i>
Jernigan, Ryan John	MS	12/2006	School of Molecular Sciences
Straessler, Nicholas Andrew	PhD	12/2006	School of Molecular Sciences
Gengler, Jamie J	PhD	5/2007	School of Molecular Sciences
Evans, Michael Joseph	PhD	12/2008	School of Molecular Sciences
Sharma, Jaswinder Kumar	PhD	5/2009	School of Molecular Sciences
Sharma, Ramesh	PhD	12/2009	School of Molecular Sciences
Ehlert, Greg	MSE	9/2009	Mechanical Engineering
Kranak, Verina Franika	MS	5/2011	School of Molecular Sciences
Wu, Yang	PhD	5/2011	School of Molecular Sciences
Nangreave, Jeanette Kim	PhD	8/2011	School of Molecular Sciences
Li, Zhe	PhD (Bio)	5/2012	School of Molecular Sciences
Zhao, Zhao	PhD	5/2013	School of Molecular Sciences
Tucker, Telpriore G	PhD	5/2014	School of Molecular Sciences
Ranjan, Rajeev	PhD	5/2015	School of Molecular Sciences
Wang, Chengwei	PhD	7/2015	Materials Engineering
Samanta, Subarna	PhD	5/2016	School of Molecular Sciences
Khosravi, Afsaneh	PhD	9/2016	Chemical Engineering
Pal, Raja	PhD	12/16	School of Molecular Sciences
Durgun, Pinar Cay	PhD	present	Chemical Engineering

Ghosh, Chandrani	PhD	present	School of Molecular Sciences
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H. Undergraduate Student Mentoring

<i>Undergraduate Student</i>	<i>Year</i>	<i>Current Position</i>
Seo, Jungmin	2009 – 2013	Research chemist, SK Chemical, South Korea
Endres, Jordan	2011 – 2012	Doctor of Dental Surgery at Alanson M. Randol Family and Cosmetic Dentistry in Roseburg
Hernandez, Carlo	2014 – 2015	Quality Assurance Technician at LSG Sky Chefs, NY
Boskailo, Timur	2016 – present	

I. High School Student Mentoring

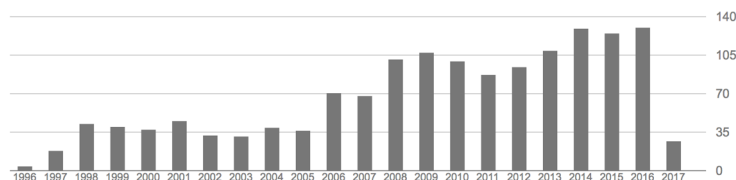
<i>High School Student</i>	<i>Year</i>	<i>Current Position</i>
Min, Jay	2011	Research chemist at Intel, AZ after undergraduate degree at UC Berkeley.
Banergee, Ruchi	2015	Undergraduate at Georgia Tech
Banergee, Reeti	2015	Undergraduate at UC San Francisco
Kim, Yoona	2015	Pre-med undergraduate at U of Arizona

II. RESEARCH

I have published **82 peer-reviewed articles**, **three book chapters**, **three conference proceedings articles**, and **12 patents or patent applications**. I have received a **total of 1474 citations**. I have an **H-index of 23** and **i10-index of 44** based on Google Scholar. **Since tenure promotion in 2007**, I have published **28 peer-reviewed articles**, **two book chapters**, **three conference proceedings articles**, and **12 patents or patent applications**.

A. Peer Reviewed Publications (as of February 2017)

Citations per year



Total Citations = 1474 (Google Scholar)

Average = 18 per article

Articles cited >100 times = 1

Articles cited 50 – 100 times = 8

Articles cited 23 – 50 times = 11

H-index = 23 (Google Scholar)

Post Tenure (#1 – #28) (* indicates corresponding or co-corresponding author)

1. Zhao, R.; Mieritz, D.; *Seo, D.-K.; *Chan, C. K., New hydrogen titanium phosphate sulfate electrodes for Li-ion and Na-ion batteries. *Journal of Power Sources* **2017**, *343*, 197-206.
2. Zhang, H.; Jeon, K.-W.; *Seo, D.-K., Equipment-Free Deposition of Graphene-Based Molybdenum Oxide Nanohybrid Langmuir–Blodgett Films for Flexible Electrochromic Panel Application. *ACS Applied Materials & Interfaces* **2016**, *8* (33), 21539-21544.
3. *Mitran, G.; Pavel, O. D.; Mieritz, D. G.; Seo, D.-K.; Florea, M., Effect of Mo/Ce ratio in Mo–Ce–Al catalysts on the hydrogen production by steam reforming of glycerol. *Catalysis Science & Technology* **2016**, *6* (21), 7902-7912.
4. *Mitran, G.; Pavel, O. D.; Florea, M.; Mieritz, D. G.; Seo, D.-K., Hydrogen production from glycerol steam reforming over molybdena–alumina catalysts. *Catalysis Communications* **2016**, *77*, 83-88.
5. Mieritz, D. G.; Renaud, A. I.; *Seo, D.-K., Unusual Changes in Electronic Band-Edge Energies of the Nanostructured Transparent n-Type Semiconductor Zr-Doped Anatase TiO₂ (Ti_{1-x}Zr_xO₂; x < 0.3). *Inorganic Chemistry* **2016**, *55* (13), 6574-6585.
6. Mieritz, D.; Davidowski, S. K.; *Seo, D.-K., Accessing alkali-free NASICON-type compounds through mixed oxoanion sol–gel chemistry: Hydrogen titanium phosphate sulfate, H_{1-x}Ti₂(PO₄)_{3-x}(SO₄)_x (x = 0.5–1). *Journal of Solid State Chemistry* **2016**, *242*, 116-125.
7. *Khosravi, A.; King, J. A.; Maltagliati, A.; Dopilka, A.; Kline, K.; Nguyen, T.; Lai, T.; Yang, S.; Chen, S.; Seo, D. K., Coarsening and Spinodal Decomposition of Zeolite Linde Type A Precursor Gels Aged at Low Temperatures. *Crystal Growth & Design* **2016**, *16* (6), 3224-3230.
8. Carey, A.-M.; Zhang, H.; Mieritz, D.; Volosin, A.; Gardiner, A. T.; Cogdell, R. J.; Yan, H.; *Seo, D.-K.; *Lin, S.; *Woodbury, N. W., Photocurrent generation by photosynthetic purple bacterial reaction centers interfaced with a porous antimony-doped tin oxide (ATO) electrode. *ACS Applied Materials & Interfaces* **2016**, *8* (38), 25104-25110.
9. Sharma, S.; Medpelli, D.; Chen, S.; *Seo, D.-K., Calcium-modified hierarchically porous aluminosilicate geopolymer as a highly efficient regenerable catalyst for biodiesel production. *RSC Advances* **2015**, *5* (80), 65454-65461.
10. *Ryckaczewski, K.; Mieritz, D. G.; Liu, M.; Ma, Y.; Iezzi, E. B.; Sun, X.; Wang, L. P.; Solanki, K. N.; Seo, D. K.; Wang, R. Y., Far-reaching geometrical artefacts due to thermal decomposition of polymeric coatings around focused ion beam milled pigment particles. *Journal of Microscopy* **2015**.
11. Medpelli, D.; Sandoval, R.; Sherrill, L.; Hristovski, K.; *Seo, D.-K., Iron oxide-modified nanoporous geopolymers for arsenic removal from ground water. *Resource-Efficient Technologies* **2015**, *1* (1), 19-27.
12. Kim, D.; Jin, Y.-H.; Jeon, K.-W.; Kim, S.; Kim, S.-J.; Han, O. H.; Seo, D.-K.; *Park, J.-C., Blue-silica by Eu²⁺-activator occupied in interstitial sites. *RSC Advances* **2015**, *5* (91), 74790-74801.

