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Personal Data

Birth date: January 17, 1956
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Education

University of California, Berkeley: Ph. D. in Chemistry, December, 1981.
Research Advisor: Yuan T. Lee, thesis title:
"Effects of Vibrational Excitation on the Dynamics of Ion-Molecule Reactions"
Rice University: B. A. in Chemistry, May 1977

Professional Experience

Henry Eyring Presidential Endowed Chair of Chemistry	2018-
Utah Nanofab Associate Director for Surface Analysis and Nanoimaging,	2013-2021
Distinguished Professor, University of Utah	2011-
Professor, University of Utah	1995-2011
Professor, State University of New York at Stony Brook	1992-1995
Director of Chemistry Graduate Studies	1990-1994
Associate Professor, State University of New York at Stony Brook	1988-1992
Assistant Professor, State University of New York at Stony Brook	1983-1988
Postdoctoral Fellow with Richard N. Zare	1981-1983
Graduate Research Associate Lawrence Berkeley Lab	1977-1981
Undergraduate Research Assistant with Philip R. Brooks	1974-1977

Honors and Awards (to SLA or for work in Anderson group)

ACS Utah Outstanding Chemist Award	2022
Flinders Univ. Visiting International Research Fellowship	2022
Cheves Walling Graduate Research Award (Daniel Rodriguez)	2022
AVS Graduate Student Presentation Award for Tim Gorey	2018
Int. Precious Metals Inst. NY Chapter student award for Timothy Gorey	2018
ACS Physical Division Award in Experimental Physical Chemistry	2016
Robert W. Parry Teaching Award (Brady Foundation)	2015
Cheves Walling Award (best Chemistry Ph.D. thesis – David Bell)	2014
Fellow of the American Association for the Advancement of Science	2011
Cheves Walling Award (best Chemistry Ph.D. thesis - Bill Kaden)	2011
Distinguished Scholarly and Creative Research Award (U. of Utah)	2007
Fellow of the American Physical Society	2005
Visiting Scientist, Inst für Physik, Univ. Chemnitz	2004
NSF Creativity Award	2004-2006
Japan Society for the Promotion of Science Senior Invitation Fellowship for Research	2002-2003
AVS Vacuum Tech. Div.Shop Note Award for 2001	2001
Professeur Invité, Université de Paris-Sud	1991
Visiting Scientist, Fakultät für Physik, Freiburg	1990
Professeur Invité, Université de Paris-Sud	1990
Camille and Henry Dreyfus Foundation Teacher-Scholar	1989-1993
Japan Society for the Promotion of Science Fellow at Institute for Molecule Science, Okazaki.	1989-1990

Alfred P. Sloan Foundation Research Fellow	1988-1990
Camille and Henry Dreyfus Foundation Award for Newly Appointed Young Faculty in Chemistry	1983
National Science Foundation Graduate Fellow	1977-1980
Zevi Salsburg Prize in Undergraduate Chemistry	1977
R. A. Welch Foundation Undergraduate Fellow	1976-1977

Professional Activities

Executive Committee, AVS Surface Science Division	2021-2023
Leadership rotation for Div. Chem. Phys., American Physical Society	2016-2020
Editorial Advisory Board, Acc. Chem. Res.	2015-
Editorial Advisory Board, Surface Science	2015-
Assoc. Director, Utah Nanofab and Microscopy Core Facilities	2013-2021
Editorial Advisory Board, J. Phys. Chem.	2012-14
Director, Catalyst/Fuel Interactions Basic Research Initiative	2012-2015
Director, Nanocatalysts in Propulsion: Mechanisms and Optimization MURI	2008-1015
Co-director, USTAR Center for Alternative Energy	2009-2012
Director, Catalysis for Propulsion MURI	2007-2012
AAAS (Fellow 2010)	
American Physical Society (Fellow 2005)	
American Chemical Society	
American Vacuum Society (AVS)	
Nano Institute of Utah	
Editorial Board, *Journal of Cluster Science*	1991-93
National Synchrotron Light Source, U15 PRT	1990-96

Consulting:
Latham Watkins (Chicago), Clifford Chance (London), Micromass UK (Waters), Wilmer Cutler Pickering Hale and Door (Boston), Hepworth Lawrence Bryer and Bizley (Rugby, UK), Dimock Stratton Clarizio (Toronto), Patrick Shea PC (Salt Lake City), USP Technical (Boeing Satellite - El Segundo), Reaction Engineering International (Salt Lake City), NASA Engineering and Safety Center (Marshall Space Flight Center)

CURRENT RESEARCH INTERESTS
Cluster Size/Alloying/Morphology Effects on Catalysis. *Goals:* Prepare and characterize model cluster catalysts where the size and morphology of the supported clusters can be controlled by size and energy-selected cluster beam deposition. The studies are aimed at understanding the size-dependent chemistry found in ultra-disperse catalysts. We are particularly interested in correlations between electronic structure and activity.
Techniques: Ion beam techniques to deposit high intensity mass-selected cluster ion beams with narrow energy spread. The usual surface analysis and preparation tools (XPS, XAS, ISS, TPS, STM, IRAS, Pulsed mass spectrometry, *in situ* electrochemistry...)

Single Nanoparticle Optical and Surface Chemical Properties. *Goals:* Determine how the optical properties of fluorescent nanoparticles (quantum dots) vary with size, charge state, ligand coating, and other properties. Measure changes in reactivity of nanoparticles with size in the scalable regime where electronic properties are tuned by size.
Techniques: Nanoparticle mass spectrometry (NPMS) is used to measure the mass and charge of single trapped nanoparticles with ppm precision. Simultaneous measurement of optical properties such as fluorescence yield, lifetime, and emission spectrum.

In Situ, Size-Selected Electrocatalysis. *Goals:* Understand effects of catalytic site size and electronic

properties on electrocatalysis. *Techniques:* Mass-selected cluster deposition on clean electrode substrates in UHV, with surface science characterization of the as-deposited electrodes. *In situ* electrochemistry allowing chemistry to be studied without complications from adventitious adsorbates.

Catalysis for Propulsion Applications. *Goals:* Probe mechanisms for ignition and reforming/cracking catalysis relevant to aeropropulsion. *Techniques:* Ion beam techniques to deposit high intensity mass-selected cluster ion beams with narrow energy spread. The usual surface analysis and preparation tools (XPS, XAS, ISS, TPS, STM, IRAS, Pulsed mass spectrometry...) TEM, XPS of nanoparticles generated from catalyst precursors *in situ* in combustors. Small Angle X-ray Scattering and PDF analysis to examine nanoparticle growth under fuel and combustor conditions.

Energetic Nanoparticles for Propulsion Applications. *Goals:* Develop efficient methods for preparing fuel-soluble, catalyst-coated nanoparticles of high energy density solids such as boron, boron nitride, aluminum, or other metals. Characterize particles before and after combustion, and understand and optimize structure/activity relationships. Current focus is on hydrocarbon fuels, polymer rocket fuels, and ionic liquid rocket fuels.
Techniques: Milling, TEM, STEM/EDX, FT-IR, XPS, turbulent flame calorimetry, NMR, combustion testing (via collaborations with Air Force Research Lab, U. Alabama).

PUBLICATIONS

1. "Proton Affinities of Hydrogen Halides Determined by the Molecular Beam Photoionization Method", P. W. Tiedemann, S. L. Anderson, S. T. Ceyer, T. Hirooka, C. Y. Ng, B. H. Mahan, and Y. T. Lee, J. Chem. Phys. 71 (1979) 605-9.
2. "Reactions of Magnetically State Selected NO with O_3: Effect of fs and Rotational States on Reactivity", Scott L. Anderson, Philip R. Brooks, James D. Fite, and On Van Nguyen, J. Chem. Phys. 72 (1980) 6521-8.
3. "Photoionization of Molecular Hydrogen Dimer $(H_2)_2$", Tomohiko Hirooka, Scott L. Anderson, Peter W. Tiedemann, Bruce H. Mahan, and Yuan T. Lee, Koen Yoshishu - Bunshi Kozo Sogo Toronkai, 64-5. Chem. Soc. Japan: Tokyo, Japan. (1979).
4. "Photoionization of $(H_2)_2$ and Clusters of O_2 Molecules", S. L. Anderson, T. Hirooka, P. W. Tiedemann, B. H. Mahan, and Y. T. Lee, J. Chem. Phys. 73 (1980) 4779-83.
5. "The Effect of Vibration and Translational Energy on the Reaction Dynamics of the $H_2^+ + H_2$ System", Scott L. Anderson, F. A. Houle, D. Gerlich, and Y. T. Lee, J. Chem. Phys. 75 (1981) 2153-62.
6. "Vibrational Effects on Proton and Charge Transfer in the $H_2^+ + Ar$ System", F. A. Houle, S. L. Anderson, D. Gerlich, T. Turner, and Y. T. Lee, Chem. Phys. Lett. 82 (1981) 372-5.
7. "Nonadiabaticity in Ion-Molecule Reactions: Coupling of Proton and Charge Transfer in the H_2^+ and $D_2^+ + Ar$ System", F. A. Houle, S. L. Anderson, D. Gerlich, T. Turner, and Y. T. Lee, J. Chem. Phys. 77 (1982) 748-55.
8. "The Effects of Collision Energy and Ion Vibrational Excitation on Proton and Charge Transfer in $H_2^+ + N_2$, CO, O_2", S. L. Anderson, T. Turner, B. H. Mahan, and Y. T. Lee, J. Chem. Phys. 77 (1982) 1842-54.
9. "Multiphoton Ionization Photoelectron Spectroscopy: A New Method for Determining the Vibrational Structure of Molecular Ions", S. L. Anderson, D. M. Rider, and R. N. Zare, Chem. Phys. Lett. 93 (1982) 11-15.
10. "Unimolecular Dissociation Rates of the Chlorobenzene Cation Prepared by Multiphoton Ionization", D. M. Rider, J. Durant, S. L. Anderson, F. D. Proch, and R. N. Zare, J. Chem. Phys. 80 (1984) 1817-25.
11. "Resonance Enhanced Multiphoton Ionization of Molecular Hydrogen Via the $^1\Sigma_g^+$ State: Photoelectron Energy and Angular Distributions", S. L. Anderson, G. D. Kubiak, and R. N. Zare, Chem. Phys. Lett. 105 (1984) 22-7.

12. "Excitation Energy Dependent Photochemistry Near the Carbon K Edge in Polymer Films", D. M. Hanson, S. L. Anderson, M. C. Nelson, G. P. Williams, and N. Lucas, J. Phys. Chem. 89 (1985) 2235-7.
13. "Multiphoton Ionization Photoelectron Spectroscopy of Phenol: Vibrational Frequencies and Harmonic Force Field for the $^2B_1$ Cation", S. L. Anderson, L. Goodman, K. Krogh-Jespersen, A. Ozkabak, R. N. Zare, and C. -F. Zheng, J. Chem. Phys. 82 (1985) 5329-39.
14. "Chemistry and Cooling of Transition Metal Cluster Ions", Luke Hanley and Scott L. Anderson, Chem. Phys. Lett. 122 (1985) 410-4
15. "Metal Cluster Ion Chemistry", Scott L. Anderson and Luke Hanley, SPIE 669 (1986) 133-136.
16. "Third Harmonic Interference Effects in the MPI Spectrum of Acetylene", T. M. Orlando, L. Li, S. L. Anderson, and M. G. White, Chem. Phys. Lett. 129 (1986) 31-5.
17. "Reactions of Bare Aluminum Cluster Ions", Luke Hanley and Scott L. Anderson, Chem. Phys. Lett. 129 (1986) 429-432
18. "Fragmentation of Nitrous Oxide by Monochromatic Soft X-Rays", J. Murakami, M. C. Nelson, S. L. Anderson, and D. M. Hanson, J. Chem. Phys. 85 (1986) 5755-62
19. "Observation of Circular Dichroism in Photoelectron Angular Distributions", J. R. Appling, M. G. White, T. M. Orlando, and S. L. Anderson, J. Chem. Phys. 85 (1986) 6803-4
20. "Chemistry of Small Metal Cluster Ions", Luke Hanley, Stephen Ruatta, and Scott L. Anderson, in The Physics and Chemistry of Small Clusters, Jena and Rao eds., Plenum, New York (1986).
21. "Fragmentation of Acetone Following Excitation in the Region of the Oxygen K Edge", M. C. Nelson, J. Murakami, S. L. Anderson, and D. M. Hanson, J. Chem. Phys. 86 (1987) 4442-5.
22. "Collision Induced Dissociation of Aluminum Cluster Ions: Fragmentation Patterns, Bond Energies, and Structures for Al_2^+ - Al_7^+", Luke Hanley, Stephen A. Ruatta, and Scott L. Anderson, J. Chem. Phys. 87 (1987) 260-8.
23. "MPI Photoelectron Spectroscopy of Ungerade Excited States of Acetylene: Intermediate State Mixing and Ion State Selection", Thomas M. Orlando, Scott L. Anderson, Jeffery R. Appling, and Michael G. White, J. Chem. Phys. 87 (1987) 852-60.
24. "Size Dependent Barriers for Reaction of Aluminum Cluster Ions with Oxygen", Stephen A. Ruatta, Luke Hanley, and Scott L. Anderson, Chem. Phys. Lett. 137 (1987) 5-9.
25. "Gerade Rydberg States of Acetylene Studied by Multiphoton Ionization and Photoelectron Spectroscopy", M. N. R. Ashfold, B. Tutcher, B. Yang, Z-k. Jin, and S. L. Anderson, J. Chem. Phys. 87 (1987) 5105.
26. "Production and Collision-Induced-Dissociation of Small Boron Cluster Ions", Luke Hanley and Scott L. Anderson, J. Phys. Chem. 91 (1987) 5161-3.
27. "Reaction of Aluminum Cluster Ions with Oxygen and Nitrous Oxide: Energetics and Dynamics of Cluster Oxidation", Stephen A. Ruatta, Luke Hanley, and Scott L. Anderson, J. Chem. Phys. 89 (1988) 273-86.
28. "Collision Induced Dissociation and Ab Initio Studies of Boron Cluster Ions: Determination of Structures and Stabilities", Luke Hanley, Jerry L. Whitten, Scott L. Anderson, J. Phys. Chem. 92 (1988) 5803-12.
29. "Oxidation of Small Boron Cluster Ions B_{1-13}^+ by Oxygen", Luke Hanley and Scott L. Anderson, J. Chem. Phys. 89 (1988) 2848-60.
30. "Multiphoton Ionization Photoelectron Spectroscopy Study of OCS: Rydberg Vibronic Structure and Ion State Selection", Baorui Yang, M. E. Eslami, and S. L. Anderson, J. Chem. Phys. 89 (1988) 5527-34.
31. "The Effects of Bending and Stretching Vibration on the Reaction of Acetylene Cations with Methane", Thomas M. Orlando, Baorui Yang, and Scott L. Anderson, J. Chem. Phys. 90 (1989) 1577-87.
32. "Dynamics of Boron Cluster Ion Reactions with Deuterium: Adduct Formation and Decay", Stephen A. Ruatta, Luke Hanley, and Scott L. Anderson, J. Chem. Phys. 91 (1989) 226-39.
33. "Interaction of Boron Cluster Ions with Water: Single Collision Dynamics and Sequential Etching", Paul Hintz, Stephen A. Ruatta, and Scott L. Anderson, J. Chem. Phys. 92 (1990) 292-303.