13. Kim, D.; Jeon, K.-W.; Jin, J. S.; Kang, S.-G.; Seo, D.-K.; *Park, J.-C., Remarkable flux effect of Li-codoping on highly enhanced luminescence of orthosilicate Ba₂SiO₄: Eu²⁺ phosphors for NUV-LEDs: autonomous impurity purification by eutectic Li₂CO₃ melts. *RSC Advances* **2015**, 5 (127), 105339-105346.
14. Das, B.; Renaud, A. I.; Volosin, A. M.; Yu, L.; Newman, N.; *Seo, D.-K., Nanoporous Delafossite CuAlO₂ from Inorganic/Polymer Double Gels: A Desirable High-Surface-Area p-Type Transparent Electrode Material. *Inorganic Chemistry* **2015**, 54 (3), 1100-1108.
15. Samain, L.; Jaworski, A.; Edén, M.; Ladd, D. M.; Seo, D.-K.; Garcia-Garcia, F. J.; *Häussermann, U., Structural analysis of highly porous γ -Al₂O₃. *Journal of Solid State Chemistry* **2014**, 217, 1-8.
16. Medpelli, D.; Seo, J. M.; *Seo, D. K., Geopolymer with hierarchically meso-/macroporous structures from reactive emulsion templating. *Journal of the American Ceramic Society* **2014**, 97 (1), 70-73.
17. Jeon, K.-W.; *Seo, D.-K., Concomitant thionation and reduction of graphene oxide through solid/gas metathetical sulfidation reactions at high temperatures. *Phosphorus, Sulfur, and Silicon and the Related Elements* **2014**, 189 (6), 721-737.
18. Sharma, S.; Volosin, A. M.; Schmitt, D.; *Seo, D.-K., Preparation and electrochemical properties of nanoporous transparent antimony-doped tin oxide (ATO) coatings. *Journal of Materials Chemistry A* **2013**, 1 (3), 699-706.
19. Volosin, A. M.; Sharma, S.; Traverse, C.; Newman, N.; *Seo, D.-K., One-pot synthesis of highly mesoporous antimony-doped tin oxide from interpenetrating inorganic/organic networks. *Journal of Materials Chemistry* **2011**, 21 (35), 13232-13240.
20. Simmons, C. R.; Schmitt, D.; Wei, X.; Han, D.; Volosin, A. M.; Ladd, D. M.; *Seo, D.-K.; Liu, Y.; *Yan, H., Size-selective incorporation of DNA nanocages into nanoporous antimony-doped tin oxide materials. *ACS Nano* **2011**, 5 (7), 6060-6068.
21. Kwan, P.; Schmitt, D.; Volosin, A. M.; McIntosh, C. L.; *Seo, D.-K.; *Jones, A. K., Spectroelectrochemistry of cytochrome c and azurin immobilized in nanoporous antimony-doped tin oxide. *Chemical Communications* **2011**, 47 (45), 12367-12369.
22. Ladd, D. M.; Volosin, A.; *Seo, D.-K., Preparation of highly porous γ -alumina via combustion of biorenewable oil. *Journal of Materials Chemistry* **2010**, 20 (28), 5923-5929.
23. *Faulques, E.; Massuyeau, F.; Wang, Q.; Seo, D. K.; Jobic, S., Mapping emissive channels of quantum dots: Influence of size and environment on energy transfer in the time domain. *Applied Physics Letters* **2010**, 97 (15), 153111.
24. Wang, Q.; *Seo, D.-K., Preparation of photostable quantum dot-polystyrene microbeads through covalent organosilane coupling of CdSe@Zns quantum dots. *Journal of Materials Science* **2009**, 44 (3), 816-820.
25. *Seo, D. K.; Kim, S. H., Nature of Stoner condition for metallic ferromagnetism. *Journal of Computational Chemistry* **2008**, 29 (13), 2172-2176.
26. *Seo, D.-K.; Weng, C. E., Orbital interpretation of kinetic energy density and a direct space comparison of chemical bonding in tetrahedral network solids. *The Journal of Physical Chemistry A* **2008**, 112 (33), 7705-7716.
27. Kim, S.-H.; Boström, M.; *Seo, D.-K., Two-Dimensional Superdegeneracy and Structure–Magnetism Correlations in Strong Ferromagnet, Mn₂Ga₅. *Journal of the American Chemical Society* **2008**, 130 (4), 1384-1391.
28. *Kanatidis, M. G.; Poeppelmeier, K. R.; Bobev, S.; Guloy, A. M.; Hwu, S.-J.; Lachgar, A.; Lattner, S. E.; Schaak, E.; Seo, D.-K.; Sevov, S. C. et al., Report from the third workshop on future directions of solid-state chemistry: The status of solid-state chemistry and its impact in the physical sciences. *Progress in Solid State Chemistry* **2008**, 36 (1), 1-133.