34. "The Effects of Different Vibrational Modes and Translational Energy on the Reaction of Acetylene Cations with Carbonyl Sulfide", Thomas M. Orlando, Baorui Yang, Yu-hui Chiu, and Scott L. Anderson, J. Chem. Phys. 92 (1990) 7356-64.
35. "Growth/Restructuring of Palladium Clusters Induced by Carbon Monoxide Adsorption", Scott L. Anderson, Takanori Mizushima, and Yasuo Udagawa, J. Phys. Chem. 95 (1991) 6603-10.
36. "Collision Induced Dissociation and Ab Initio Studies of Boron Cluster Ions: Determination of Structures and Stabilities" - erratum, Luke Hanley, Jerry L. Whitten, Scott L. Anderson, J. Phys. Chem. 92 (1988) 5803. J. Phys. Chem. 94 (1990) 2218
37. "Multiphoton Ionization State Selection: Vibrational Mode and Rotation State Control", Scott L. Anderson, Adv. Chem. Phys. 82 (1992) 177-212.
38. "Boron Cluster Ion Oxidation: Reactions with CO_2, Dissociation of Boron Cluster Oxide (B_nO^+) Ions, and Sequential Oxidation." Stephen A. Ruatta and Scott L. Anderson. J. Chem. Phys. 94 (1991) 2833-47.
39. "Semiconductor Cluster Ion Reactions and Energetics", Scott L. Anderson, in Fundamentals of Gas Phase Ion Chemistry, K. R. Jennings, ed., Kluwer Acad. Pub., Dordrecht, p. 117-30 (1991)
40. "Vibrational Mode Effects in Polyatomic Ion Reactions", Scott L. Anderson, in Fundamentals of Gas Phase Ion Chemistry, K. R. Jennings, ed., Kluwer Acad. Pub., Dordrecht, p. 183-96 (1991)
41. "Chemistry With Cluster Ions", Scott L. Anderson, in Clusters of Atoms and Molecules II , (Springer Ser. Chem. Phys. 56) H. Haberland, ed. Springer-Verlag, Berlin (1994), 241-59
42. "Cluster Ion Beam Study of a System with Structural Isomers: $C_n^+ + D_2$ (n=2-12)", Paul A. Hintz, Marianne B. Sowa, and Scott L. Anderson, Chem. Phys. Lett. 177 (1991) 146-52.
43. "The Effects of Reactant Vibrational, Electronic, and Collision Energy on the Reactions of OCS^+ with C_2H_2: Complementary Studies of Reactions in the $[C_2H_2+OCS]^+$ System", Baorui Yang, Yu-hui Chiu and Scott L. Anderson, J. Chem. Phys. 94 (1991) 6459-68.
44. "Reaction of Boron Cluster Ions (B_n^+, n=2-24) with N_2O: NO vs. NN Bond Activation as a Function of Size", Paul A. Hintz, Marianne B. Sowa, Stephen A. Ruatta, and Scott L. Anderson. J. Chem. Phys. 94 (1991) 6446-58.
45. "The Effects of Vibrational Mode, Spin-Orbit State and Collision Energy on Collision-Induced Dissociation and Predissociation of OCS^+", Baorui Yang, Yu-hui Chiu, Hunghsin Fu, and Scott L. Anderson J. Chem. Phys. 95 (1991) 3275-82.
46. "Size-Dependent Reactions of Boron and Carbon Cluster Ions", P. A. Hintz, S. A. Ruatta, M. B. Sowa, and S. L. Anderson, Mater. Res. Soc. Symp. Proc. 206 (1991) 121-126.
47. "Dissociation Energies for Carbon Cluster Ions (C_{2-15}^+): A System Where Photodissociation is Misleading", Marianne B. Sowa, Paul A. Hintz, and Scott L. Anderson, (communication) J. Chem. Phys. 95 (1991) 4719-20.
48. "Oxidation Reactions of Metal and Semi-Metal Cluster Ions", P. A. Hintz, M. B. Sowa, J. Christian, Z. Wan, and S. L. Anderson, in *Gas Phase Metal Reactions*, A. Fontijn, ed. (North Holland, Amsterdam) 1992, p. 605-20.
49. "$Ne^+ + C_{60}$: Collision Energy and Impact Parameter Dependence for Endohedral Complex Formation, Fragmentation, and Charge Transfer", Zhimin Wan, James F. Christian, and Scott L. Anderson, (communication) J. Chem. Phys. 96 (1992) 3344-7.
50. "Cluster Beam Studies of Metal Combustion", S. L. Anderson, Report SBIL-002; Order No. AD-A253952, 14 pp. Avail. NTIS.
51. "Comparison of Bending, C-C Stretching, and Collision Energy Effects on the Reaction of $C_2H_2^+$ with D_2", Yu-hui Chiu, Baorui Yang, Hunghsin Fu, Scott L. Anderson, M. Schweizer, and D. Gerlich, J. Chem. Phys. 96 (1992) 5781-8.
52. "C_{61}^+ Production and Decomposition in $^{13}C^+ + C_{60}$ Collisions: C-atom Exchange and the Fragmentation Pattern as a Function of Energy", James F. Christian, Zhimin Wan, and Scott L. Anderson, J. Phys. Chem. 96 (1992) 3574-6.
53. "Collision of Li^+ and Na^+ with C_{60}: Insertion, Fragmentation, and Thermionic Emission", Zhimin Wan, James F. Christian, and Scott L. Anderson, Phys. Rev. Lett. 69 (1992) 1352-5.
54. "Chemistry of Metal and Semi-Metal Cluster Ions", Denise C. Parent and Scott L. Anderson, Chem.

Rev. 92 (1992) 1541-65.

55. "$O^+ + C_{60}$: $C_{60}O^+$ Production and Decomposition, Charge Transfer, and Formation of $C_{59}O^+$: Dopeyball or $[CO@C_{58}]^+$", James F. Christian, Zhimin Wan, and Scott L. Anderson, Chem. Phys. Lett. 199 (1992) 373-8.
56. "Oxidation of Small Carbon Cluster Ions by O_2: Effects of Structure on the Reaction Mechanism", Marianne B. Sowa and Scott L. Anderson, J. Chem. Phys. 97 (1992) 8164-72.
57. "$N^+ + C_{60}$ Reactive Scattering: Substitution, Charge Transfer, and Fragmentation", James F. Christian, Zhimin Wan, and Scott L. Anderson, J. Phys. Chem. 96 (1992) 10597-600.
58. "$Ne^+ + C_{60}$ Collisions: The Dynamics of Charge and Energy Transfer, Fragmentation, and Endohedral Complex Formation", James F. Christian, Zhimin Wan, and Scott L. Anderson, J. Chem. Phys. 99 (1993) 3468-79.
59. "Collision of Alkali Ions with C_{60}/C_{70}: Insertion, Thermionic Emission, and Fragmentation", Zhimin Wan, James F. Christian, Yousef Basir, and Scott L. Anderson, J. Chem. Phys. 99 (1993) 5858-70.
60. "An Experimental Approach to Elucidating Selective Solid-State Photochemistry Induced by Monochromatic X-rays", S. Sambasivan, P. A. Hintz, S. L. Anderson, and D. M. Hanson, Nuclear Instrum. Methods A347 (1994) 462-465.
61. "Ion Beam Studies of Atomic Ion Collisions with C_{60}: Chemistry at Surface, Substitutional, and Endohedral Sites", Yousef Basir, Zhimin Wan, James F. Christian, and Scott L. Anderson, Int. J. Mass Spectrom. Ion Processes 138 (1994) 173-85
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65. "Vibrational Mode and Collision Energy Effects on a Highly Constrained Reaction: $OCS^+ + OCS \rightarrow CS_2^+ + CO_2$ and $S_2^+ + 2\ CO$", Yu-hui Chiu, Baorui Yang, Hunghsin Fu, and Scott L. Anderson, J. Chem. Phys. 102 (1995) 1188-1191.
66. "Dissociation Energies for Small Carbon Cluster Ions ($C_{2\text{-}19}^+$) Measured by Collision-Induced-Dissociation, Marianne B. Sowa-Resat, Paul A. Hintz, and Scott L. Anderson, J. Phys. Chem.99, (1995) 10736-41.
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68. "Kinetic Parameters for Heterogeneous Boron Combustion Reactions via the Cluster Beam Approach", Jason Smolanoff, Marianne Sowa-Resat, Adam Łapicki, Luke Hanley, Stephan Ruatta, Paul Hintz, and Scott L. Anderson, Combustion and Flame, 105 (1996) 68-79.
69. "Interaction of Mn^+ and Mn_2^+ with C_{60}: Exohedral and Endohedral Metal-Fullerene Bonding" Yousef Basir and Scott L. Anderson, Chem. Phys. Lett. 243 (1995) 45-8.
70. "Effects of Composition, Structure, and H-atom Addition on the chemistry of Boron Oxide Cluster Ions with HF", Jason Smolanoff, Adam Łapicki, Nicole Kline, and Scott L. Anderson, J. Phys. Chem. 99(1995) 16276-83.
71. "Transition Metal-C_{60} Bonding by Guided Ion Beam Scattering", Yousef Basir and Scott L. Anderson, in *Fullerenes: Chemistry, Physics, and New Directions*, R. Ruoff and K. Kadish, eds. The Electrochemical Society, 1995, 1448-56.
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73. "State-selected $C_2H_2^+$ reactions with methane at high internal energies. H^+ and H^- transfer reactions, two new channels in the $C_2H_2^+$ A state region", C. Metayer-Zeitoun, C. Alcarez, S. L. Anderson, H. Palm, and O. Dutuit, J. Phys. Chem. 99 (1995) 15523-31.

74. “Reaction mechanisms and energy disposal in the $[C_2H_2:OCS]^+$ system: A mode-selective differential cross section study”, Yu-hui Chiu, Hunghsin Fu, Jui-tsen Huang, and Scott L. Anderson, J. Chem. Phys.105 (1996) 3089-3107
75."Mode-selective differential scattering as a probe of polyatomic ion reaction mechanisms", Scott L. Anderson, Accounts of Chemical Research, 30 (1997) 28-36.
76."Boron oxide oligamer collision-induced dissociation: Thermochemistry, Structure, and implications for boron combustion", Dilrukshi M. Peiris, Adam Łapicki, and Scott L. Anderson, Report UUIL-001, submitted to DTIC 8/96.
77."Cluster beam study of boron oxide and hydrogenated boron oxide ion cluster reactions with water",Adam Łapicki, Dilrukshi M. Peiris, Jason N. Smolanoff, and Scott L. Anderson, Report UUIL-002, submitted to DTIC 8/96.
78."Flow tube mass spectrometry of strained hydrocarbon fuel molecules" Z. Li, D. Peiris, J. Eckwert, S. L. Anderson, Proc. Ninth ONR Propulsion Meeting, Arlington, VA Sept 10 - 15, 1996.
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80."Interaction of small boron cluster ions with HF", Marianne Sowa-Resat, Jason Smolanoff, Adam Łapicki, and Scott L. Anderson, J. Chem. Phys. 106 (1997) 9511-22.
81."The dynamics of the $C_2H_2^+ + ND_3$ reaction: A mode-selective differential scattering study", Jun Qian, Hunghsin Fu, and Scott L. Anderson, J. Phys. Chem.101 (1997) 6504-12.
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84."A Simple Radio-Frequency Power Source for Ion Guides and Traps", Ronald M. Jones, Dieter Gerlich, and Scott L. Anderson, Rev. Sci. Instrum. 68 (1997) 3357-62
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86."Collisions of Rare Gas Ions with C_{60}: Endohedral Formation, Energy Transfer, and Scattering Dynamics", Yousef Basir and Scott L. Anderson, J. Chem. Phys. 107 (1997) 8370-79
87."Vibrational Mode-Selected Differential Scattering of NH_3^+ + Methanol (d_1, d_3, d_4): Control of Product Branching by Hydrogen-Bonded Complex Formation", Hunghsin Fu, Jun Qian, Richard J. Green, and Scott L. Anderson, J. Chem. Phys,108 (1998) 2395
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90."Interaction of boron oxide oligamer cations with water: effects of structure on reactivity", Adam Łapicki, Dilrukshi M. Peiris, Jason N. Smolanoff and Scott L. Anderson, J. Phys. Chem. A 103 (1999) 226-234.
91. "A phase-space-compressing, mass-selecting beamline for focused ion beam production", Kevin J. Boyd, Adam Łapicki, Masato Aizawa, and Scott L. Anderson,Rev. Sci. Instrum, 69 (1998) 4106-15.
92. "Transition metal-C_{60} bonding by guided ion beam scattering", Yousef J. Basir and Scott L. Anderson, Int J. Mass Spectrom. 185/186/187 (1999) 603-15.
93."Pyrolysis and Isomerization of Quadricyclane, Norbornadiene, and Toluene", Zhi Li and Scott L. Anderson, J. Phys. Chem. A 102 (1998) 9202-9212.
94."Decomposition Chemistry of High Energy Fuels by Flow Tube Mass Spectrometry",Zhi Li and Scott

L. Anderson, proceedings of the 11th ONR propulsion meeting, (West Palm Beach, Aug. 17-19, 1998)

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233. "Fluorocarbon-Capped Aluminum Nanoparticles: Synthesis, Characterization, Combustion, and Comparison to Hydrocarbon-Capped Aluminum Nanoparticles", Tonya N. Jensen, Marc J. R. Malek, Zachary L. Whipple, Andrew R. Demko, Elektra K. Ismael, and Scott L. Anderson*, (in preparation for Comb. Sci. Tech)
234. "Methods for Non-Destructive, High Precision Mass/Charge Determination for Single, Trapped, GigaDalton Nanoparticles", David M. Bell, Collin R. Howder, Bryan A, Long, Scott L. Anderson, ChemRxiv (December 2022) DOI: 10.26434/chemrxiv-2022-1n56p
235. "High Temperature Transformation, O_2 Etching, and Passivation of Single SiO_x Nanoparticles: Kinetics and Optical Properties as Structure Probes", Daniel J. Rodriguez, Chris Y. Lau, Abigail M. Friese, and Scott L. Anderson, Mol. Phys. (2023) p. e2184652 (Dieter Gerlich memorial Festschrift) DOI: 10.1080/00268976.2023.2184652, ChemRxiv DOI: 10.26434/chemrxiv-2023-cs6vh
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238. “The Interaction of Size-Selected Ru_3 Clusters with TiO_2: Depth-Profiling of Encapsulated Clusters”, Liam Howard-Fabretto, Timothy J. Gorey, Guangjing Li, DJ Osborn, Siriluck Tesana, Gregory F. Metha, Scott L. Anderson, and Gunther G. Andersson*, Phys. Chem. Chem. Phys. (submitted 1/24)

INVITED LECTURES AND PRESENTATIONS

1. "The Effect of H_2^+ Vibration on the $H_2^+ + H_2$ Reaction", 2nd Chemical Congress of the N. American Cont. , Las Vegas, Nev. , Aug. 24-29, 1980.Ch
2. "Metastable Ion Fragmentation and Photoelectron Energy Analysis as a Probe of MPI Dynamics and Fragmentation Kinetics", Gordon Conf.. on UV/Vis Multiphoton Ionization, New London, NH, July 12, 1982.
3. "Multiphoton Ionization Photoelectron Spectroscopy of Small Molecules", Gordon Conf. on UV/Vis Multiphoton Ionization, New London, NH, June 11-15, 1984.
4. "Multiphoton Ionization Photoelectron Spectroscopy", Chemistry Dept., Rutgers Univ., Oct. 18, 1984
5. "Metal Cluster Ion Chemistry", Naval Research Lab, Oct 8, 1985.
6. "Chemistry of Transition Metal Cluster Ions", Chemistry Dept., Yale Univ., Nov. 19, 1985.
7. "Chemistry of Cooled Metal Cluster Ions", Chemistry Dept., University of Delaware, April 21, 1986.
8. "Metal Cluster Ion Chemistry", 1986 Quebec Symposium of the SPIE - Laser Applications in Chemistry, Quebec, June 6, 1986.
9. "Metal Clusters and Auger Dynamics", Bell Laboratories, Murray Hill, Sept. 22, 1986.
10. "Reaction Dynamics of Aluminum Cluster Ions", Department of Chemistry, Stanford University, April 17, 1987.
11. "Physical and Chemical Properties of Aluminum Cluster Ions", Department of Chemistry, University of California, Berkeley, April 20, 1987.
12. "Reaction Dynamics of Small Metal Cluster Ions", Materials Research Society 1987 Spring Meeting, Anaheim, April 21-25, 1987.
13. "Bonding and Chemistry of Metal Cluster Ions", Department of Chemistry, State University of New York, Stony Brook, April 30, 1987
14. "Cluster Studies with RF Ion Guides", Metal and Semiconductor Clusters Gordon Conference, Holderness School, August 3-7, 1987.
15. "Dynamics of Chemisorption on Metal Cluster Ions", Department of Chemistry, Iowa State University, Sept. 11, 1987
16. "Dynamics of Chemisorption on Metal Cluster Ions", Department of Chemistry, University of Illinois, Sept. 23, 1987
17. "Dynamics of Aluminum Cluster Ion Oxidation", Department of Chemistry, Pennsylvania State University, Dec. 11, 1987.
18. "MPI State Selection and Studies of State Selected Ion Chemistry", Multiphoton Processes Gordon Conference, Colby-Sawyer College, New London, NH, June 13-17, 1988.
19. "Experimental and Ab Initio Studies of Pure and Alloy Metal Cluster Ions", Atomic and Molecular Interactions Gordon Conference, Plymouth State College, August 1-5. 1988
20. "Experimental and Ab Initio Studies of Metal Cluster Ions", Department of Chemistry, Columbia University, September 15, 1988.
21. "Experimental and Ab Initio Studies of Boron Cluster Ions", American Chemical Society, National Meeting, Los Angeles, September 26-29, 1988.
22. "Structure and Reactivity of Boron Cluster Ions", Department of Chemistry, City College of CUNY, October 19, 1988.
23. "Dynamics of Metal Cluster Ion Reactions", Department of Chemistry, University of Rochester, February 8, 1989.
24. "Combustion of Cluster Ions", 2nd ONR Propulsion Meeting on Energetic Materials Combustion, Irvine, CA October 17, 1989.
25. "Size and Energy Effects on the Chemistry of Boron Cluster Ions", Chemistry Department, University of California, Irvine, October 19, 1989.

26. "The Effects of Different Kinds of Reactant Vibrational Motion on Chemical Reactions", Chemistry Department, University of California at Los Angeles, October 20, 1989
27. "The Effects of Different Kinds of Reactant Vibrational Motion on Chemical Reactions", Chemistry Department, Tokyo University (Hongo Campus), November 6, 1989
28. "The Origin of "Magic Numbers" in Chemistry of Semiconductor Cluster Ions", Chemistry Department, Keio University, Yokohama, November 7, 1989.
29. "The Origin of "Magic Numbers" in Chemistry of Semiconductor Cluster Ions", Chemistry Department, Tokyo University (Komaba Campus), November 8, 1989
30. "The Effects of Different Kinds of Reactant Vibrational Motion on Chemical Reactions", Chemistry Department, Tohoku University, Sendai, November 10, 1989.
31. "Collision Energy and Cluster Size Effects on the Reactions of Boron Cluster Ions", Institute for Molecular Science, Okazaki, Japan, November 22, 1989.
32. "Vibrational Mode Effects on OCS^+ Dissociation and Reactions", L. U. R. E., Université de Paris Sud, Orsay France, March 28, 1990.
33. "Mode Specific Vibrational Effects in Polyatomic Ion Chemistry", Department of Chemistry, Wesleyan University, April 13, 1990.
34. "Vibrational Mode and Collision Energy Effects on Ion-Molecule Reactions", 38th ASMS Conference on Mass Spectrometry and Allied Topics, Tucson, AZ June 3-8, 1990.
35. "Semiconductor Cluster Ion Reactions", Fakultät für Physik, University of Freiburg, w. Germany, June 27, 1990.
36. "Semiconductor Cluster Ion Reactions and Energetics", NATO Advanced Study Institute on Gas Phase Ion Chemistry, Mt. St. Odile, France, July 2, 1990.
37. "Vibrational Mode Effects in Polyatomic Ion Reactions", NATO Advanced Study Institute on Gas Phase Ion Chemistry, Mt. St. Odile, France, July 2, 1990.
38. "Vibrational Mode Effects in Polyatomic Ion Reactions", Chemistry Department, Brookhaven National Laboratory, Sept. 5, 1990.
39. "Effects of Different Modes of Nuclear Motion on Polyatomic Ion Reactions", Chemistry Division, Naval Research Laboratory, Dec. 3, 1990.
40. "Multiphoton Ionization Studies of Vibrational Mode Effects on Polyatomic Ion-Molecule Reactions", Gordon Conf.. on Structures, Energetics, and Reaction Dynamics of Gaseous Ions, Ventura, CA March 3-8, 1991.
41. "Effects of Structure on the Chemistry of Boron and Carbon Cluster Ions", Chemistry Department , University of Virginia, May 13, 1991.
42. "Structure and Reactivity of Boron and Carbon Cluster Ions", Université de Paris-Sud, Orsay France, June 28, 1991.
43. "Oxidation Reactions of Metal and Semi-Metal Cluster Ions", Symposium on Gas-Phase metal Reactions, 4th Chemical Congress of N. America, New York, NY August 25-30, 1991.
44. "Structure-Chemistry Relationships in Carbon and Boron Cluster Ions", State University of New York, September 26, 1991.
45. "Structure and Chemistry of Semiconductor Cluster Ions", Symposium on Surface and Atomic Physics, Val di Fiemme, Trentino, Italy, Jan 19-25, 1992.
46. "Chemistry of Small and Large Carbon Cluster Ions", Chemistry Department, University of Illinois at Chicago, March 5, 1992.
47. "Chemistry of Small and Large Carbon Cluster Ions", Chemistry Department, Northwestern University, March 6, 1992.
48. "Endo and Exo-Chemistry of Buckyballs", Chemistry Department, State University of New York at Stony Brook, April 2, 1992.
49. "Chemistry of Small and Large Carbon Cluster Ions", IBM, Yorktown Heights, April 6, 1992.
50. "Ion beam studies of exo and endohedral reactions of atomic and molecular ions with fullerenes", Sixth International Symposium on Small Particles and Inorganic Clusters, Chicago, Sept. 16-22, 1992.
51. Primary Chemistry of High Energy Fuels Combustion, S. L. Anderson, 5th ONR Propulsion Meeting,

Arlington, VA, Sept 29 - Oct., 1992
52. "Puncturing Buckyballs with Atomic Ions", Physics Dept. SUNY at Stony Brook, Oct 21, 1992.
53. "Ion Beam Studies of Endo-and Exo-Chemistry of Fullerenes", Eastern Analytical Symposium, Sommerset, NJ, November 18, 1992.
54. "Reaction Mechanisms of Carbon Cluster Ions: Bats, Belts, and Balls", OE/LASE 93, SPIE, Los Angeles Jan 16-23, 1993.
55. "Endo- and Exo-Chemistry of Buckyballs", Chemistry Department, Yale University, Feb. 16, 1993.
56. "Endo- and Exo-Chemistry of Fullerenes", Chemistry Department, University of Utah, April 26, 1993.
57. "Matrix and Cluster Beam Studies of High Energy Fuels Combustion Chemistry", 6th ONR Propulsion Meeting, Boulder, Aug 30 - Sept 2, 1993.
58. "Ion Beam Studies of Fullerenes - Endo, Exo, and Astrochemistry", Chemistry Dept. University of Connecticut, Dec. 1, 1993.
59. "Vibrational Mode Effects and Energy Disposal in reactions of Polyatomic Ions", Chemistry Department, University of Utah, Dec. 13, 1993.
60. "Endo, Exo, and Substitutional Chemistry of fullerenes" Workshop on Carbon Cluster Ions, Berlin-Brandenburg Akademie der Wissenschaft, Berlin, March 13-16, 1994
61. "Endo, Exo, and Substitutional Chemistry of fullerenes", Fakultät für Physik, Universität Freiburg, March 29, 1994.
62. "Atomic Site Selective Solid-State Photochemistry in Matrix Isolated N_2O Using Monochromatic Soft X-rays, NSLS Users Meeting, Brookhaven National Lab, Upton, NY 1994
63. "Matrix Photolysis of Strained Hydrocarbon Fuel Molecules", 7th ONR Propulsion Meeting, Buffalo, Aug. 29-31, 1994.
64."Vibrational Mode Effects and Energy Disposal in reactions of Polyatomic Ions", Chemistry Department, University at Stony Brook, Sept. 22, 1994.
65. “Vibrational Mode Effects and Energy Disposal in reactions of Polyatomic Ions", Philips Lab, Hanscom AFB, Oct. 20, 1994.
66. “Surface, Substitutional, and Endohedral Chemistry of C_{60}", Physics Department, Univ. of New Hampshire, Dec. 5, 1994.
67. " Vibrational Mode Effects and Vibrational Control (?) in Reactions of Polyatomic Ions”, Chemistry Dept., Ohio State University, May 8, 1995.
68. " "Transition Metal - C_{60} Bonding by Guided-Ion Beam Scattering”, Y. Basir and S. Anderson, Fullerene Symposium of the Electrochemical Society, Reno, NV May 21-26, 1995
69. “Ion Beam Probing of Fullerene Chemistry”, Dept. of Metallurgical Engineering, Univ. of Utah, May 31, 1995.
70. “Vibrational Mode Effects and Energy Disposal in reactions of Polyatomic Ions”, SPIE meeting, San Diego, July 9-14, 1995
71. “Decomposition and Reactions Induced by Atomic Site-Selective Soft X-ray Excitation in Hydrogen Matrices”, Gordon Conference on Chemistry and Physics of Matrix Isolated Species, Plymouth, NH July 30- Aug. 4, 1995.
72. “Vibrational Mode Effects and Product Energy Disposal in Reaction of Polyatomic Ions”, Chemistry Department, North Dakota State, March 14, 1996
73.“Vibrational Mode Effects and Product Energy Disposal in Reaction of Polyatomic Ions”, Chemistry Department, Univ. of California at San Diego, May 14, 1996
74. “Cluster Ion Beams: Structure-Chemistry Relationships from Scattering Dynamics” Gordon Conference on Dynamics of Simple Systems, Proctor Academy, 11-16 August, 1996.
75. "Metal cation interactions with C60: exo and endohedral complexes and fullerene-carbides", Nobel Institute of Physics, Royal Swedish Acadamy of Sciences, workshop on Collision Studies Involving Fullerenes, Stockholm, 28 Aug - 1 Sept, 1996
76."Flow tube mass spectrometry of strained hydrocarbon fuel molecules" Ninth ONR Propulsion Meeting, Arlington, VA Sept 10 - 15, 1996.
77."Mode-selective differential scattering as a probe of polyatomic ion reaction mechanisms", Modern

Trends in Chemical Dynamics, Academia Sinica, Taipei, December 9-12, 1996
78. "Vibrational mode effects on reaction mechanisms for polyatomic ions", Chemistry Department, Indiana University, February 13, 1997.
79. "Vibrational mode effects on reaction mechanisms for polyatomic ions", Chemistry Department, University of Kansas, April 30, 1997.
80. "Stability and reactivity of strained fuels by flow tube mass spectrometry", 10th ONR propulsion meeting, Naval Postgraduate School, Monterrey, CA, Oct 7-9, 1997
81. "New tricks for cluster ions beam deposition", Gordon Conference on Atomic and Molecular Clusters, Ventura, CA, Jan 4-9, 1998
82. "Solid-solid interface studies by cluster beam deposition", AFOSR Molecular Dynamics meeting, Naval Postgraduate School, Monterrey , CA, May 17-19, 1998.
83."Decomposition Chemistry of High Energy Fuels by Flow Tube Mass Spectrometry" 11th ONR propulsion meeting, (West Palm Beach, Aug. 17-19, 1998)
84."Cluster-Surface Collisions by Phase-Space Compressed Guided-Ion Beam Methods", The Twelfth International Workshop on Inelastic Ion-Surface Collisions, South Padre Island, Jan 24-29, 1999
85."Reactant mode effects as a probe of ion-molecule reaction mechanisms", Gordon Conf. on Structure, Energetics, and Dynamics of Gaseous Ions, Ventura, Feb 28 - Mar 4, 1999
86."The effects of reactant vibration on the lifetimes and fate of collision intermediates", ACS National Meeting, Anaheim March 21 - 25, 1999
87."Vibrational mode effects on polyatomic ion reactions"Bogazici University, Istanbul, May 31, 1999
88."Stability and reactivity of strained fuels by flow tube mass spectrometry", 12th ONR Propulsion Meeting, Salt Lake City, Aug. 3-6, 1999
89."Vibrational mode effects on highly constrained reactions", Chemistry Dept. Argonne Nat. Lab, Nov. 1, 1999
90."Vibrational and Translational Effects as a Probe of Complex Reaction Dynamics", Chemistry Dept. University of Nevada, Reno, May 5, 2000.
91."Reactant translation and vibrational state as a probe of reaction dynamics", Physics Dept. Tech. Univ. Chemnitz, Germany, Aug. 3, 2000.
92."Pyrolysis chemistry of JP-10", 13th ONR Propulsion meeting,Minneapolis, Aug. 10-12, 2000
93."Cluster deposition studies of impact dynamics and chemistry on supported clusters", 221st ACS National Meeting, San Diego, April 1-5, 2001
94."Cluster ion deposition: Dynamics and model catalysts", 17th Symposium on Chemical Kinetics and Dynamics, Kyushu, Univ., Kyushu, Japan, May 23-25, 2001
95."Cluster ion deposition: Dynamics and model catalysts", Inst. Molec. Science, Okazaki, Japan, May 28, 2001
96."Vibrational mode-selected differential scattering: a sensitive probe of polyatomic reaction mechanisms", Inst. Molec. Science, Okazaki, Japan, May 28, 2001
97."Cluster ion deposition: Dynamics and model catalysts",Genesis Research Inst. Toyota Inst. Technology, Tokyo, Japan, May 29, 2001
98."Vibrational mode-selected differential scattering: a sensitive probe of polyatomic reaction mechanisms", Genesis Research Inst. Toyota Inst. Technology, Tokyo, Japan, May 29, 2001
99."Vibrational mode-selected differential scattering: a sensitive probe of polyatomic reaction mechanisms", Keio Univ. Tokyo, Japan, May 30, 2001
100."Vibrational mode-selected differential scattering: a sensitive probe of polyatomic reaction mechanisms", Chemistry Dept, U. of Utah, Oct 9, 2001
101."Ion beam deposition of size-selected supported metal clusters", Chemistry Dept., Brookhaven Nat. Lab., Dec. 13, 2001
102."Issues in size-selected nanoscale catalyst studies", Brookhaven National Lab, Nanocenter workshop, Mar. 7-9, 2002
103."Effects of cluster size, impact energy, and support state on the properties of Ni clusters on oxide supports", American Physical Society, March 18-22, 2002, Indianapolis
104."Chemistry of JP-10 Relating to PDE Combustion and Diagnostics", S. Nakra, R. J. Green, S. L. Anderson, Fifteenth ONR Propulsion Meeting, Washington, DC, Aug 5-7, 2002

105."Metal nanocluster deposition dynamics, and size-selected model catalysts", Nat. Inst. Adv. Indust. Sci. Tech., Nagoya, Japan, Oct. 1, 2002.
106."Metal nanocluster deposition dynamics, and size-selected model catalysts", Inst. Multidiscip Res. Adv. Materials, Sendai, Japan, Oct. 7, 2002.
107."Metal nanocluster deposition dynamics, and size-selected model catalysts", Cluster Res. Lab. Toyota Tech. Inst., Tokyo, Japan, Oct. 8, 2002.
108."Metal nanocluster deposition dynamics, and size-selected model catalysts", Chemistry Dept. Seoul National University, Seoul, Korea, Oct 10, 2002.
109."Metal Nanocluster Deposition Dynamics, Sintering Behavior, and Size Effects", AVS 49th International Symposium, Denver, Nov. 5, 2002.
110."Metal Nanocluster Deposition Dynamics, Sintering Behavior, and Size Effects", Chemistry Dept. Texas A&M University, Nov. 14, 2002.
111."Model Catalyst Preparation by Size-Selected Cluster Deposition", Meeting on Catalysis by Oxide-Supported Metal Nanoclusters, Santa Barbara, Feb. 25-28, 2003
112."Prospects for Nanocatalysis in Propulsion Applications", S. Anderson, 16th ONR Propulsion Meeting, Los Angeles, CA, June 9, 2003
113."Model Ir and Pd catalysts by cluster ion deposition", S. Anderson, 226th ACS National Meeting, New York, NY, Sept 7 - 11, 2003.
114."Surface Chemistry of Size-Selected Gold and Iridium Clusters on TiO_2", University of Texas, 22 Jan. 2004.
115. "Monitoring Deposition Behavior and Chemistry of Size-Selected Metal Clusters on Oxide Surfaces", Society of Western Analytical Professors, Salt Lake City, 16-17 Jan. 2004.
116."Size-selected Metal Cluster Deposition on Oxide Surfaces: Impact Dynamics and Supported Cluster Chemistry", SASP 2004 (XIV Symp on Atomic, Cluster, and Surface Physics), La Thuile, Italy, 1-6 Feb., 2004.
117."Dynamical Control of 'Statistical Reactions' ", Chemistry Department, Texas Tech University, Oct. 15, 2004.
118."Cluster Size and Support Effects on Activity in Supported Gold and Iridium Catalysts", AVS 51st Int. Symp., Anaheim, Nov. 14-19. 2004
119."Size and Morphology Effects on Activity of Supported Catalysts", Symposium on Size Selected Clusters, Brand,Austria, 28 Feb - 3 Mar 2005
120."Deposition and Catalytic Activity of Size-Selected Gold and Iridium Clusters on Titania and Alumina", 229th ACS National Meeting, San Diego, CA, March 13-17, 2005
121."Nano-scale gold catalysts – a more valuable form of gold" Chemistry Dept. Pacific Univ., Mar. 29, 2005
122."Deposition and Catalytic Activity of Size-Selected Au and Ir Clusters on TiO_2 and Al_2O_3", Chemistry Dept. Argonne National Lab, May 2, 2005
123."Deposition and Catalytic Activity of Size-Selected Au and Ir Clusters on TiO_2 and Al_2O_3", Chemistry Dept. Purdue University, May 4, 2005
124."Hydrazine decomposition over size-selected Ir_2/Al_2O_3 model catalysts", AFOSR Molecular Dynamics meeting, Monterrey, CA, May 23, 2005
125."Cluster Deposition Studies: Effects of Size and Support on Model Catalysts", DOE CPIMS meeting, Airle, VA, Oct 24 2005.
126."Energetic nanoparticle fuels/catalysts" DARPA Seedling workshop on Engineering the Future of Military Logistic Fuels, 2020 and Beyond ", Houston, TX Aug 30-31, 2005
127."Size-selected model gold and iridium catalysts", European Conference on Surface Science, Berlin Germany, Sept 4 - 8 2005.
128."Vibrational Mode-Specific Effects in Polyatomic Ion Chemistry", Wayne State Univ. Chemistry Department. Feb 22 2006.
129."Size-selected model iridium/alumina catalysts", Int. Conf. on Clusters at Surfaces, Warnemünde, Germany, May 28-Jun2, 2006.
130."Nanoparticles for energetic fuels", Nano Materials of Defense Applications, Virginia Beach, VA,