Pre-Tenure (#29 – #44) at ASU (* indicates corresponding or co-corresponding author)

29. Wang, Q.; Xu, Y.; Zhao, X.; Chang, Y.; Liu, Y.; Jiang, L.; Sharma, J.; *Seo, D.-K.; *Yan, H., A facile one-step in situ functionalization of quantum dots with preserved photoluminescence for bioconjugation. *Journal of the American Chemical Society* **2007**, 129 (20), 6380-6381.

30. *Seo, D.-K., Density functional perturbational orbital theory of spin polarization in electronic systems. II. Transition metal dimer complexes. *The Journal of Chemical Physics* **2007**, 127 (18), 184103.
31. *Seo, D.-K., Self-interaction correction in the LDA+ U method. *Physical Review B* **2007**, 76 (3), 033102.
32. Wu, L. M.; Kim, S. H.; *Seo, D. K., Electron-Precise/Deficient La_{5-x}CaxGe₄ (3.4 ≤ x ≤ 3.8) and Ce_{5-x}CaxGe₄ (3.0 ≤ x ≤ 3.3): Probing Low-Valence Electron Concentrations in Metal-Rich Gd₅Si₄-Type Germanides. *ChemInform* **2006**, 37 (5).
33. Wang, Q.; *Seo, D.-K., Synthesis of deep-red-emitting CdSe quantum dots and general non-inverse-square behavior of quantum confinement in CdSe quantum dots. *Chemistry of Materials* **2006**, 18 (24), 5764-5767.
34. *Seo, D.-K.; Wu, L.-M.; Kim, S.-H., Understanding Structure-forming Factors and Theory-guided Exploration of Structure-Property Relationships in Intermetallics. *Inorganic Chemistry in Focus III* **2006**, 183-193.
35. *Seo, D.-K., Density functional perturbational orbital theory of spin polarization in electronic systems. I. Formalism a. *The Journal of Chemical Physics* **2006**, 125 (15), 154105.
36. Wu, L.-M.; Kim, S.-H.; *Seo, D.-K., Electron-Precise/Deficient La_{5-x}CaxGe₄ (3.4 ≤ x ≤ 3.8) and Ce_{5-x}CaxGe₄ (3.0 ≤ x ≤ 3.3): Probing Low-Valence Electron Concentrations in Metal-Rich Gd₅Si₄-type Germanides. *Journal of the American Chemical Society* **2005**, 127 (45), 15682-15683.
37. Wang, Q.; Iancu, N.; *Seo, D.-K., Preparation of large transparent silica monoliths with embedded photoluminescent CdSe@ ZnS core/shell quantum dots. *Chemistry of Materials* **2005**, 17 (19), 4762-4764.
38. Kim, S.-H.; Seo, D.-K.; Kremer, R. K.; Köhler, J.; Villesuzanne, A.; *Whangbo, M.-H., Large negative magnetoresistance of the rare-earth transition-metal intermetallic compound PrMnSi₂. *Chemistry of Materials* **2005**, 17 (25), 6338-6341.
39. Kim, S.-H.; Seo, D.-K.; Kremer, R. K.; Köhler, J.; Villesuzanne, A.; *Whangbo, M.-H., Observation of unusual hysteretic magnetic properties of the rare earth intermetallic compound PrMnSi₂: Magnetic susceptibility, magnetization, heat capacity, and electronic band structure studies. *Chemistry of Materials* **2005**, 17 (14), 3711-3716.
40. Wu, L.-M.; *Seo, D.-K., Mn₁₄Al_{56+x}Ge_{3-x} (x = 0 – 0.6): A New Intermetallic Phase Containing Unprecedented “Half-Broken” Mackay Icosahedra as Building Units. *Journal of the American Chemical Society* **2004**, 126 (13), 4398-4403.
41. Wu, L.-M.; *Seo, D.-K., New Solid-Gas Metathetical Synthesis of Binary Metal Polysulfides and Sulfides at Intermediate Temperatures: Utilization of Boron Sulfides. *Journal of the American Chemical Society* **2004**, 126 (14), 4676-4681.
42. Iancu, N.; Sharma, R.; *Seo, D.-K., Low-temperature synthetic method for size-controlled CdSe nanocrystals: utilization of boron selenide. *Chemical Communications* **2004**, (20), 2298-2299.
43. Han, Y.-K.; *Seo, D.-K.; Kang, H.; Kang, W.; *Noh, D.-Y., New 1: 3 Type Nickel-Bis(dithiolene) Salt (FcCHCHPymCH₃)[Ni(dmit)₂]₃(dmit: 2-Thioxo-1, 3-dithiole-4, 5-dithiolate): Its Electrocrystallization, Crystal Structure, Electrical Properties, and Electronic Band Structure Analysis. *Inorganic Chemistry* **2004**, 43 (23), 7294-7300.
44. Wu, L.-M.; Sharma, R.; *Seo, D.-K., Metathetical conversion of Nd₂O₃ nanoparticles into NdS₂ polysulfide nanoparticles at low temperatures using boron sulfides. *Inorganic Chemistry* **2003**, 42 (19), 5798-5800.