May 1-4, 2006.
131."What's really going on here: Experimental and Computational Ion Reaction Dynamics", 22nd Asilomar Conference on Mass Spectrometry (ASMS), Asilomar, CA, Oct 20-24, 2006
132."Model size-selected cluster catalysts", Trends in Chemical Dynamics 2006, Taiwan, Dec 10-15, 2006
133."Catalysis by Size-Selected Cluster Deposition" International Workshop on "Clusters - a Bridge Across Disciplines, Jekyll Island GA, Dec 16-20, 2006
134."Model Size-Selected Catalysts", Chemistry Dept, Southern Illinois University, Carbondale, Feb. 9, 2007
135."Catalysis by Size-Selected Cluster Deposition", Catalyst Club of Chicago, Chicago, April 9, 2007\
136."Size-selected cluster deposition: Dynamics and applications to catalysis", Univ. Ill. Chicago, Chicago, April 10, 2007.
137."Size-selected cluster deposition: Dynamics and applications to catalysis", Argonne National Lab, Argonne, April 11, 2007.
138."Vibrational Dynamics in Ion-Molecule Reactions", Jason Boyle, Jianbo Liu, Brady Uselman, Scott Anderson, XXI Dynamics of Molecular Collisions, Santa Fe, July 8-13, 2007.
139."Physical and Catalytic Properties of Deposited Size-Selected Metal Clusters", Bill Kaden, Tianpin Wu, Chaoyang Fan, Sungsik Lee, Scott L. Anderson, Gordon Conf. on Clusters, Nanocrystals, and Nanostructures, Mt. Holyoke College, July 29-Aug. 3, 2007
140. "Physical and Catalytic Properties of Deposited Size-Selected Metal Clusters", Chemistry Dept., Louisiana State University, Sept 14, 2007.
141. "Effects of particle size and particle-support interactions on the physical and chemical properties of metal/oxide model catalysts", Chemistry Colloquium, University of Chicago, Nov. 12, 2007
142."Combining QCT and experiments to unravel complex dynamics", New Challenges for Theory in Chemical Dynamics, January 7 – 11, 2008, Telluride, CO.
143. "Atomic Control of Catalysts", Chemistry Colloquium, Johns Hopkins University, March 25, 2008
144. "Nano Catalysis for Propulsion Applications", Air Force Laboratory Nano Review, Dayton, OH May 5, 2008.
145. "Nano Catalysis for Propulsion Applications", AFOSR Molecular Dynamics meeting, Tyson's Corner, VA, May 18-21, 2008
146. "Physical and Chemical Properties of Model Catalysts Prepared by Size-Selected Cluster Deposition", Int. Conf. on Clusters at Surfaces, Warnemuende, Germany, May 25-29, 2008
147. "Beam and Trajectory Studies of Vibrational Dynamics in Polyatomic Ion Reactions", Gordon Conference on Atomic and Molecular Interactions, Colby-Sawyer College, July 6-11, 2008
148. "Cluster size and support effects on sintering and CO adsorption", Genesis Research Institute Symposium, Nagoya, Japan, Feb 23-27, 2009
149. "Correlations between activity, core level binding energies, and adsorbate binding sites for model Pd_n/TiO_2 and Pd_n/alumina catalysts prepared by size-selected cluster deposition", Chemistry Colloquium, Brookhaven National Lab, June 17, 2009
150. "Atomic control over nanoparticle catalysts: Every atom counts", Chemistry Department, Boise State Univ., Nov. 9 2009.
151. "Production and combustion of catalyst-coated boron nanoparticles", ONR Alternative Energy review, US Naval Academy, Nov. 18-20, 2009.
152. "Trajectory simulations of JP-10 decomposition/oxidation", China Lake Naval Air Station, Jan. 26, 2010.
153. "Ion scattering as a probe of surface structure and adsorbate binding", Society of Western Analytical Professors, Salt Lake City, Feb. 5, 2010.
154. "Correlations between electronic structure, sinter stability, adsorbate binding, and catalytic activity in size-selected model catalysts", Jekyll Island Conference on Clusters, Feb. 15-19, 2010
155. "Correlations between electronic structure, chemical properties, and thermal stability of size-selected Pd clusters on titania", Physics Dept., U of Utah, Mar. 2, 2010.

156. "Atomic Control Over Nanoparticle Catalysts: Every Atom Counts", Chemistry Dept. BYU Idaho, March 25, 2010.
157. "Vibration as a Mechanistic Probe and Control Parameter in Polyatomic Ion Reactions", J. Heyrovsky Institute, Czech Acad. Sci., Prague, June 14, 2010
158. "Pd_n model catalysts: relationships between size, electronic and geometric structure, adsorbate binding, and activity", The Cluster-Surface Interactions Workshop, Stratford-upon-Avon, UK, July 5-8, 2010.
159. "Morphology, Electronic Structure, and Reactivity of Size-Selected Pd Clusters", Invited outside lecturer, Sonderforschungsbereich 767 - Klausurtagung 2010 at Söllerhaus, Austria, Sept. 27, 2010
160. "Vibrational Modes and Collision Energy as Probes of Reaction Mechanisms", Inst. der Physik, Universität Köln, Germany. Oct. 5, 2010
161. "Atomic Control Over Nanoparticle Catalysts: Every Atom Counts", Chemistry Dept. University of Wyoming, October 18, 2010
162. "Atomic Control Over Nanoparticle Catalysts: Every Atom Counts", Chemistry Dept. California State University, Long Beach, December 1, 2010
163. "Structure and Mechanisms of Supported Model Catalysts", 2010 AF MURI review meeting, Yale University, New Haven, 9-10 Dec. 2010.
164. "Principles of Catalysis", Catalyst Foundational Science Workshop, Organized by the NASA Engineering and Safety Center at Aerojet, Redmond, WA Feb 1 – 2, 2011
165. "Preparation and characterization of boron and aluminum nanoparticles soluble in ionic liquids", AFOSR workshop on ionic liquid propellants, Anaheim, CA March 30, 2011.
166. "Correlations between Electronic Structure, Chemical Properties, and Adsorbate Binding in Size-Selected Model Catalysts", UCLA, May 2, 2011
167. "Chemistry on Size-Selected, Supported Clusters", 2011 Clusters, Nanocrystals & Nanostructures Gordon Research Conference, Mt. Holyoke, July 24-29, 2011
168. "Atomic Control Over Nanoparticle Catalysts: Every Atom Counts", BYU, Sept. 29 2011.
169. "Understanding Catalytic Combustion Using SAXS and PDF", Randall E. Winans1, Juan Wang, Scott L. Anderson, Peter J. Chupas, Soenke Seifert, Hai Wang, and Erik Tolmachoff,
170. "Correlations between cluster size, electronic/geometry structure, and activity for supported model catalysts", New Challenges for Theory in Chemical Dynamics, Telluride, CO TSRC workshop on
171. "Cluster size effects on chemical and physical properties of model catalysts", APS March Meeting, Boston, February 27 - March 2, 2012
172. "Effects of Support on the Size-Dependent Activity of Pd_n/oxide Model Catalysts", Karlsruhe Institute of Technology, April 2, 2012
173. "Effects of Support on the Size-Dependent Activity of Pd_n/oxide Model Catalysts", Fritz Haber Institute, Berlin, April 4, 2012.
174. "Study of the Formation and Structure of Pd Nanoparticles in Flames by SAXS and Simulation", Materials Research Society fall meeting, Boston, 11/25/2012 (presented by Randall Winans)
175. "Size selected catalysis and electrocatalysis", Cluster-Surface Interactions meeting, Lyon, France, Sept 10 – 13, 2012.
176. "Study of the Formation and Structure of Pd Nanoparticles in Flames by SAXS and Simulation", Randall E. Winans, Juan Wang, Scott L. Anderson, Soenke Seifert, Hai Wang, Sydnie Leib and Erik Tolmachoff, Materials Research Society (paper Y2.02), Boston, Nov. 25 – 30.
177. "Size selected catalysis and electrocatalysis", Chemistry Department, University of Wisconsin, Jan. 22, 2013
178. "Ion Techniques for Nanoparticle Surface Chemistry", Gordon Research Conf. on Gaseous Ions, Galveston, TX, Feb. 24 – Mar. 1, 2013
179. "Size-dependent correlations between electronic structure and activity for catalysis and electrocatalysis", Symposium on Size-Selected Clusters S^3C, Davos, Switzerland, March 3-8, 2013

180. "Alumina support and cluster size effects on activity of Pd_n for catalytic oxidation of CO", Faraday Discussion 162, Berlin, Germany 10-12 Apr. 2013
181. "Size, metal, and support effects on adsorbate binding and reactivity of model catalysts", International Conference on Chemical Bonding, Kauai, Hawaii, on July 4-8, 2013
182. "Size-dependent correlations between electronic structure and activity for model size-selected catalysts", Workshop on soft X-ray spectroscopy of heterogeneous interfaces, LBNL, Berkeley, Oct. 8-9, 2013.
183. "Novel approaches to production and characterization of nanoscale surface and optical properties", NanoUtah, University of Utah, Oct. 18, 2013
184. "Size-dependent Correlations between Supported Cluster Electronic Properties and Catalytic/Electrocatalytic Activity", AVS 61st International Symposium, Long Beach, CA, October 27 - November 1, 2013.
185. "Cluster size and support thickness effects on activity of model Pd_n/alumina and Pt_n/alumina catalysts prepared by mass-selected cluster deposition." Chemical Sciences and Engineering Colloquium, Argonne National Lab, March 11, 2014
186. "Electronic Structure-Activity Correlations in Model Size-Selected Catalysts and Electrocatalysts", 247th ACS National Meeting, Dallas, March 16-20, 2014
187. "Catalyst and Fuel Interactions to Optimize Endothermic Cooling", Air Force Molecular Dynamics meeting, Arlington, VA, May 19-21, 2014.
188. "Catalysis and Electrocatalysis by Size-Selected Clusters", Cluster-Surface Interactions 2014, Varese, Italy, June 2-4, 2014.
189. "Challenges for in situ electrochemical studies with size-selected cluster electrodes", International workshop on nanoclusters: Fundamentals to Functionality, Keio University, Yokohama, Japan, Sept 6, 2014.
190. "Effects of electronic and geometric structure on the activity of size-selected model catalysts and electrocatalysts", ISSPIC17 (Int. Symp. Small Particles and Inorg. Clusters), Fukuoka Japan, Sept. 7-12, 2014.
191. "Atomically size-selected *in situ* electrochemistry: Ethanol Oxidation and Oxygen Reduction over Pt_n/ITO electrodes", Chemistry Colloquium, University of Georgia, Sept. 23, 2014.
192. "Atomically Size-Selected Electrochemistry: Correlations of Activity and Electronic Structure", Chemistry Dept, Rice University, Sept 26, 2014.
193. "Atomically size-selected *in situ* electrochemistry: Ethanol Oxidation and Oxygen Reduction over Pt_n/ITO electrodes", Chemistry Colloquium, Montana State University, Nov. 14, 2014
194. "(Keynote) Effects of Catalytic Site Size on Activity of Model Electrodes Prepared By Mass-Selected Cluster Deposition, 227th Electrochemical Society meeting, May 24-28, 2015, Chicago.
195. "Size-selected catalysis and electrocatalysis: Correlations with physical properties" Nano catalysis symposium, 250th ACS Meeting, Aug. 16-20, 2015, Boston, MA.
196. "Single nanoparticle trapping for optical and surface chemistry studies", Chemistry, University of Leipzig, July 3, 2015
197. "Chemistry on the surface of nanoparticles using beams and traps", Dynamics of Molecular Collisions XXV - 50 Years of Reaction Dynamics, Asilomar, CA, July 12-17, 2015
198. "Size-selected catalysis and electrocatalysis: correlations with physical properties" 250th ACS National Meeting, Boston, MA, Aug. 16-20, 2015
199. "Size-dependent correlations between supported cluster physical and chemical properties", Pacifichem 2015, Honolulu, HI, Dec. 15-18, 2015
200. "Nanocatalysis: Every Atom Counts", Science at Breakfast, Salt Lake City, January 7, 2016.
201. "Surface Chemistry on Single Nanoparticles", Symposium on size-selected clusters (S^3C), Davos, Switzerland, Feb. 18 – Mar. 4, 2016.
202. "Chemistry on Size-Selected and Single Nanoparticles", Chemistry, Cornell University, April 7, 2016.
203. "Nanochemical Strategies for Propulsion Enhancement", AFOSR Molecular Dynamics meeting, Arlington, VA, May 23-26, 2016

204. "XANES Interpretation and Strategies for Stabilizing Subnanometer Supported Clusters", Cluster-Surface Interactions 2016, Argonne National Lab, May 31 - Jun 3, 2016
205. "Beam and Single Particle Approaches to Nanoparticle Surface Chemistry", 252 ACS National meeting, Philadelphia, Aug. 21-25, 2016
206. "Chemistry of, and Catalyzed by Nanoparticles", ACS Publications Symposium: Innovation in Molecular Science, Beijing, October 23-25, 2016.
207. "Chemistry on the Surface of Nanoparticles", National Center for Nanoscience and Technology, Chinese Academy of Sciences, Beijing, Oct. 24, 2016
208. "Nanoparticle Surface Chemistry by Beam and Trap Methods", Dalian Institute of Chemical Physics, Dalian, Oct. 27, 2016.
209. "Size-Correlations as a Probe of Catalysis Mechanisms", AVS 63rd International Symposium, Nashville, Nov. 8, 2016.
210. "Single Nanoparticle Mass Spectrometry", Society of Western Analytical Professors meeting, Feb. 3-4, 2016, Salt Lake City, UT
211. "Ion Beam and Trap Techniques for Surface Chemistry on Clusters", Gaseous Ions Gordon Research Conference, Ventura, CA Feb 12-17, 2017.
212. "Using size to tune electronic properties to control catalysis", Accts. Chem. Res. Invited Poster Session, 253rd ACS National Meeting, San Francisco, April 2-6, 2017.
213. "Surface chemistry on nanoparticles: Size and structure effects", Chemistry Dept. University of Hawaii, 4 May, 2017.
214. "Surface chemistry on nanoparticles: Size and structure effects", Okinawa Institue Science and Technology Graduate University, Okinawa, Japan, June 14, 2017.
215. "Selectively Doped, Size-Selected Cluster Catalysts and Temperature-Dependent Kinetics of Single Nanoparticles", Clusters and Nanostructures Gordon Research Conf., Mt. Holyoke, MA July 9-14, 2017.
216. "High Temperature Carbon Surface Chemistry by Single Particle Mass Spectrometry", 9th Ablation Workshop, Montana State University, Bozeman, MT, August 30-31 2017.
217. "Chemistry on the surface of nanoparticles: Size-selected and single nanoparticle studies", Indiana University, Sept. 21, 2017.
218. "Chemistry on the surface of nanoparticles: Size-selected and single nanoparticle studies", Rocky Mountain Regional ACS meeting, Loveland, CO, Oct. 25-26, 2017.
219. "Single Nanoparticle Mass Spectrometry for High Temperature Sublimation and Oxidation Kinetics", AIAA SciTech Forum, Kissimmee, FL, Jan. 11, 2018.
220. "Size, Structure, Support, and Alloying Effects on Cluster Chemistry", American Physical Society, Los Angeles, March 5-9, 2018.
221. "Size, support, and alloy effects on cluster catalysis", 255th ACS National Meeting, New Orleans, LA, March 18-22, 2018.
222. "Size-Selected Catalysis and Electrocatalysis by Cluster Beam Deposition", Materials Research Society, Phoenix, AZ, April 3-5, 2018
223. "Size-selected cluster deposition for solar fuels catalysis", Workshop on Cluster Catalysis, Christchurch, New Zealand, April 8-10, 2018
224. "Chemistry on Nanoparticle Surfaces: Size-Selected and Single Particle Approaches", Chemistry Dept. Student Choice Speaker, U. Mass Amherst, April 19, 2018.
225. "Tuning the Structure and Behavior of Atomically-selected Platinum-Tin Bimetallic Catalysts",International Precious Metals Institute, **Timothy J. Gorey**, Eric T. Baxter, Guangjing Li, Borna Zandkarimi, Anastassia Alexandrova, and Scott Anderson, San Antonio, TX, June 9-12, 2018. NY Chapter Award address by Tim Gorey.
226. "Improving the chemical and sinter stability of supported cluster catalysts", 2018 Cluster Surface Interactions meeting, Trondheim, Norway, June 18-22, 2018.
227. "Single Nanoparticle Measurements of Carbon Oxidation Kinetics", Int. Conf. on Combustion Physics and Chemistry, Samara, Russia, July 24-28, 2018.