Before coming to ASU (#45 – #82)

45. Zhao, J.-T.; Seo, D.-K.; Corbett, J. D., Synthesis, structures and properties of CaGa, YGa and Y(Ga, Z) phases: a model for the transformation of a CrB to a MoB-type structure in doped YGa phases. *Journal of Alloys and Compounds* **2002**, 334 (1), 110-117.
46. Seo, D.-K.; Corbett, J. D., Synthesis, structure, and bonding of BaTi₃: an unusual competition between cluster and classical bonding in the thallium layers. *Journal of the American Chemical Society* **2002**, 124 (3), 415-420.

47. Seo, D.-K.; Corbett, J. D., Synthesis, structure, and bonding of open-shell Sr₃In₅: An unusual electron deficiency in an indium network, beyond the Zintl boundary. *Journal of the American Chemical Society* **2001**, *123* (19), 4512-4518.
48. Seo, D.-K.; Corbett, J. D., Aromatic metal clusters. *Science* **2001**, *291* (5505), 841-842.
49. Koo, H. J.; Seo, D. K.; Whangbo, M. H., Consequence of the metal-atom clustering on the magnetic properties in vanadium sulfide V₅S₈. *Journal of Solid State Chemistry* **2001**, *160* (1), 287-291.
50. Seo, D. K.; Papoian, G.; Hoffmann, R., Generalized perturbational molecular orbital (PMO) theory. *International Journal of Quantum Chemistry* **2000**, *77* (1), 408-420.
51. Seo, D.-K.; Corbett, J. D., Synthesis, structure, and bonding of hypoelectronic SrIn₄: direct example of a dominant size effect in structure selection. *Journal of the American Chemical Society* **2000**, *122* (40), 9621-9627.
52. Bengel, H.; Jobic, S.; Moëlo, Y.; Lafond, A.; Rouxel, J.; Seo, D. K.; Whangbo, M. H., Distribution of the Pb and Sb Atoms in the (Pb, Sb) S Layers of the Franckeite-Type Misfit Compound [(Pb, Sb)S]₂.₂₈NbS₂ Examined by Scanning Tunneling and Atomic Force Microscopy. *Journal of Solid State Chemistry* **2000**, *149* (2), 370-377.
53. Stagarescu, C. B.; Duda, L. C.; Smith, K. E.; Seo, D. K.; Whangbo, M. H.; Jeromé, D.; Haddon, R. C.; Brooks, J. S.; Guo, J.; Nordgren, J., Molecular components of the bulk electronic structure of organic conductors: a soft X-ray absorption and soft X-ray emission spectroscopy approach. *Journal of Electron Spectroscopy and Related Phenomena* **1999**, *101*, 539-544.
54. Stagarescu, C. B.; Duda, L.-C.; Smith, K. E.; Seo, D. K.; Whangbo, M. H.; Jeromé, D.; Haddon, R. C.; Brooks, J. S.; Guo, J.; Nordgren, J., Electronic Structure of the Organic Conductors κ-ET₂Cu(SCN)₂ and κ-ET₂Cu[N(CN)₂]Br Studied Using Soft X-ray Absorption and Soft X-ray Emission. *Journal of Solid State Chemistry* **1999**, *143* (1), 1-8.
55. Seo, D.-K.; Hoffmann, R., Direct and indirect band gap types in one-dimensional conjugated or stacked organic materials. *Theoretical Chemistry Accounts: Theory, Computation, and Modeling (Theoretica Chimica Acta)* **1999**, *102* (1), 23-32.
56. Seo, D.-K.; Hoffmann, R., What determines the structures of the group 15 elements? *Journal of Solid State Chemistry* **1999**, *147* (1), 26-37.
57. Zhang, Y.; Warren, C. J.; Haushalter, R. C.; Clearfield, A.; Seo, D. K.; Whangbo, M. H., Comparative Study of the Structural, Electronic, and Magnetic Properties of the Layered Ternary Vanadium Oxides CaV₄O₉(IV), Cs₂V₄O₉(V), and [H₂N(CH₂)₄NH₂]V₄O₉ (III). *ChemInform* **1998**, *29* (28).
58. Zhang, Y.; Warren, C. J.; Haushalter, R. C.; Clearfield, A.; Seo, D.-K.; Whangbo, M.-H., Comparative study of the structural, electronic, and magnetic properties of the layered ternary vanadium oxides CaV₄O₉, Cs₂V₄O₉, and [H₂N(CH₂)₄NH₂]V₄O₉. *Chemistry of Materials* **1998**, *10* (4), 1059-1064.
59. Yoon, K. H.; Seo, D. K.; Cho, Y. S.; Kang, D. H., Effect of Pt layers on the photoelectrochemical properties of a WO₃/p-Si electrode. *Journal of Applied Physics* **1998**, *84* (7), 3954-3959.
60. Seo, D. K.; Whangbo, M. H.; Neiningner, K.; Thiele, G., Single-crystal X-ray diffraction and electronic band structure studies of PdTeI. *Journal of Solid State Chemistry* **1998**, *137* (2), 206-210.
61. Seo, D. K.; Gupta, N.; Whangbo, M. H.; Hillebrecht, H.; Thiele, G., Pressure-induced changes in the structure and band gap of CsGeX₃ (X= Cl, Br) studied by electronic band structure calculations. *Inorganic Chemistry* **1998**, *37* (3), 407-410.
62. Jung, D.; Seo, D. K.; Ren, J.; Whangbo, M. H., Simulation of the scanning tunneling and atomic force microscopy images of a xanthine monolayer on graphite. *Surface Science* **1998**, *401* (3), 476-481.
63. Bengel, H.; Jobic, S.; Deudon, C.; Rouxel, J.; Seo, D. K.; Whangbo, M. H., Scanning tunneling and atomic force microscopy study of the misfit layer compounds (LaS)_{1.14}(NbS₂)_n (n= 1, 2) and [(Pb, Sb)S]_{1.14}NbS₂. *Surface Science* **1998**, *400* (1), 266-276.
64. Shreeve-Keyer, J. L.; Haushalter, R. C.; Lee, Y.-S.; Li, S.; O Connor, C. J.; Seo, D.-K.; Whangbo, M.-H., New Layered Materials in the K-In-Ge-As System: K₈In₈Ge₅As₁₇ and K₅In₅Ge₅As₁₄. *Journal of Solid State Chemistry* **1997**, *130* (2), 234-249.

65. Seo, D. K.; Whangbo, M. H.; Subramanian, M. A., Electronic band structure study of colossal magnetoresistance in $\text{Ti}_2\text{Mn}_2\text{O}_7$. *Solid State Communications* **1997**, 101 (6), 417-421.
66. Seo, D. K.; Ren, J.; Whangbo, M. H., Study of the origin of superstructure patterns in the scanning tunneling images of perylene-3, 4, 9, 10-tetracarboxylic-dianhydride on graphite by electronic structure calculations. *Surface Science* **1997**, 370 (2-3), 252-258.
67. Seo, D. K.; Perdue, K.; Ren, J.; Whangbo, M. H., Study of scanning tunneling microscopy images and probable relaxations of the SrTiO_3 (100) surface by electronic structure calculations. *Surface Science* **1997**, 370 (2-3), 245-251.
68. Seo, D.-K.; Whangbo, M.-H., Symmetric Stretching Vibrations of Two-Coordinate Oxygen Bridges as a Cause for Negative Thermal Expansion in $\text{ZrV}_x\text{P}_{2-x}\text{O}_7$ and AW_2O_8 (A= Zr, Hf) at High Temperature. *Journal of Solid State Chemistry* **1997**, 129 (1), 160-163.
69. Seo, D.-K.; Ren, J.; Whangbo, M.-H.; Canadell, E., Electronic band structure study of the transport properties of the intermetallic compounds ZrRuP and ZrRuSi . *Inorganic Chemistry* **1997**, 36 (26), 6058-6063.
70. Lee, K. S.; Seo, D. K.; Whangbo, M. H.; Li, H.; Mackay, R.; Hwu, S. J., Vacancy Ordering as the Cause for the Electrical Resistivity Anomalies and Superlattice Modulations in $\text{ACu}_{7-x}\text{S}_4$ (A= Ti, K, Rb). *Journal of Solid State Chemistry* **1997**, 134 (1), 5-9.
71. Lee, K. S.; Seo, D. K.; Whangbo, M. H., Structural and Electronic Factors Governing the Metallic and Nonmetallic Properties of the Pyrochlores $\text{A}_2\text{Ru}_2\text{O}_7$ -y. *Journal of Solid State Chemistry* **1997**, 131 (2), 405-408.
72. Lee, K.-S.; Seo, D.-K.; Whangbo, M.-H., Electronic Band Structure Study of the Anomalous Electrical and Superconducting Properties of Hexagonal Alkali Tungsten Bronzes AxWO_3 (A= K, Rb, Cs). *Journal of the American Chemical Society* **1997**, 119 (17), 4043-4049.
73. Gupta, N.; Seo, D. K.; Whangbo, M. H.; Jovic, S.; Rouxel, J.; Brec, R., Square Planar to Rectangular Distortion in Transition-Metal Compounds of Edge-Sharing Square Planar Units MX_4 . *Journal of Solid State Chemistry* **1997**, 128 (2), 181-184.
74. Dhingra, S. S.; Seo, D. K.; Kowach, G. R.; Kremer, R. K.; Shreeve-Keyer, J. L.; Haushalter, R. C.; Whangbo, M. H., One-Dimensional Semiconducting Chains of the Quaternary Zintl Anion in $(\text{Et}_4\text{N})_4[\text{Au}(\text{Ag}_{1-x}\text{Aux})_2\text{Te}_9]$. *Angewandte Chemie International Edition in English* **1997**, 36 (10), 1087-1090.
75. Zönnchen, P.; Thiele, G.; Hess, C.; Schlenker, C.; Bengel, H.; Cantow, H. J.; Magonov, S. N.; Seo, D.; Whangbo, M. H., Crystal structure, electronic band structure, electrical resistivity and scanning probe microscopy studies of layered compound MoOCl_2 . *New Journal of Chemistry* **1996**, 20 (3), 295-300.
76. Smith, R. L.; Rohrer, G. S.; Lee, K. S.; Seo, D. K.; Whangbo, M. H., A scanning probe microscopy study of the (001) surfaces of V_2O_5 and V_6O_{13} . *Surface Science* **1996**, 367 (1), 87-95.
77. Shreeve-Keyer, J. L.; Haushalter, R. C.; Seo, D.-K.; Whangbo, M.-H., Crystal and Electronic Structure of a Quaternary Layered Compound from the K-In-Ge-Sb System: $\text{K}_9\text{In}_9\text{GeSb}_{22}$. *Journal of Solid State Chemistry* **1996**, 122 (1), 239-244.
78. Seo, D. K.; Whangbo, M. H.; Fravel, B.; Montgomery, L. K., Comparison of the Fermi surfaces of isostructural organic conducting salts $(\text{BEDT-TTF})_2\text{MHg}(\text{SCN})_4$ and $(\text{BEDT-TSF})_2\text{MHg}(\text{SCN})_4$ (M= NH_4 and K). *Solid state communications* **1996**, 100 (3), 191-194.
79. Seo, D. K.; Liang, W.; Whangbo, M. H.; Zhang, Z.; Greenblatt, M., Electronic Band Structure and Madelung Potential Study of the Nickelates La_2NiO_4 , $\text{La}_3\text{Ni}_2\text{O}_7$, and $\text{La}_4\text{Ni}_3\text{O}_{10}$. *Inorganic Chemistry* **1996**, 35 (22), 6396-6400.
80. Seo, D.-K.; Whangbo, M.-H., Origin of the structural phase transitions and the anomalous electrical and magnetic properties of the magnetic metal $\text{NaV}_6\text{O}_{11}$. *Journal of the American Chemical Society* **1996**, 118 (16), 3951-3958.
81. Lee, K. S.; Seo, D. K.; Ren, J.; Whangbo, M. H.; Magonov, S. N.; Bar, G.; Brütting, W., Analysis of the structural and electronic properties of (fluoranthene) $_2$ PF $_6$ and characterization of its (011) surface by scanning tunneling microscopy. *Synthetic Metals* **1996**, 80 (1), 1-6.