228. "Model cluster catalysis and electrocatalysis by size-selected cluster deposition", 256th American Chemical Society National Meeting, Boston, MA, August 19-23, 2018.
229. "High temperature surface chemistry and emission spectroscopy of individual nanoparticles", 256th American Chemical Society National Meeting, Boston, MA, August 19-23, 2018.
230. "Spectroscopy and Surface Chemistry of Individual Nanoparticles", 2nd Johnson-Sessler Lecture, Chemistry Dept. Yale Univ., Sept. 14, 2018.
231. "Surface chemistry on nanoparticles: Size-Selected and Single Particle Studies", Chemistry Dept., Trinity University, April 25, 2019.
232. "Single particle and size-selected surface chemistry on nanoparticles", Technical University Munich, Germany June 14, 2019.
233. "Single Nanoparticle Surface Chemistry and Spectroscopy: Evolution of NP properties", Dynamics of Molecular Collisions XXVII, Big Sky, MT July 7-12, 2019.
234. Keynote: "Size Effects on Catalysis and Electrocatalysis", 76th Fujihara Seminar "International Workshop on Designer Nanocluster Materials - From Gas Phase to Condensed Phase", Tomakomai, Hokkaido, Japan Sept. 29 – Oct. 2, 2019.
235. "Size- and Composition-Selected Cluster Catalysts", Advances in Cluster Beam Deposition, Okinawa Inst. Sci. Tech., Okinawa, Japan, Oct. 21-25, 2019.
236. "The Effects of Size, Charge, and Surface Structure on Stability, Oxidation, and Growth of Carbon Nanoparticles", Symposium on Size-Selected Clusters, Davos, Switzerland, Feb. 23-28, 2020.
237. "Alloying to Control Coking and Sintering of Sub-Nano Size- and Composition-Selected Cluster Catalysts", Guangjing Li, Borna Zandkarimi, Timothy J. Gorey, Mai-Anh Ha, Ashley C. Cass, Anastassia Alexandrova, Scott L. Anderson, ACS National Meeting, Philadephia, PA, March 22-26, 2020. (canceled due to COVID)
238. "Chemistry on the surface of individual nanoparticles: Effects of nanoparticle heterogeneity & evolution", University of Nebraska, Omaha, Oct. 12, 2020 (virtual).
239. "High and Ultrahigh Temperature Surface Chemistry by a Single Nanoparticle Method", Characterisation and Applications of Advanced Nanophotonic Materials and Structures, virtual symposium sponsored by Oxford Instruments, Feb. 9-10, 2021.
240. "Catalysis and Electrocatalysis on Sub-Nano Clusters" Swansea University, Wales, Jun. 16, 2021 (virtual).
241. "Cluster Model Catalysts: Improved Stability, Size-Selected Electrocatalysis, and Single Cluster/Atom Electrocatalysis", Cluster Meeting 2021, J. Heyrovský Institute, Prague, Czech Republic, July 18-23, 2021 (live meeting attended virtually due to UofU travel restriction)
242. "Size-selected cluster catalysis and electrocatalysis", Int. Symp. Surface Science 9 (ISSS-9), Takamatsu, Japan, Nov. 29-31, 2021 (moved online)
243." Catalysis and electrocataysis by supported size-selected Pt-based cluster systems", Pacifichem, Honolulu (moved online), Dec. 16-21, 2021.
244. "Selectively alloyed sub-nano clusters as catalysts resistant to sintering and poisoning", ACS Spring 2022 meeting, San Diego, March 20-24, 2022.
245. "Ensembles of metastable states of supported size-selected cluster catalysts determine their catalytic activity, selectivity, and degradation resistance", Patricia Poths; Borna Zandkarimi; Guangjing Li; Scott Anderson; Anastassia Alexandrova, Presenter ACS Spring 2022 meeting, San Diego, March 20-24, 2022.
246. "Tuning sub-nano cluster catalysis and electrocatalyis", Guangjing Li, Marc J. R. Malek, Tsugunosuke Masubuchi, Ashley C. Cass, and Scott L. Anderson", CSI 2022 – Cluster Surface Interactions Workshop, Santa Margherita Ligure, Italy, April 1-4, 2022
247. "Size- and composition-selected sub-nano cluster catalysts and electrocatalysts", J. Heyrovský Institute of Physical Chemistry, Czech Acad. Science, Prague, Czech Republic, June 16, 2022
248. "Sub-nano cluster size effects on electrocatalytic hydrogen evolution and alcohol oxidation: Correlations with cluster electronic properties and binding sites", Chemistry Dept., Adelaide University, Adelaide Australia, August 26, 2022

249. “Sub-nano cluster size effects on electrocatalytic hydrogen evolution and alcohol oxidation: Correlations with cluster electronic properties and binding sites”, Physics Dept., Flinders University, Adelaide Australia, Sept. 1, 2022.
250. “Size-selected ElectroCatalysis, and Single Nanoparticle Surface Chemistry”, Chemistry Dept., Univ. Colo. Boulder, Feb 10, 2023
251. “Size-Selected Cluster Electrocatalysis: Effects of Cluster Electronic Structure and Fluxionality on Activity and Stability Under Reaction Conditions” Symposium on Size-Selected Clusters (S^3C), Davos, Switz. Feb. 26-Mar. 3, 2023.
252. “Size-Selected Catalysis and Electrocatalysis: Effects of Cluster Electronic Structure and Fluxionality on Activity and Stability Under Reaction Conditions”, Prague Cluster Meeting 2023, Heyrovský Institute, Prague, Czech Republic June 18-23, 2023
253. “Understanding Cluster Dynamics and Size Effects on Physical and Catalytic Properties” ACS Fall 2023, San Francisco, Aug. 13-17, 2023
254. “Sub-nano electrocatalysts: Cluster size and support effects”, International Symposium of Small Particles and Inorganic Clusters - ISSPIC XXI, Berlin, Germany, 3-8, Sept, 2023.
255. “The effects of catalytic cluster size on catalysis and electrocatalysis” AVS 69, Portland, OR, Nov 5-10 2023.

CONTRIBUTED PAPERS

1. "Bimolecular Reactions of State Selected Molecular Ions", F. A Houle, S. L. Anderson, D. Gerlich, and Y. T. Lee: ACS national meeting, Las Vegas, Aug. 27, 1980.
2. "The Effects of Reagent Vibration on the Dynamics of Reactions of H_2^+ with Simple Molecules", S. L. Anderson, T. Turner, F. A. Houle, D. Gerlich, and Y. T. Lee: XXII ICPEAC, Gatlinberg, Tenn. , July 27, 1981.
3. "Vibrational Effects on H_2^+ Reaction Dynamics", S. L. Anderson, T. Turner, F. A. Houle, D. Gerlich, and Y. T. Lee: Gordon Conf.. on the Dynamics of Molecular Collisions, Plymouth, NH, July 27, 1981.
4. "Multiphoton Ionization Photoelectron Spectroscopy", S. L. Anderson and R. N. Zare, 1983 Conference on the Dynamics of Molecular Collisions, Gull Lake, MN, June 26, 1983.
5. "Ionic Unimolecular Decomposition Studied by MPI TOF Mass Spectroscopy", J. L. Durant, S. L. Anderson, and R. N. Zare, 1983 Conference on the Dynamics of Molecular Collisions, Gull Lake, MN, June 26, 1983.
6. "Force Field of the Phenol $^2B_1$ cation", S. L. Anderson, R. N. Zare, L. Goodman, K. Krogh-Jespersen, and A. Ozkabak, Gordon Conf.. on UV/Visible MPI, New London, NH, June 11, 1984.
7. "Studies of the Chemistry and Cooling of Vanadium Cluster Ions", L. Hanley and S. L. Anderson, 1985 Conference on the Dynamics of Molecular Collisions, Snowbird, UT, July 14-19, 1985.
8. "Studies of the Chemistry of Transition Metal Cluster Ions", L. Hanley and S. L. Anderson, Gordon Conf. on the Chemistry and Physics of Solids: Clusters, Plymouth, NH, Aug 12-16, 1985.
9. "Production and Cooling of Metal Cluster Ions", L. Hanley and S. L. Anderson, 7th East Coast ICR and Ion-Molecule Chemistry Symposium, Newark, DE, Oct. 19, 1985.
10. "Reactions of Gas Phase Metal Cluster Ions with Small Molecules", L. Hanley and S. L. Anderson, 191st ACS National Meeting, New York, April 13-18, 1986.
11. "Multiphoton Ionization Spectroscopy for Ion State Selection", T. M. Orlando and S. L. Anderson, 191st ACS National Meeting, New York, April 13-18, 1986.
12. "Multiphoton Studies of High Excited States of Acetylene", T. M. Orlando, S. L. Anderson, J. R. Appling and Michael G. White, Gordon Conf.. on Multiphoton Processes, New London, NH, June 9-13, 1986.
13. "Size and Collision Energy Effect on Gas Phase Metal Cluster Ion Reactions", Luke Hanley and Scott Anderson, Gordon Conf.. on Atomic and Molecular Interactions, Plymouth, NH, July 28-Aug. 1, 1986.
14. "Unimolecular Decay Following Atom-Selective, Core-Level Excitation of Small Molecules", J. Murakami, M. C. Nelson, D. M. Hanson, and S. L. Anderson, Gordon Conf. on Atomic and

Molecular Interactions, Plymouth, NH, July 28-Aug. 1, 1986.

15. "Chemistry of Small Metal Cluster Ions", Luke Hanley, Steven A. Ruatta, and Scott L. Anderson, International Symposium on the Physics and Chemistry of Small Clusters, Richmond VA Oct. 28 - Nov. 1, 1986
16. "Reactions and Collision Induced Dissociation of Small Aluminum and Boron Cluster Ions", L. Hanley, S. Ruatta, and S. L. Anderson, APS National Meeting, New York, March 16-20, 1987.
17. "Multiphoton Ionization State Selection Studies of Acetylene", T. M. Orlando and S. L. Anderson, 193rd ACS National Meeting, Denver, Colo, April 7, 1987.
18. "The Effect of Reagent Excitation on Collision Induced Dissociation of Acetylene Cations", T. M. Orlando, B. Yang, and S. L. Anderson, 1987 Conference on the Dynamics of Molecular Collisions, Wheeling, WV, July 12-17, 1987
19. "Properties and Reactivity of Thermalized, Mass-Selected Aluminum and Boron Cluster Ions", Luke Hanley, Stephen A. Ruatta, and S. L. Anderson, 1987 Conference on the Dynamics of Molecular Collisions, Wheeling, WV, July 12-17, 1987
20. "Reactions of Thermalized, Mass-Selected Aluminum Cluster Ions with Small Molecules", Stephen A. Ruatta, Luke Hanley, and Scott L. Anderson, Gordon Conference on Metal and Semiconductor Clusters, Holderness School, August 3-7, 1987
21. "Properties and Reactivity of Thermalized, Mass-Selected Boron Cluster Ions", Luke Hanley, Stephen A. Ruatta, and Scott L. Anderson, Gordon Conference on Metal and Semiconductor Clusters, Holderness School, August 3-7, 1987
22. "MPI (2+1) Photoelectron Spectroscopy and State-Selected Ion-Molecule Reaction Studies of Acetylene", B. Yang, Z. Jin, T. M. Orlando, and S. L. Anderson, 3rd International Laser Science Conference, Atlantic City, November 1-5, 1987.
23. "Effect of Excitation Site on Fragmentation of Nitrous Oxide by Monochromatic Soft X-rays", S. L. Anderson, J. Murakami, M. C. Nelson, and D. M. Hanson, New Opportunities in Chemistry: An International Symposium on the Uses of Synchrotron Radiation in Chemistry", Upton, NY November 4-6, 1987
24. "A Photoelectron Spectroscopic Study of (2+1) Resonant Enhanced Multiphoton Ionization of Acetylene", Jin Zhongkao, Yang Baorui, and Scott L. Anderson, 1987 International Laser Science Conference, Ximen, China, November, 1987.
25. "Unimolecular Decay Following Core-Electron Excitation of Molecules", K. T. Wu, C. I. Ma, D. Lapiano, S. L. Anderson, and D. M. Hanson, 195th ACS National Meeting, Toronto, June 5-10, 1988
26. "Multiphoton Ionization Photoelectron Spectroscopy and State Selected Ion Molecule Reactions of OCS", Baorui Yang, Thomas Orlando, and Scott L. Anderson, Multiphoton Processes Gordon Conference, Colby-Sawyer College, 13-17 June, 1988
27. "The Effects of Vibrational and Translational Energy in $C_2H_2^+ + CH_4$, CD_4 Reactions: Mode Specificity and Complex Formation", Thomas Orlando, Baorui Yang, and Scott L. Anderson, Multiphoton Processes Gordon Conference, Colby-Sawyer College, 13-17 June, 1988
28. "Multiphoton Ionization Vibrational State Selection Studies of Acetylene Cation Reaction Dynamics", T. M. Orlando, B. Yang, and S. L. Anderson, Atomic and Molecular Interactions Gordon Conf.., Plymouth State College, 1-6 August 1988.
29. "Barriers to Product Formation in Reaction of Metal, Semiconductor and Alloy Cluster Ions", Stephen A. Ruatta and Scott L. Anderson, Atomic and Molecular Interactions Gordon Conf.., Plymouth State College, 1-6 August 1988.
30. "Vibrational Mode Effects on Reactions of $C_2H_2^+$ and OCS^+", B. Yang, T. M. Orlando, Y. Chiu, and S. L. Anderson, 1989 Conference on the Dynamics of Molecular Collisions, Asilomar, July 16-21, 1989.
31. "Reaction Dynamics of Boron Cluster Ions", S. A. Ruatta, L. Hanley, P. A. Hintz, and S. L. Anderson, 1989 Conference on the Dynamics of Molecular Collisions, Asilomar, July 16-21, 1989.
32. "Spectroscopic Investigation of the $[C_2H_2{:}OCS]^+$ Reaction System", T. M. Orlando, A. Friedmann, J. P Maier, B. Yang, Y. Chiu, and S. L. Anderson, 1989 Conference on the Dynamics of Molecular

Collisions, Asilomar, July 16-21, 1989.