82. Tucker, D. A.; Seo, D. K.; Whangbo, M. H.; Sivazlian, F. R.; Stoner, B. R.; Bozeman, S. P.; Sowers, A. T.; Nemanich, R. J.; Glass, J. T., Comparison of silicon, nickel, and nickel silicide (Ni₃Si) as substrates for epitaxial diamond growth. *Surface Science* **1995**, 334 (1-3), 179-194.

B. Invited Book Chapters (as of February 2017)

Post Tenure (#83 and #84)

83. Seo, D.-K., Spin polarization in *Handbook of Solid State Chemistry. Volume 5: Theoretical Description*. Wiley-VCH Verlag GmbH & Co. 2017 (in press).
84. Seo, D.-K., Preparation of colloidal cadmium sulfide (CdS) quantum dot nanoparticles. In *Experiments in Green and Sustainable Chemistry* Wiley-VCH Verlag GmbH & Co. KGaA: 2009; pp 238-244.

Before coming to ASU (#85)

85. Whangbo, M. H.; Seo, D.-K.; Canadell, E., Structural and Electronic Instabilities of Transition Metal Chalcogenides. In *Physics and Chemistry of Low-Dimensional Inorganic Conductors*, Springer US: 1996; pp 285-302.

C. Conference Proceedings (as of February 2017)

Post Tenure (#86 – #88)

86. Hörtz, C.; Ladd, D. M.; Seo, D.-K. In *Preparation of Nanoporous MgAl₂O₄ by Combined Utilization of Sol-Gel Process and Combustion of Biorenewable Oil*, 2011; Cambridge University Press: 2011; pp mrsf10-1306.
87. Wang, Q.; Yan, H.; Seo, D.-K. In *A synthetic strategy of quantum dot-bioconjugate*, 2010; IEEE: 2010; pp 332-333.
88. Kost, A. R.; Rauh, D.; Bertone, J.; Willard, P.; Bruce, B. D.; Steenbergen, E. H.; Zhang, Y.-H.; Jeon, K.-W.; Seo, D.-K. In *Optically tandem thin film solar cells*, 2009; IEEE: 2009; pp 002183-002186.

D. Patents and Patent Applications (as of February 2017)

Post Tenure (#89 – #100)

89. Seo, D.-K.; Chen, S. US PTO Provisional 62/448,462 Aluminosilicate nanorods. 2017.
90. Seo, D.-K.; Haydel, S. US PTO Provisional Antimicrobial geopolymer composition. 2016.
91. Seo, D.-K.; Volosin, A. US Patent 9,365,691 Fabricating porous materials using interpenetrating inorganic-organic composite gels. 2016.
92. Seo, D.-K.; Volosin, A. US Patent 9,308,511 Fabricating porous materials using thixotropic gels. 2016.
93. Seo, D.-K.; Medpelli, D.; Seo, J. US Patent 9,242,900 Porous geopolymer materials. 2016.
94. Seo, D.-K.; Medpelli, D.; Ladd, D.; Mesgar, M. WO Application WO2013044016A2 US Patent 9,296,654 Geopolymer resin materials, geopolymer materials, and materials produced thereby. 2016. **(US Patent has been granted and the applications are pending in China, EU, South Korea and India)**
95. Seo, D.-K.; Mieritz, D.; Chan, C.; Zhao, R. WO Application WO2015006010 Metal oxides from acidic solutions. 2014.
96. Seo, D.-K. WO Application WO2015191817 Geopolymer aggregates. 2014. **(The applications are pending in US, China, EU, South Korea, Russia and Canada).**
97. Akhtar, F.; Seo, D.-K. WO Application WO2015191962 Carbon dioxide adsorbents. 2014.
98. Seo, D.-K.; Ladd, D.; Volosin, A. WO Application WO2009140030 Porous metal oxide particles. 2013.
99. Seo, D.-K.; Jeon, K.-W. US Application US20140371443 Multifunctional Materials and Composites. 2013.

100. Seo, D.-K.; Iancu, N.; Wu, L. US Patent US7393516 Preparation of metal chalcogenides from reactions of metal compounds and chalcogen. 2008.

E. Ongoing Sponsored Research

External

DOD-NAVY-ONR Seo, D.-K. (co-PI) 08/20/2012 – 08/18/2017 \$6,250,000 (5 years)
Title: *MURI: Translating Biochemical Pathways to Non-Cellular Environment*

HHS-NIH-NIAID Seo, D.-K. (PI) 06/01/2016 – 05/31/2018 \$390,484 (2 years)
Title: *Development of Customized Aluminosilicates as Complementary Topical Therapeutic*

Internal

LightWorks Seed Seo, D.-K. (PI) 02/13/2017 – 06/15/2017 \$45,000 (4 months)
Title: *Nanostructured Faujasite Zeolite for Carbon Dioxide and Methane Separation*

F. Pending Grant Proposals

DoD-CDMRP Seo, D.-K. (PI) 05/01/2017 – 04/30/2020 \$2,189,483 (3 years)
Title: *Fast-Ion Release Antimicrobials (FIRAs) for Aqueous-Based Battlefield Wound Flushing*

PLuS Alliance Seed Seo, D.-K. (co-PI) 06/01/2017 – 05/31/2018 \$54,000 (1 year)
Title: *Protection of Frontline Health Care Workers from Infectious Hazards*

NSF-CBET Seo, D.-K. (co-PI) 05/01/2017 – 4/30/2020 \$598,472 (3 years)
Title: *Interfacing Photosynthetic Systems with Novel Electrode Materials*

G. Completed Sponsored Research Projects

External

NSF-MPS-DMR Seo, D.-K. (PI) 2/15/2003 – 1/31/2008 \$465,039 (5 years)
Title: *CAREER: New Ferromagnetic Metals*

NSF-MPS-DMR Seo, D.-K. (co-PI) 2/1/2008 – 1/31/2011 \$296,000 (3 years)
Title: *Acquisition of a Multi-Purpose Powder Diffractometer for The X-Ray Facility at ASU Chemistry for Use in Research and Education*

DOE-BES Seo, D.-K. (co-PI) 7/1/2009 – 4/30/2015 \$13,644,631 (5 years)
Title: *DOE EFR Center for Bio-Inspired Solar Fuel Production*

NSF-MPS-DMR Seo, D.-K. (PI) 7/15/2010 – 6/30/2014 \$600,000 (4 years)
Title: *Materials World Network: Complex Structured "Electron-Poor" Framework Semiconductors with Potential for Thermoelectric Application*

NSF SBIR Phase I Seo, D.-K. (subcontract) 1/1/2011 – 8/30/2011 \$180,000 (6 months)
Title: *Development of Nanoporous Geopolymer Composites as Adsorbent for Arsenic Removal*

NSF SBIR Phase II Seo, D.-K. (subcontract) 4/1/2012 – 9/30/2014 \$721,997 (1.5 years)
Title: *Development of Nanoporous Geopolymer Composites as Adsorbent for Arsenic Removal*

Stockholm University Seo, D.-K. (PI) 9/1/2013 – 8/31/2014 \$59,882 (1 year)
Title: *Structure and Phase Prediction of Metal Carbide Materials using Evolutionary Algorithms*

Internal

AzTE Catalyst Fund Seo, D.-K. (PI) 9/1/2008 – 3/31/2009 \$50,000 (6 months)

Title: *Scale-Up Production of Aerogel-Like Metal Oxide Materials*

H. Fellowships and Awards

Camille & Henry Dreyfus Foundation Seo, D.-K. (PI) 5/1/2006– 4/30/2011 \$75,000 (5 years)
 Title: *Theoretical & Experimental Studies on Itinerant Electron Magnetism in Intermetallics*

I. Invited Lectures at Academic Institutions or Conferences

Post-Tenure (Since 2008) 3 Keynote presentations and 34 Invited presentations.

1. **“Visualization of Chemical Bonding in Intermetallics based on Kinetic Energy Density”** ACS Spring 2008 Meeting, New Orleans, Apr. 6 2008 (Special Symposium in honor of Prof. John Corbett)
2. **“Facile Surface-Functionalization of Colloidal CdSe Quantum Dots for Their Composite Preparations”** American Ceramic Society - Glass & Optical Materials Division (GOMD) Conference, Tucson, AZ May 19, 2008
3. **“Spin Polarization and Covalent Magnetism of Intermetallics”** Rare Earth Research Conference U of Alabama, Tuscaloosa, June 24, 2008
4. **“Spin Polarization and Covalent Magnetism of Intermetallics”** European Conference on Inorganic Materials, September 27 – 30, 2008, Dresden, Germany
5. **“Low-Temperature Synthesis and Functionalization of II-VI Colloidal Quantum Dots for Their Composites”** Motorola Research Laboratory, Tempe March 20, 2008
6. **“Low-Temperature Synthesis and Functionalization of II-VI Colloidal Quantum Dots for Their Composites”** Jean Rouxel Institute of Materials, Nantes, France, June 15, 2008
7. **“Sustainable Approaches in Syntheses of Nanoporous Materials”** University of Delaware, Dec. 2009
8. **“Sustainable Approaches in Syntheses of Nanoporous Materials”** Suzhou Institute of Nano-Tech. and Nano-Bionics, Chinese Academy of Science, China, Dec. 2009
9. **“Sustainable Approaches in Syntheses of Nanoporous Materials”** Fujian Institute for Research of Structure of Matter, Chinese Academy of Science, China, Dec. 31, 2010
10. **“Recent Development of Theoretical Understanding of Intermetallics”** Fujian Institute for Research of Structure of Matter, Chinese Academy of Science, China, Dec. 31, 2010
11. **“Sustainable Approaches in Syntheses of Nanoporous Materials”** Samsung Advanced Institute of Technology, South Korea, Jan. 4, 2010
12. **“Recent Development of Theoretical Understanding of Intermetallics”** Samsung Advanced Institute of Technology, South Korea, Jan. 4, 2010
13. **“Sustainable Approaches in Syntheses of Nanoporous Materials”** Kyunghee University, South Korea, Jan. 5, 2010
14. **“Sustainable Approaches in Syntheses of Nanoporous Materials”** NanoVoltaix, Inc., AZ, Mar. 29, 2010
15. **“Sustainable Approaches in Syntheses of Nanoporous Materials”** Nanoscience seminar, Arizona State University, Apr. 2010.
16. **“Sustainable Approaches in Syntheses of Nanoporous Materials”** Department of Chemistry, Ewha Women's University, South Korea, Dec. 14, 2010.
17. **“Highly Transparent Mesoporous Metal-Oxide Films for Energy Applications”** US-KOREA Conference 2012, Orange County, CA, August 8 - 11, 2012.
18. **“Synthetic Design of Nanoporous Materials for Sustainability Applications”** North Carolina State University, February 2013.