33. "Reaction Dynamics of Boron Cluster Ions", S.A. Ruatta, L. Hanley, P. A. Hintz, and S. L. Anderson, XVI ICPEAC, New York, 26 July - 1 August, 1989.
34. "Vibrational Mode Effects on Ion Molecule Reactions", B. Yang, T. M. Orlando, Y. Chiu, and S. L. Anderson, XVI ICPEAC, New York, 26 July - 1 August, 1989.
35. "Reaction Dynamics of Boron Cluster Ions", S.A. Ruatta, P.A. Hintz, and S.L. Anderson. Gordon Conf.. on Metal and Semiconductor Clusters, Holderness, NH July 31 - August 4, 1989.
36. "A Triple Sector Instrument for Large Cluster Chemistry", Z. Wan, J. Christian, and S.L. Anderson. Gordon Conf.. on Metal and Semiconductor Clusters, Holderness, NH July 31 - August 4, 1989.
37. "Cluster Morphology Changes Induced By Adsorbate Interactions", Scott. L. Anderson and Yasuo Udagawa, Pacifichem 89 meeting, Honolulu, December 17-22, 1989 (post-deadline)
38. "Size Dependent Chemistry of Boron, Silicon, and Carbon Cluster Ions", S. A. Ruatta, P. A. Hintz, and S. L. Anderson, American Physical Society National Meeting, Anaheim, CA March 12-16, 1990.
39. "Mode Specific Vibrational Effects in Polyatomic Ion Chemistry", Baorui Yang, Yu-hui Chiu, Thomas Orlando, and Scott L. Anderson, Symposium on Atomic and Surface Physics, Obertraun, Austria, March 18-24, 1990.
40. "Varieties of Cluster Size Effects on the Chemistry of Boron Cluster Ions", Stephen. A. Ruatta, Paul A. Hintz, and Scott L. Anderson, Symposium on Atomic and Surface Physics, Obertraun, Austria, March 18-24, 1990.
41. "The Effects of Vibrational, Electronic, and Collision Energy on the Reactions in the $[C_2H_2+OCS]^+$ system", Baorui Yang, Yu-hui Chiu, and Scott L. Anderson, Gordon Conference on Multiphoton Processes, New London, NH, June 10-15, 1990.
42. "Vibrational State-Selection Studies of Ion-Molecule Reaction Dynamics Using Multiphoton Ionization", Yu-hui Chiu, Baorui Yang, and Scott L. Anderson, Gordon Conference on Multiphoton Processes, New London, NH, June 10-15, 1990.
43. "Vibrational Mode Effects on Reactions of Polyatomic Ions", Baorui Yang, Yu-hui Chiu, and Scott L. Anderson, Gordon Conference on Atomic and Molecular Interactions, Newport RI, July 29 - Aug 3 1990.
44. "Structural Effects on Chemical Properties of Boron and Carbon Cluster Ions", Paul A. Hintz, Stephen A. Ruatta, Marianne B. Sowa, and Scott L. Anderson, Gordon Conference on Atomic and Molecular Interactions, Newport RI, July 29 - Aug 3 1990.
45. "A Triple Sector Mass Spectrometer for Large Cluster Chemistry", James F. Christian, Z. Wan, and S.L. Anderson, Gordon Conference on Atomic and Molecular Interactions, Newport RI, July 29 - Aug 3 1990.
46. "Size Dependent Reactions of Boron and Carbon Cluster Ions", Paul A. Hintz, Stephen A. Ruatta, Marianne B. Sowa, and Scott L. Anderson, Fall Meeting of the Materials Research Society, Boston, Nov. 26-30, 1990.
47. "The Effects of Cluster Size, Collision Energy, and Structural Isomers on the reactivity of Boron and Carbon Cluster Ions", Paul A. Hintz, Marianne B. Sowa, and Scott L. Anderson, East Coast Symp. on the Chem. and Phys. of Clusters and Cluster Ions, Baltimore, Jan. 14-16, 1991.
48. "Structural Effects on Chemical Properties of Boron and Carbon Cluster Ions", P. A. Hintz, S. A. Ruatta, M. B. Sowa, and S. L. Anderson, Gordon Conf.. on Structures, Energetics, and Reaction Dynamics of Gaseous Ions, Ventura, CA March 3-8, 1991.
49. "Pre and Post K-Edge Resonances in Boron and Boron-Rich Compounds", Scott L. Anderson, Workshop on Atomic and Molecular Science, Brookhaven National Lab, May 20, 1991
50. "Internal and Translational Energy Effects on Cluster Ion Chemistry", J. Christian, P. Hintz, M. Sowa, Z. Wan, and S. Anderson, NATO ASI on Metal-Ligand Interactions: From Atoms to Clusters to Surfaces, Centraro, Italy, June 10-21, 1991.
51. "The Effects of Different Modes of Nuclear Motion on Polyatomic Ion-Molecule Reactions.", Yu-hui Chiu, Baorui Yang, Hunghsin Fu, and Scott L. Anderson, 1991 Conference on the Dynamics of Molecular Collisions, Lake George, NY July 7-12, 1991.

52. "Structure - Chemistry Relationships in Carbon and Boron Cluster Ions", P. A. Hintz, M .B. Sowa, and S. L. Anderson, Gordon Conference on Metal and Semiconductor Clusters, Wolfboro, NH, Aug. 5-9 1991.
53. "Size Dependent properties of boron cluster ions: Reactivity, structure, and photodissociation", P. A. Hintz, M. B. Sowa, and S. L. Anderson, 4th Chemical Congress of N. America, New York, NY August 25-30, 1991.
54. "Carbon cluster ion reactions: structural isomer effects on reactivity", M. B. Sowa, P. A. Hintz, and S. L. Anderson, 4th Chemical Congress of N. America, New York, NY August 25-30, 1991.
55. "Internal and translational energy effects on cluster ion chemistry", J. Christian, Z. Wan, and S. L. Anderson, 4th Chemical Congress of N. America, New York, NY August 25-30, 1991.
56. "Vibrational mode, electronic state, and collision energy effects on ion-molecule reactions", Y. Chiu, B. Yang, H. Fu, and S. L. Anderson, 4th Chemical Congress of N. America, New York, NY August 25-30, 1991.
57. "State-selected ion-molecule reactions", O. Dutuit, C. Métayer, C. Alcarez, P. M. Guyon, D. Gerlich, J. Hepburn, S. Anderson, and T. Weng, Symp. Atomic and Surface Physics, Pampeago, (Italy) 19-15 January 1992.
58. "Site Selective x-ray Photochemistry in Cryogenic Layers", Paul Hintz, Marianne Sowa, Yu-hui Chiu, Hunghsin Fu, Zhimin Wan, and Scott Anderson, 1992 Annual Meeting, National Synchrotron Light Source, Brookhaven NY May 18-20, 1992.
59. "Role of internal and collisional energy in the $C_2H_2^+ + CH_4$ reaction studied with state-selected $C_2H_2^+$", C. Métayer-Zeitoun, C. Alcarez, O. Dutuit, S. L. Anderson, M. Schweizer, and D. Gerlich, 10th Int. Conf.. on VUV Physics, Paris, July 27-31, 1992
60. "Product time-of-flight analysis as a probe of the dynamics of the $C_2H_2^+ + CH_4$ reaction studied with state-selected $C_2H_2^+$", C. Métayer-Zeitoun, C. Alcarez, O. Dutuit, S. L. Anderson, M. Schweizer, and D. Gerlich, MOLEC IX, Prague, Aug. 30 - Sept 4, 1992.
61. "Collision Dynamics and Reactivity of $A^+ + C_{60}$, where $A^+ = Ne^+, C^+, N^+, O^+, C_2^+$; and preliminarily, B^+ and F^+", James F. Christian, Z. Wan, and S.L. Anderson, Netherlands Physical Society, Autumn meeting of the Atomic Physics and Quantum Electronics Section, Lunteren, The Netherlands, November 5-6, 1992.
62. "Endo and exo-chemistry of fullerenes by ion beam techniques", J. Christian, Z. Wan, Y. Basir, and S.L. Anderson, Gordon Conference on Structures, Energetics, and Reaction Dynamics of Gaseous Ions", Ventura CA, March 1-5, 1993.
63. "Structure-Chemistry Relationships in Small Boron and Carbon Cluster Ions", M.B. Sowa, J. Smolanoff, and S. L. Anderson, Gordon Conference on Structures, Energetics, and Reaction Dynamics of Gaseous Ions", Ventura CA, March 1-5, 1993.
64. "Differential cross sections for state selected ions", Y. Chiu, H. Fu, J. Huang, and S. L. Anderson, Gordon Conference on Structures, Energetics, and Reaction Dynamics of Gaseous Ions", Ventura CA, March 1-5, 1993.
65. "The role of internal and collisional energy in the $C_2H_2^+ + CH_4$ reaction, studied with state-selected $C_2H_2^+$", C. Métayer, C. Alcaraz, O. Dutuit, and S. L. Anderson, Gordon Conference on Structures, Energetics, and Reaction Dynamics of Gaseous Ions", Ventura CA, March 1-5, 1993.
66. "Effects isotopiques dans la réaction $C_2H_2^+ + CH_4$ étudiée avec des ions $C_2H_2^+$ sélectionnés en énergie interne", C. Métayer-Zeitoun, C. Alcaraz, O. Dutuit, S. L. Anderson, M. Schweizer, and D. Gerlich, Colloque "Autour de la photophysique moléculaire: a gourmet's delight of science" Paris, May 3-5 1993.
67. "Endo and Exo Chemistry of Fullerenes", J. Christian, Z. Wan, Y. Basir, S. Anderson, Physical Organic Gordon Conference, Holderness School, Holderness, NH, June 20-25, 1993.
68. "Endo and Exo Chemistry of Fullerenes" J. Christian, Z. Wan, Y. Basir, S. Anderson, Metal and Semiconductor Clusters Gordon Conference, Wolfboro, NH, Aug 9-13, 1993.
69. "Effects of Oxidation State on the Reactions of Boron Cluster Ions", J. N. Smolanoff, M. B. Resat, N. Klein, and S. L. Anderson, Metal and Semiconductor Clusters Gordon Conference, Wolfboro, NH, Aug 9-13, 1993.

70. "Astrochemical Implications of the $C^+ + C_{60}$ Reaction - Kiss Those Fullerenes Goodbye", S. L. Anderson, Metal and Semiconductor Clusters Gordon Conference, Wolfboro, NH, Aug 9-13, 1993.
71. "The Effects of Electronic Structure and Geometric Isomers on the Chemistry of Small Carbon Cluster Ions", M. B. Sowa-Resat, J. N. Smolanoff, and S. L. Anderson, Metal and Semiconductor Clusters Gordon Conference, Wolfboro, NH, Aug 9-13, 1993.
72. "Scattering Dynamics and Energy Disposal in the $[C_2H_2{:}OCS]^+$ System", Y. Chiu, J. Huang, H. Fu, and S. L. Anderson, Symposium on Atomic, Cluster, and Surface Physics ' 94, Hintermoos Austria, March 20-26, 1994
73. "Ion Beam Studies of Atomic Ion Collisions with C_{60}: Chemistry at Surface, Substitutional, and Endohedral Sites", Y. Basir, Z. Wan, J. F. Christian, and S. L. Anderson, Symposium on Atomic, Cluster, and Surface Physics ' 94, Hintermoos Austria, March 20-26, 1994.
74. "Scattering Dynamics and Energy Disposal in the $[C_2H_2{:}OCS]^+$ System", H. Fu, J. Huang, Y. Chiu, and S. L. Anderson, Gordon Conference on Multiphoton Processes, Colby-Sawyer College, June 12-17, 1994.
75. "Scattering Dynamics and Energy Disposal in the $C_2H_2^+ + CH_4$ System", J. Huang, H. Fu, Y. Chiu, and S. L. Anderson, Gordon Conference on Multiphoton Processes, Colby-Sawyer College, June 12-17, 1994.
76. "Cluster Beam Studies of Boron Volatilization Chemistry:, Jason Smolanoff, Marianne Sowa-Resat, Adam Lapicki, and Scott L. Anderson, Gordon Conference on Energetic Materials, New Hampton School, 26 June - 1 July, 1994.
77. "Experimental and *Ab Initio* Studies of the Reactivity of Boron Cluster Ions with HF", Marianne Sowa-Resat, Jason Smolanoff, Adam Lapicki, and Scott L. Anderson, Gordon Conference on Atomic and Molecular Interactions, Colby Sawyer College, 3-8 July, 1994.
78. "Molecular Changes Induced by Monochromatic X-rays", J. Glatthaar, S. Chiang, S. Sambasivan, D. Hanson, S. Anderson, Gordon Conferences on Radiation Chemistry, Salve Regina College, 17-22 July, 1994.
79. “A Study of Photo-decomposition in Condensed Phase Induced by Monochromatic Soft X-rays”, S. Sambasivan, J. Glatthaar, J. Eckwert, S. Anderson and D. Hanson, NSLS Users meeting, May 7-10, 1995
80. “Vibrational Mode Effects on Polyatomic Ion-Molecule Reactions”, Scott L. Anderson, ACS National meeting (oral), Anaheim, April 2, 1995
81. “Vibrational Mode Effects and Energy Disposal in Reactions of Polyatomic Ions” J. Huang, H. Fu, Y. Chiu, and S. Anderson,1995 Conf.. on the Dynamics of Molecular Collisions, Asilomar, July 16-21, 1995.
82. “Photochemistry following atomic site-selective x-ray excitation in deuterium matrices”, Sharadha Sambasivan, Juergen Eckwert, Joerg Glatthaar, S L. Anderson and D M. Hanson, Gordon Conference on Chemistry and Physics of Matrix Isolated Species, Plymouth, NH July 30- Aug. 4, 1995.
83. “Reactivity of Boron Oxide and Hydrogenated Boron Oxide Ion Clusters with Deuterium Oxide, Studied by the Guide Ion Beam Method”,Adam apicki, Dilrukshi Peiris, and Scott L. Anderson, American Physical Society National Meeting, St. Louis, March 18, 1996
84. “Collisionally Induced Dissociation Studies of Boron Oxide Cluster Ions”, Dilrukshi Peiris, Adam apicki, and Scott L. Anderson, American Physical Society National Meeting, St. Louis, March 18, 1996
85. “Collision-Induced Dissociation of Boron Oxide Ion Clusters", Dilrukshi Peiris, Adam apicki, and Scott L. Anderson, 44th Am. Soc. Mass Spectrom. Conf., Portland, May 12-16, 1996
86."Guided-ion beam mass spectrometric study of strained molecules and their isomers", Zhi Li and Scott L. Anderson, Gordon Conf. on Gaseous Ions, Ventura CA Feb 21-28, 1997.
87."Mode-selective differential scattering as a probe of polyatomic ion reaction dynamics", Jun Qian, Hunghsin Fu, Scott L. Anderson, Gordon Conf. on Gaseous Ions, Ventura CA Feb 21-28, 1997.
88."A new method for mass spectral characterization of organic isomers: application to pyrolysis of

strained molecules", Zhi Li and Scott Anderson, XXXth meeting of the American Chemical Society, San Francisco, CA, April 1997

89."Characterization of strained isomers using low energy guided-ion beam mass spectrometry", Zhi Li and Scott L. Anderson, ASMS, Palm Springs, June 1-5 1997

90."Ion-C_{60} scattering by guided beam triple sector mass spectrometry: Chemistry at surface, network, and endohedral sites", Yousef J. Basir and Scott L. Anderson, ASMS, Palm Springs, June 1-5 1997

91."Mode-selective differential scattering as a probe of polyatomic ion reaction dynamics", Jun Qian, Hunghsin Fu, Richard Green, and Scott L. Anderson, 1997 Conf. on Dynamics of Molecular Collisions, Brainerd, MN July 20-25, 1997.

92."Solid-solid interfacial interactions by phase-space compressed, guided ion beam deposition", Kevin Boyd, Adam □apicki, Masato Aizawa, and Scott L. Anderson, 1997 Conf. on Dynamics of Molecular Collisions, Brainerd, MN July 20-25, 1997.

93."Phase-space compressed cluster ion beam deposition", Kevin Boyd, Adam □apicki, Masato Aizawa, and Scott L. Anderson, 1997 Gordon Conf. on Dynamics at Surfaces, Proctor Acad. Aug 10-15, 1997.

94."Film/Substrate interfacial interactions by mass-selected cluster ion deposition", Kevin J. Boyd, Adam Lapicki, Masato Aizawa, and Scott L. Anderson,44th AVS National Symposium, San Jose, Oct. 20-24, 1997

95."A phase-space-compressed, guided-ion beam instrument for mass-selected ion beam deposition", Adam Lapicki, Kevin J. Boyd, Masato Aizawa, and Scott L. Anderson, 44th AVS National Symposium, San Jose, Oct. 20-24, 1997. (Oral by Lapicki)

96."A phase-space compressed, guided ion beam instrument in studies of mass-selected ion beam deposition and interfacial interactions between nanoscale clusters and substrate surfaces" Adam Lapicki, Kevin J. Boyd, Masato Aizawa, and Scott L. Anderson, International Symposium on Nano-scale Modifications of Surfaces, Krakow, May 1998.

97."Mode-selective differential scattering as a probe of polyatomic ion-molecule chemistry", Reactions Mechanisms Conference, Asilomar, June 28-July 3, 1998

98."State-Selection via Mass-Analyzed Threshold Ionization: the Rotationally State-Selected Reaction of NO+ with Ethanol", Richard J. Green, Jun Qian, Ho-Tae Kim, and Scott L. Anderson, Gordon conference on the Structures, Energetics, and Dynamics of Gaseous Ions, Ventura, Feb 28-Mar 5, 1999.

99."The state-selective ion-molecule reaction: Phenol$^+$(6a,12) + ND_3", Ho-Tae Kim,Richard J. Green, Jun Qian, Scott L. Anderson, Gordon conference on the Structures, Energetics, and Dynamics of Gaseous Ions, Ventura, Feb 28-Mar 5, 1999.

100."Dynamics of Cu^+ and Cu_2^+ impact on molybdenum", Kevin J, Boyd, Adam Lapicki, Masato Aizawa, and Scott L. Anderson, Gordon conference on the Structures, Energetics, and Dynamics of Gaseous Ions, Ventura, Feb 28-Mar 5, 1999.

101."Guided-ion beam studied of low energy Cu^+ and Cu_2^+ ion interactions with Ni(100) and Mo", A. ・apicki, K. J. Boyd, M. Aizawa, M. Popescu, and S. L. Anderson, Dynamics at Surfaces Gordon Conf., Proctor Acad. Aug. 8-13, 1999.

102."Guided-ion beam studied of low energy Cu^+ and Cu_2^+ ion interactions with Ni(100)", S. L. Anderson, A. ・apicki, K. J. Boyd, M. Aizawa, M. Popescu, (oral) at AVS 46th Int. Symp., Seattle, Oct. 25, 1999.

103."Guided-ion beam studied of low energy Cu^+ and Cu_2^+ ion interactions with Mo", S. L. Anderson, A. ・apicki, K. J. Boyd, M. Aizawa, (oral) at AVS 46th Int. Symp., Seattle, Oct. 27, 1999.

104."REMPI and MATI studied of state-selected ion chemistry" Ho-tae Kim, Jianbo Liu, Richard J. Green, and Scott L. Anderson, Atomic and Molecular Interactions Gordon conference, July 2-6, 2000

105."Modeling of Cluster Ion-Surface Interactions with Full Inclusion of Internal Degrees of Freedom" K. J. Boyd, Adam ・apicki, and Scott L. Anderson, AVS 47th International Symposium, Boston, October 2-6, 2000.

106.”Ion beam deposition of size-selected vanadium and nickel clusters supported on TiO2(110):Instrumental setup and XPS study", Masato Aizawa, Sungsik Lee, and Scott L. Anderson, Gordon Conf. on Dynamics at Surfaces, Proctor Acad., Aug 12-17, 2001.

107.”Ion Beam Deposition of Size-selected Supported Metal Clusters” 15th International Vacuum Congress (IVC-15), AVS 48th International Symposium (AVS-48), 11th International Conference on Solid Surfaces (ICSS-11), October 28 - November 2, 2001, San Francisco

108."Model catalysts prepared by nanocluster deposition: Ir_n/TiO_2", Masato Aizawa, Sungsik Lee, and Scott Anderson, Gordon Conf. on Reactions at Surfaces, Ventura, Feb. 16-21, 2003.

109."Model catalysts prepared by nanocluster deposition: Ni_n/TiO_2 and Pd_n/TiO_2", Sungsik Lee, Masato Aizawa, and Scott Anderson, Gordon Conf. on Reactions at Surfaces, Ventura, Feb. 16-21, 2003.

110."Model catalysts prepared by nanocluster deposition: Ir, Ni, and Pd on TiO_2", Sungsik Lee, Masato Aizawa, and Scott Anderson, Gordon Conf. on Gaseous Ions, Ventura, March 2 - 7, 2003.

111."Experimental and direct dynamics study of collision-induced dissociation of formaldehyde cation: Effects of impact energy, geometry and vibrational mode", Jianbo Liu, Brian Van Devener, Kihyung Song, William L. Hase, Scott L. Anderson, Gordon Conf. on Gaseous Ions, Ventura, March 2 - 7, 2003.

112."Vibrationally State-Selected Reaction Dynamics Studies of Formaldahyde Cation", Brady Uselman, Jianbo Liu, and Scott Anderson, Gordon Conf. on Gaseous Ions, Ventura, March 2 - 7, 2003.

113."Metal Nanocluster Deposition Dynamics, Sintering Behavior, and Size Effects", S. Lee, M. Aizawa, C. Fan, and S. Anderson, Gordon Conference on Dynamics at Surfaces, Proctor Academy, August 10-14, 2003

114."Experimental and Direct Dynamics Trajectory Study of Vibrational Mode Effects", J. Liu, B. VanDevener, and S. Anderson, SASP 2004 (XIV Symp on Atomic, Cluster, and Surface Physics), La Thuile, Italy, 1-6 Feb., 2004.

115."Experimental and Direct Dynamics Trajectory Study of Vibrational Mode Effects", J. Liu, B. VanDevener, and S. Anderson, SASP 2004 (XIV Symp on Atomic, Cluster, and Surface Physics), La Thuile, Italy, 1-6 Feb., 2004.

116."Size selected gold cluster catalysts : CO oxidation reaction", Sungsik Lee, Chaoyang Fan, Tianpin Wu, William Kaden, and Scott L. Anderson", 2004 GRC on Catalysis, Colby Sawyer College, June 27-July 2, 2004

117."State-Selected preparation of NO_2 cations and dynamical studies of the charge transfer reaction of $NO_2^+ + NO$", Brady Uselman, Jianbo Liu, Jason Boyle, and Scott Anderson, 2004 GRC on Atomic and Molecular Interactions, Colby Sawyer College, July 11-16, 2004

118."Size-selected Gold-cluster catalysts : CO oxidation reaction", Tianpin Wu, Sungsik Lee, Chaoyang Fan, and Scott Anderson, Rocky Mountain Chapter AVS 2004 Annual Symposium, Golden CO, August 12, 2004

119."Model catalysts prepared by size-selected cluster deposition", Reactions at Surfaces Gordon Conf, Ventura, Feb 13-18, 2005

120."Dynamical control of statistical ion-molecule reactions" Jianbo Liu and Scott L. Anderson, Gordon Research Conference on Gaseous ions: Structure, Energetics and Reactions, Ventura, CA, Feb27-Mar04, 2005

121."Collisional Energy Transfer and Implications for Collision Induced Dissociation (CID) Threshold Measurements", Brady Uselman, Jianbo Liu, and Scott L. Anderson, Gordon Research Conference on Gaseous ions: Structure, Energetics and Reactions, Ventura, CA, Feb27-Mar04, 2005

122."Size-Dependent CO Oxidation on Au_n/TiO_2". Chaoyang Fan, Tianpin Wu, Bill Kaden, Scott Anderson, Gordon Conference on Dynamics at Surfaces, Proctor Academy, Aug. 14 - 18, 2005

123."Studies of Size Selected Model Ir/alumina Catalysts", Bill Kaden, Chaoyang Fan, Tianpin Wu, Scott Anderson, Gordon Conference on Dynamics at Surfaces, Proctor Academy, Aug. 14 - 18, 2005

124."Physical and Chemical Properties of Model Catalysts Prepared by Size-Selected Cluster Deposition", T. Wu, S. Lee, C. Fan, W. Kaden, SL Anderson, AVS 52nd International Symposium, Oct 30-Nov 4, 2005, Boston, MA

125."Dynamical Control of "Statistical" Reactions", Trends in Chemical Dynamics 2006, Taiwan, Dec 10-15, 2006
126. "Size-selected Nano-cluster Catalysts: Water on Au/TiO_2(110)", Reactions at Surfaces Gordon Conf., Ventura, Feb. 11-17, 2007.
127."Water dissociation and isotopic exchange over TiO_2(110) and Au/TiO_2(110)", Tianpin Wu, Bill Kaden, Brian VanDevener, and Scott L. Anderson, Western States Catalysis Club, Provo, Feb 23, 2007 (won 3rd place student award).
128."Cluster size effects on hydrazine decomposition on Irn/Al2O3/NiAl(110)" Chaoyang Fan, Tianpin Wu, William E. Kaden* and Scott L. Anderson, Western States Catalysis Club, Provo, Feb 23, 2007
129."Direct Dynamics, Quasi-Classical Trajectories for Ion-Molecule Reactions" Jianbo Liu, Jason Boyle, Scott L. Anderson, Gaseous Ions Gordon Conference, Ventura, Feb. 25-Mar 2, 2007
130."A Dynamical Study of Vibrationaly State-Selected Nitrogen Dioxide Reacting with Acetylene", Jason M. Boyle, Brady Uselman, Scott L. Anderson, Gaseous Ions Gordon Conference, Ventura, Feb. 25-Mar 2, 2007
131."Energy and mass-selected cluster ion deposition", Bill Kaden, Tianpin Wu, Scott Anderson, XXI Dynamics of Molecular Collisions, Santa Fe, July 8-13, 2007.
132. "Studies of Hydrazine Decomposition over Size Selected Metal Cluster/Metal Oxide Model Catalyst Surfaces", William Kaden, Tianpin Wu, Will Kunkel, Jon Paul Johnson, Clayton C. Williams & Scott L. Anderson, Dynamics at Surfaces Gordon Research Conference (8/12/07 – 8/17/07), Proctor Academy; Andover, NH
133. "Studies of Size Selected Metal Clusters on Surfaces of Interest", William Kaden, Tianpin Wu, Will Kunkel, Jon Paul Johnson, Clayton C. Williams & Scott L. Anderson, Nano Utah '07 (10/26/07), Salt Lake City, UT
134. "Studies of Size Selected Metal Cluster/Metal Oxide Model Catalysts", Bill Kaden, Will Kunkel, Tianpin Wu, Jon Paul Johnson, Clayton C. Williams, Scott L. Anderson, Grand Challenges of Electron Chemistry & Catalysis at Interfaces, (8/10/08 – 8/15/08) Santa Barbara, CA
135. "Mass Selecting Ion Beam-Line for the Creation of Size Selected Metal Particle Covered Surfaces", NanoUtah, Salt Lake City, Oct. 17, 2008.
136. "Studies of Cluster Stability of Ir_n/SiO_2 Model Catalyst During N_2H_4 Decomposition", Gordon Conference on Chemical Reaction at Surfaces, Feb 8-13 2009, Ventura, CA.
137. "An Experimental and Computational Study of Vibrationally State-Selected NO_2^+ with Acetylene", Jason M. Boyle, Jianbo Liu, and Scott L. Anderson, Gordon Research Conf. on Gaseous Ions, Galveston, TX, 3/1-3/6/2009.
138. "Experimental and Numerical Studies on Methane Ignition Catalyzed by in situ Generated Palladium Nanoparticles in a Laminar Flow Reactor," T. Shimizu, A. D. Abid, G. Poskrebyshev, H. Wang, J. Nabity, J. Engel, J. Yu, D. Wickham, B.V. Devener and S.L. Anderson, 6th US National Meeting of Combustion, Ann Arbor, Michigan, May 17-20, 2009, paper 32B1
139. "Correlations between activity, core level binding energies, and adsorbate binding sites for model Pd_n/TiO_2 and Pd_n/alumina catalysts prepared by size-selected cluster deposition", William E. Kaden, Tianpin Wu, William A. Kunkel, Scott L. Anderson, Dynamics of Molecule Collisions, Salt Lake City, UT , July 5- July 10, 2009
140. "Correlations between activity, core level binding energies, and adsorbate binding sites for model Pd_n/TiO_2 and Pd_n/alumina catalysts prepared by size-selected cluster deposition", William E. Kaden, Tianpin Wu, William A. Kunkel, Scott L. Anderson, Gordon Conf. on Dynamics at Surfaces, Proctor Academy, Aug 9-14 2009.
141. "Pd Electronic Structure controls Reactivity of Size Selected Pd_n/TiO_2 Catalyst", NanoUtah, Oct 15-16 2009, Salt Lake City, UT
142. "Size-Dependent Oxygen Activation Efficiency over Pd_n/TiO_2(110) and Catalyst Deactivation for the CO Oxidation Reaction", NanoUtah, Oct 18-19, 2010 Salt Lake City, UT
143. "Fuel Enhancement via Oleic Acid Capped Boron Nanoparticles", NanoUtah, Oct 18-19, 2010 Salt Lake City, UT

144."Size-selected and nanparticle-based model catalysts: Mechanisms and Optimization", Scott L. Anderson, 2010 AFOSR MURI Review meeting, Yale University, Dec 9 – 10, 2010
145. "Catalytic oxidation of methane over ex-situ generated palladium nanoparticles," T. Shimizu, H. Wang, J. P. Perez, S. L. Anderson, Seventh US National Combustion Meeting, Atlanta, Georgia, March 20-23, 2011
146. "Characterization of Pd nanoparticles by small angle and high energy wide angle X-ray scattering", Wang, Juan; Winans, Randall E.; Seifert, Sonke; Lee, Byeongdu; Anderson, Scott L., 241st ACS National Meeting, Anaheim, CA, March 27-31, 2011
147. "Characterization of Catalysts by Small Angle X-ray Scattering and Pair Distribution Function Analysis", Juan Wang, Randall E. Winans, Peter J. Chupas, Scott L. Anderson, 241st ACS National Meeting, Anaheim, CA, March 27-31, 2011
148. "Catalysis and High Energy Density Nanoparticles with Controlled Surface Chemistry for Propulsion Applications" William Kunkel, Paulo Perez, Brandon McMahon, Matt Kane, Sloan Roberts, and Scott Anderson, Air Force Molecular Dynamics meeting, Pasadena, CA May 15-17, 2011
149. "Loading Metal Nanoparticles in Energetic Ionic Liquids", Parker D. McCrary, Preston A. Beasley, Tommy W. Hawkins, Stefan Schneider, Jesus Paulo Perez, Brandon W. McMahon, Scott L. Anderson, Steven Son, and Robin D. Rogers, COIL-4 (Conference on ionic liquids), Arlington, VA, June 15-18, 2011
150. "Diffusion and reaction dynamics on surfaces by size-selected cluster deposition (Selected for oral presentation)", Will Kunkel, Matt Kane, Sloan Roberts, Scott Anderson, Dynamics of Molecular Collisions 2011, Snowbird, UT July 10-15, 2011
151. "Mode- and bond-specific effects in reaction of water cations with small molecule proton acceptors" David Bell and Scott Anderson, Dynamics of Molecular Collisions 2011, Snowbird, UT July 10-15, 2011.
152. "Un-oxidized, air-stable boron and aluminum nanoparticles functionalized for fuel and propulsion applications", Brandon McMahon, J. Paulo Perez, and Scott Anderson, 2011 Clusters, Nanocrystals & Nanostructures Gordon Research Conference, Mt. Holyoke, July 24-29, 2011.
153. "Synthesis of air-stable, unoxidized, boron and aluminum nanoparticles using ball milling techniques", Jesus Paulo L. Perez, Brandon McMahon and Scott L. Anderson, Nanoelectronic Devices for Defense & Security (NANO-DDS) Conference, (New York), Aug. 28-Sept 1, 2011.
154. "Synthesis of air-stable, unoxidized, boron and aluminum nanoparticles using ball milling techniques", Jesus Paulo L. Perez, Brandon McMahon and Scott L. Anderson, NanoUtah 2011, Salt Lake City, Oct. 13-14
155. "Nanoparticles in hypergolic and energetic ionic liquids", McCrary, Parker D.; Beasley, Preston A.; Cojocaru, O. A.; Hawkins, Tommy; Schneider, Stefan; Perez, J. P.; McMahon, Brandon W.; Anderson, Scott L.; Son, Steven F.; Rogers, Robin D. 243rd ACS National Meeting, San Diego, March 25- 29, 2012
156."Dual Ligand Passivation and Homogeneous Media Ball Milling: Novel Approaches for both the Synthesis and Capping of Air-Stable Aluminum Nanoparticles", Brandon W. McMahon, Jesus Paulo L. Perez, Stefan Schneider, Jerry Boatz, Tom Hawkins, Parker D. McCrary, Preston A. Beasley, Robin D. Rogers, and Scott L. Anderson, 243rd ACS National Meeting, San Diego,March 25-29, 2012
157. "Synthesis of Air-Stable, Unoxidized Boron Nanoparticles Using Ball Milling Techniques", J. Paulo Perez, Brandon McMahon, Stefan Schneider, Jerry Boatz, Tom Hawkins, Parker D. McCrary, Preston A. Beasley, Robin D. Rogers, Steve Son, and Scott Anderson, 243rd ACS National Meeting, San Diego, March 25-29, 2012
158. "CO Oxidation over size-selected Pd clusters supported on thin Alumina films", Matthew Kane, Sloan Roberts, and Scott L. Anderson, Gordon Research Conference on Catalysis, Colby Sawyer College, June 24 – 29, 2012
159. "The role of different metal oxide supports in size-selected Pd_n cluster CO oxidation catalysis", Matthew Kane, Sloan Roberts, and Scott L. Anderson, Gordon Research Conference on