19. **“Synthetic Development of Nanoporous Transparent Conducting Metal Oxides and Their Inorganic/Bio Hybrids”**, Energy Frontier Research Center (EFRC) PI Meeting, Washington DC, July 18 – 19, 2013
20. **“Inorganic Nanoporous Materials,”** Russian American Workshop – Design of Advanced Functional Materials: Education, Research & Innovations in Engineering, Kazan, Russia, October 2013
21. **“New nanostructured geopolymer materials and zeolites,”** 10th Pacific Rim Conference on Ceramic and Glass Technology, San Diego, CA, June 2013.
22. **“Nanoporous geopolymers and composites for environmental remediation and catalysis,”** 38th International Conference and Expo on Advanced Ceramics and Composites, Daytona Beach, FL, January 26-31, 2014.
23. **Keynote Presentation “Thiol-based reduced graphene oxides and their composites,”** International Conference on Computational & Experimental Engineering and Sciences, Changwon, Korea, June 12 - 17, 2014
24. **“New nanostructured materials for energy and environmental applications,”** LG Chem, Daejeon, Korea, June 17, 2014.
25. **“Synthetic Exploration of Nanostructured Inorganic Materials for Sustainable Energy Solutions,”** Konkuk University, Chungju, South Korea, June 18, 2014.
26. **“New nanostructured aluminosilicate materials from geopolymer chemistry for emerging applications,”** Korea Institute of Ceramic Engineering and Technology (KICET), Seoul, Korea, June 20, 2014.
27. **Keynote Presentation, “New sol-gel chemistries and nanostructured metal oxide for photo-/electro-applications,”** The 5th International Symposium on Structure-Property Relationship in Solid State Materials (SPSSM), Qingdao, China, June 22 - 27, 2014.
28. **“New nanostructured materials for energy and environmental applications,”** Fujian Institute of Research on the Structure of Matter, Chinese Academy of Sciences, Fuzhou, China, June 30, 2014.
29. **“Geopolymer Materials – New Kids in Nanostructured Aluminosilicate Science and Technology”** Nanoscience Seminar, Arizona State University - Mar. 2, 2015
30. **“Nanostructured Aluminosilicates from “Green Cement: Sustainable Materials Synthesis for Sustainability Applications”** US-KOREA Conference 2015, Atlanta July. 29 - Aug. 1, 2015
31. **“Functional Nanoporous Metal Oxides for Nano/Bio Hybrid and Sustainability Applications”** Ajou Univ., South Korea, October 11, 2015
32. **“Functional Inorganic Nanomaterials for Nano/Bio Hybrid and Sustainability Applications”** Department of Chemistry, Silla Univ., South Korea, October 13, 2015
33. **Keynote Presentation “Clays and Zeolites: From Natural to New Materials”** International Scientific-Practical Conference, November 9-13, 2015, Kazan, Russia
34. **“Porous Sol-Gel Metal Oxides for Sustainability Applications: From Bio/Nano Hybrid-based Solar Energy Conversion to Carbon Capture”** Department of Chemistry, Iowa State Univ. Oct 21, 2016
35. **“What is the Smallest Size of Geopolymer Particles?: Production of Geopolymer Nanoaggregates, Their Characteristics and Emerging Applications”** 41st International Conference and Expo on Advanced Ceramics and Composites, Daytona Beach, FL, January 22 – 27, 2017
36. **“Functional Nanoporous Metal Oxides for Nano/Bio Hybrid and Sustainability Applications”** Pohang Institute of Technology (POSTECH), Mar. 1, 2017.
37. **“Geopolymer Materials – New Kids in Nanostructured Aluminosilicate Science and Technology”** LG Chem, Dajeon, South Korea, Mar. 6, 2017

Pre-Tenure (2001 - 2007) 17 Invited presentations (Titles are omitted).

38. Gordon Research Conference (GRC): Solid State Chemistry I, July 19, 2004;
39. Southeastern Regional American Chemical Society (SERMACS) Meeting, Raleigh, Nov. 12, 2004;

40. Gordon Research Conference (GRC): Solid State Chemistry II, Italy, June, 2005
41. Max-Planck Institute for Solid State Science, Stuttgart, Germany, June, 2005
42. Max-Planck Institute for Chemical Physics of Solids, Dresden, Germany, June, 2005
43. Collaborative Research Center (Sonderforschungsbereich 608: Complex Transition-Metal Compounds with Spin and Charge Degree of Freedom and Disorder): University of Köln, Cologne, Germany, June, 2005.
44. Institute of Inorganic Chemistry, University of Köln, Cologne, Germany, June, 2005
45. Jean Rouxel Institute of Materials in Nantes (IMN-CNRS), University of Nantes, Nantes, France, June, 2005
46. University of Rennes, Rennes, France, June, 2005
47. Institut de Chimie de la Matière Condensée de Bordeaux (ICMCB-CNRS), University of Bordeaux, Cedex, France, June, 2005
48. International Symposium on Structure-Property Relationships in Solid State Materials I, Boureaux, France, June, 2006
49. The Transatlantic Frontiers of Chemistry Symposium, New Duram, USA, July 2006
50. Department of Chemistry, University of Houston, 2006
51. Department of Chemistry, University of California, Davis, 2006
52. Department of Chemistry, Texas A&M University; North Carolina State University, 2006
53. Department of Chemistry, Ohio State University, 2006
54. North American Solid State Chemistry (NASSCC) Conference, College Station, 2007

J. Oral Presentations Contributed at Conferences (Since 2008)

55. **“Greener Syntheses of High- Porosity High-Surface Area Metal Oxides: Utilization of Biorenewable Oil”** ACS Spring Meeting, San Francisco, Mar. 22, 2010
56. **“New Synthetic Methods for Aerogel-Like Metal Oxides: Utilization of Biorenewable Oil”** Materials Research Society (MRS) Meeting Fall 2010 - Dec. 1, 2010
57. **“New Nanostructured Aluminosilicate Materials and Hierarchical Zeolites from Geopolymer Chemistry”** North America Solid State Chemistry Conference (NASSCC), Corvallis, OR, June 23-26, 2013
58. **“Magnetic Interactions in Metallic Solids: Spin Polarization Reversal and Noncollinear Magnetism”** North America Solid State Chemistry Conference (NASSCC), Tallahassee May 22-24, 2015
59. **“Exceptional Carbon Dioxide (CO₂) Sorption Properties of Hierarchical FAU Zeolites Having a High Crystallinity, Produced through a Scalable and Sustainable Synthetic Method”** Materials Research Society (MRS) Meeting, Phoenix, Mar 31, 2016

III. SERVICE

A. Professional Service

2016

Editorial Board of Elsevier journal Resource-Efficient Technology

B. Department Service

2016

(Spring) P&T Committee

(Fall) Sabbatical leave

C. University Service

Oversee Committee Chair for Golwater Environmental Laboratory

D. Community Service

2016

Reviewer to journals including JACS, J. Mater. Chem., Chem. Mater., Crystal Design & Engineering and Inorg. Chem.