Catalysis, Colby Sawyer College, June 24 – 29, 2012

160. "Milling Boron in H2 Atmosphere: A New Approach to Producing Reactive Surfaces and Hydrogen Loading of Boron Nanoparticles" J. Paulo Perez, Brandon McMahon, and Scott L. Anderson, Energetic Ionic Liquids Symposium, AFRL/Edwards AFB, May 21-22, 2013
161. "Preparation and Functionalization of Aluminum Nanoparticles for Energetic Ionic Liquids via a Novel Milling Technique" Brandon McMahon, J. Paulo Perez, and Scott L. Anderson, Energetic Ionic Liquids Symposium, AFRL/Edwards AFB, May 21-22, 2013
162. "Electronic Structure-Activity Correlations in Size-Selected Model Catalysts" Dynamics at Surfaces Gordon Conference, Newport RI Aug 11-16, 2013.
163. "In Depth Ligand-Surface Interaction Studies of Oleic Acid Capped Aluminum Nanoparticles Produced Using High Throughtput Ball Milling", Jiang Yu, Brandon McMahon, Scott L. Anderson, NanoUtah, Salt Lake City, UT Oct. 18, 2013
164. "The Importance of Metal Cluster Size in the Pt_n/Alumina Heterogeneous Catalyst System", F. Sloan Roberts, Matthew D. Kane, William Kaden, Scott L. Anderson, NanoUtah, Salt Lake City, Oct. 18, 2013
165. "Gas phase quantum dots: heat activation, blinking, and absolute charge and mass determination", Collin R. Howder, David M. Bell, Scott L. Anderson, NanoUtah, Salt Lake City, Oct. 18, 2013
166. "Al_2O_3 Film Thickness and Pd_n Cluster Size Effects on the Electronic Structure and Reactivity for the CO Oxidation Reaction", Matthew D. Kane, F. Sloan Roberts, and Scott L. Anderson, NanoUtah, Salt Lake City, Oct. 18, 2013
167. "High resolution mass spectrometry of single nanoparticles", David M. Bell, Collin R. Howder, Scott L. Anderson, NanoUtah, Salt Lake City, Oct. 18, 2013
168. "Kinetics of Catalytic Oxidation of Ethylene over Palladium Oxide", Y. X. Xin, B. Yang, H. Wang, S. L. Anderson, C. K. Law, 35th International Symposium on Combustion, San Francisco, Aug. 3-8, 2014
169. "Synthesis and characterization of surface-functionalized aluminum and boron nanoparticles in hypergolic ionic liquid propellants", Jesus Paulo L. Perez, Brandon W. McMahon, Jiang Yu, Stefan Schneider, Jerry A. Boatz, Tom W. Hawkins, Parker D. McCrary, Luis A. Flores, Robin D. Rogers, and Scott L. Anderson*, Air Force Molecular Dynamics meeting, Arlington, VA May 19-21, 2014.
170." Size-dependent correlations between supported cluster physical and catalytic properties". Pacifichem, Dec. 15-20, 2015, Honolulu, Hi
171. "Aluminum nanocluster surface reactions: a theoretical study", Jerry A. Boatz, Brandon W. McMahon, Jiang Yu, and Scott L. Anderson, Air Force Molecular Dynamics meeting, Albuquerque, NM, May 19-21, 2014.
172. "Improving performance in energetic ionic liquid-based propulsion systems", Steven D. Chambreau, Ghanshyam L. Vaghjiani, Stephen R. Leone and Scott L. Anderson, Air Force Molecular Dynamics meeting, Albuquerque, NM, May 19-21, 2014.
173. "Nano Surface Chemistry for Catalysis and Energetics", E. T. Baxter, Jiang Yu, Yang Dai, T. Gorey, A. Alexandrova, S. L. Anderson, S. D. Chambreau, J. A. Boatz, S. Schneider, G. L. Vaghjiani, R. D. Rogers, Air Force Molecular Dynamics meeting, Albuquerque, NM, May 19-21, 2014.
174. "Effects of Catalytic Site Size on Activity of Model Electrodes Prepared By Mass-Selected Cluster Deposition", Alexander von Weber, Eric Baxter, Henry S. White and Scott Anderson, GRC on Clusters and Nanostructures, Girona, Spain, July 5-10, 2015
175. "Surface Chemistry and Electrochemistry on Size-Selected Clusters", Eric T. Baxter, Yang Dai, Tim Gorey, Alexander von Weber, Henry S. White, Scott Anderson*, Sungsik Lee, Sungwon Lee and Randall Winans, Elisa Jimenez-Izal, Jonny Dadras, Anastassia Alexandrova, GRC on Dynamics at Surfaces, Newport, RI, Aug. 9-14, 2015
176. "In situ real time monitoring of sintering resistant platinum catalysts achieved by atomic layer deposition", S Lee, S Lee, Y Dai, T Gorey, S Anderson, R Winans, 252nd ACS National Meeting, Philadelphia, Aug. 21–25 2016
177. "Borated Pt subnanoclusters on metal oxides: Coke prevention via minimizing dehydrogenation of

alkenes and C-sticking", Mai-anh Ha, Eric T. Baxter, Jonny Dadras, Elisa Jimenez-Izal, Scott L. Anderson, Anastassia N. Alexandrova, 253rd ACS National Meeting in San Francisco, California, April 2-6, 2017.

178. "Effects of site size on activity and product branching for supported, size-selected Pt clusters", Scott L. Anderson, 253rd ACS National Meeting in San Francisco, California, April 2-6, 2017.
179. "Using size to tune electronic properties to control catalysis", Yang Dai,Timothy J. Gorey, Eric T. Baxter, Mai-Anh Ha, Anastassia Alexandrova, Sungwon Lee, Soenke Seifert, Sungsik Lee, Randall E. Winans, and Scott L. Anderson, Accounts of Chemical Research invited poster session, 253rd ACS National Meeting in San Francisco, California, April 2-6, 2017.
180. "Preferential Growth of Al_2O_3 on Size-Selected Platinum Clusters via Atomic Layer Deposition", Dynamics at Surfaces GRC, Salve Regina, July 30 – Aug 4, 2017.
181. "Surface Chemistry on Single Hot Carbon Nanoparticles", 255th ACS National Meeting, New Orleans, March 19, 2018
182. "Chemistry and space propulsion applications of room temperature ionic liquids", S. Chambreau, G. Vaghjiani, S. Anderson, S. Leone, K. Bowen, R. Kaiser, D. Parkinson, Air Force Molecular Dynamics meeting, Albuquerque, May 22-24, 2018.
183. "BH-capped nanocluster surface reactions, a theoretical study", Jerry A. Boatz, Jiang Yu, and Scott Anderson, Air Force Molecular Dynamics meeting, Albuquerque, May 22-24, 2018.
184. "An ALD Approach for Tuning the Structure and Behavior of Platinum-Tin Bimetallic Model Catalysts" Timothy J. Gorey, Eric T. Baxter, Guangjing Li, Borna Zandkarimi, Anastassia Alexandrova, and Scott Anderson, AVS 65th International Symposium, Long Beach, CA, 21-26 Oct. 2018.
185. "Electrocatalytic alcohol oxidation by size-selected Pt clusters", Ashley C. Cass , Harrison F. McKnight , Scott L. Anderson, ACS Fall 2019 meeting, San Diego, August 25 - 29, 2019.
186. "Electrocatalytic Alcohol Oxidation by Size-Selected Pt Clusters", Ashley C. Cass and Scott L. Anderson, Advances in Cluster Beam Deposition, Okinawa Inst. Sci. Tech., Okinawa, Japan, Oct. 21-25, 2019.
187. "Chemistry on Single Silicon and Silica Nanoparticles: Effects of NP Heterogeneity on Chemistry", Daniel J. Rodriguez, Bryan A. Long, Chris Y. Lau, Scott L. Anderson, SACNAS 2019 – The National Diversity in STEM Conference, Honolulu, Hi, 10/31/19 – 11/2/19.
188. "Growth, Destruction, and Emission Spectroscopy of Single Isolated Nanoparticles", Chris Y. Lau, Daniel J. Rodriguez, Abigail M. Friese, Bryan A. Long, Scott L. Anderson, ACS National Meeting, Philadephia, PA, March 22-26, 2020.
189. "Insights into the Sites and Mechanism for the Electrochemical Birch Reduction Reaction", Byron Peters, Kevin Rodriguez, Solomon Reisberg, Sebastian Biel, David Hickey, Yu Kawamata, Sagar Udyavara, Kevin Klunder, Timothy Gorey, Scott Anderson, Shelley Minteer, Phil Baran, and Matthew Neurock, 17th International Congress On Catalysis 2020 Vision, San Diego, CA June 14-19, 2020.
190. "Kinetics of Carbon Nanoparticle Growth by Single Nanoparticle Mass Spectrometry (NPMS): Acetylene Addition to Graphitic and Carbon Black NPs at High Temperatures." Chris Lau, Daniel J. Rodriguez, Abigail Friese, Scott L. Anderson, ACS National Meeting, Spring 2021, April 5-30, 2021 (virtual).
191. "Excellent performance of Pt_4Ge/alumina model catalysts in preventing carbon deposition and sintering in dehydrogenation of alkanes, Guangjing Li, Patricia Poths, Anastassia Alexandrova, Scott L. Anderson, ACS National Meeting, Spring 2021, April 5-30, 2021 (virtual).
192. "High Temperature O_2 Oxidation of Individual Graphite and Silicon Nanoparticles", Daniel J. Rodriguez, Chris Lau, Abigail Friese, and Scott L Anderson, ACS National Meeting, Spring 2021, April 5-30, 2021 (virtual).
193. "Suppressing Sintering and Poisoning of Sub-Nano Pt Catalysts by Ge Doping: Pt_4Ge on Alumina", Guangjing Li* and Scott L Anderson, 81st Physical Electronics Conference (virtual), Aug. 3, 2022.

194. "Hydrogen evolution reaction by sub-nano Pt clusters: size-dependent electrocatalytic activity and mechanistic insights", Tsugunosuke Masubuchi, Simran Kumari, Zisheng Zhang, Philippe Sautet, Anastassia Alexandrova, Henry S. White, Scott L. Anderson, 16th annual meeting Japan Soc. for Molec. Sci. Sept. 19-22, 2022, Yokohama, Japan.
195. "High temperature etching and growth kinetics for individual carbon and silicon nanoparticles", Chris Lau, Abigail Friese, Daniel Rodriguez, Scott Anderson, Atomically Precise Nanostructures Gordon Research Conference, Ventura, CA, Oct. 16-21, 2022
196. "Single Nanoparticle Surface Chemistry: Structure-Reactivity Relationships, Evolution During Reactions, and an Approach to Ultra-High Temperature Surface Chemistry" Chis Y. Lau, Abigail Friese, Daniel J. Rodriguez, and Scott L. Anderson, 68th symposium of the AVS, Nov. 6-11, 2022, Pittsburgh, PA
197. "Electrocatalytic Activity of sub-nano Pt clusters toward the hydrogen evolution reaction", Tsugunosuke Masubuchi, Simran Kumari, Zisheng Zhang, Philippe Sautet, Anastassia Alexandrova, Henry S. White, Scott L. Anderson, 68th symposium of the AVS, Nov. 6-11, 2022, Pittsburgh, PA.
198. "A single nanoparticle approach to high temperature surface chemistry: Oxidative etching and sublimation", Abigail M. Friese, Audrey R. Burrows, Chris Lau, and Scott L. Anderson, Gordon Research Conf. on Dynamics at Surfaces, Salve Regina College, July 16-21, 2023
199. "Oxidation and passivation kinetics of nanomaterials at high and ultra-high temperatures: a single nanoparticle approach", Abigail M. Friese, Daniel J. Rodriguez, and Scott L. Anderson, ACS Fall 2023, San Francisco, Aug. 13-17, 2023
200. "Ultra-high temperature sublimation and oxidation of HfC: A single nanoparticle mass spectrometry approach.", Abigail M. Friese, Audrey R. Burrows, Chris Lau, and Scott L. Anderson, ACS Fall 2023, San Francisco, Aug. 13-17, 2023
201. "Sub-nano platinum clusters supported on highly oriented pyrolytic graphite: a model system for studying cluster-support effects on electrocatalytic reactions", Tsugunosuke Masubuchi , Zihan Wang , Scott L. Anderson, ACS Fall 2023, San Francisco, Aug. 13-17, 2023
202. "Size-selected Pt clusters for electrochemical reactions", Michael P. O'Brien, Zihan Wang, Tsugunosuke Masubuchi, Scott L. Anderson, ACS Fall 2023, San Francisco, Aug. 13-17, 2023
203. "Size-Selected Ptn Cluster Electrocatalysts for Alcohol Oxidation", Zihan Wang, Tsugunosuke Masubuchi, Michael O'Brien, and Scott L. Anderson, AVS 69, Portland, Nov. 5-10 2023.
204. "Size-Selected Pt Alloy Cluster Catalysts for the Dehydrogenation of Light Alkanes", AVS 69, Portland, Nov. 5-10 2023

RESEARCH GRANTS - AWARDED

1. Camille and Henry Dreyfus Foundation Award to Newly Appointed Young Faculty in Chemistry. "Experimental Studies of Ion-Molecule Reaction Dynamics", 9/1/83-8/31/84, $25,000.
2. Research Corporation Cottrell Grant. "Study of Vibrationally State-Selected Ion-Molecule Reactions", 12/1/83 - 12/31/85, $15,000.
3. Petroleum Research Fund - American Chemical Society (PRF15430G6). "Vibrationally State Selected Ion-Molecule Reactions", 5/1/84 - 8/31/86, $15,000.
4. Office of Naval Research (N00014-85-K-0678). "Cluster Beam Studies of Boron Combustion Chemistry", 7/1/85 - 6/30/88, $503,572, 431-6521A
5. National Science Foundation (CHE-8600952). "State Selection Studies of Polyatomic Ion-Molecule Reaction Dynamics", 8/1/86 - 7/31/89, $257,898, 431-2750A
6. DOD-URIP (ONR). "High Transmission Spectrograph for Metal Combustion Studies", 8/1/86 - 7/31/88, $161,950.
7. Office of Naval Research. "Cluster Beam Studies of Metal Combustion Chemistry", 7/1/88 - 6/30/91, $514,159, contract modification to 431-6521A
8. Alfred P. Sloan Foundation Fellowship, 9/1/88 - 8/31/90, $25,000, 431-3096A.
9. National Science Foundation (CHE-8903765). "Vibrational Mode Effects on Polyatomic Ion-Molecule Reactions", 6/1/89 - 5/31/92. $271,000, 431-2750B.
10. Camille and Henry Dreyfus Foundation Teacher-Scholar Award, 12/89. $50,000, 431-3588A.

11. National Science Foundation (USE-9150974). "An Undergraduate instrumentation Center for Chemistry Laboratory", 6/1/91 - 5/31/93. $70,136 (co-principal investigator).
12. Office of Naval Research. "Primary Chemistry of High Energy Fuels Combustion", 10/1/91-9/30/92 $56,000 431-4416A
13. Office of Naval Research "Cluster Beam Studies of Boron/Boron Oxide Combustion Chemistry", 6/1/92-5/31/94 $102,324 431-4416A (contract modification)
14. National Science Foundation "Reactant state-selection and product energy disposal in polyatomic ion-molecule reactions", 6/1/92-5/31/95, $332,000 431-2750C.
15. Dept. of Energy "Chemistry Induced by the Selective Excitation of Core Electrons in Biomolecules", $471,644 (co-PI with D. Hanson) 431-4724A
16. Condensed phase photochemistry of strained hydrocarbon fuel materials. Office of Naval Research. 5/10/93 - 5/9/95, $199,877, 431-4777A.
17. Plasma-based ultrafine particle synthesis. co-PI with C. Berndt, H. Herman, and A. King. NSF. 3/15/94 - 2/28/97, $290,000, 431-0009A
18. "Flow reactor/mass spectrometer for fuels evaluation", ONR $103,280 431-4777a, 5/10/95-5/9/96
19. “Elementary heterogeneous chemistry for boron and aluminum combustion”, ONR $211,397, 4/1/95-3/31/98, 5-28294
20. “Reactant state effects and product energy disposal in polyatomic ion chemistry”, NSF, $321,620, 7/15/95-7/14-98
21. “Interface Formation and Solid-Solid Reactions Induced by Cluster Ion Deposition”, AFOSR, $389,094, 4/1/96-3/31/99
22. "Preparation and Characterization of Mono-disperse Supported Catalysts" Funding Incentive Seed Grant, $39,980 9/1/97-8/31/98
23. "Stability and Reactivity of Strained Fuels by Flow Tube Mass Spectrometry", ONR, $224,123, 7/1/97 - 6/30/00, accnt# 5-28204
24. "Mode-selective differential scattering as a probe of polyatomic ion reaction dynamics", NSF, $355,039, 8/1/98 - 7/31/01, project 58500242
25. "Hybrid Milling Machine", Research Instrumentation Award, $38,000, 6/15/98 - 6/14/99, accnt# 2-11738
26. "High repetition rate laser vaporization source for cluster ion beam deposition" AFOSR (DURIP equipment) $99,495 + $5k match, project number 55900168
27. "Supplement/modification to "Interface formation and solid-solid reactions induced by cluster ion deposition" AFOSR $48,386 4/1/99 - 9/30/99, project 55900023.
28. "Expansion to "Stability and Reactivity of Strained Fuels by Flow Tube Mass Spectrometry", ONR, 55900076, $74,987, 10/1/99-6/30/00
29. “Cluster ion beam deposition for catalysis studies”, DOE, 55800129, 9/1/99-8/31/02, $362,476
30. "Cluster Ion Beam Studies of Fundamental Dynamics Related to Physical Deposition", AFOSR, 55900193, 2/1/99 - 11/30/02 $381,466
31. “Breakdown Behavior of Fuels for Pulsed Detonation Engines” ONR, 55900219, 3/1/01-2/28/04, $237,825
32. “Mode-selective differential scattering studies of ion-molecule reaction dynamics”, NSF, 8/1/01 - 7/31/04, $433,403
33. "Cluster Deposition Studies of the Effects of Cluster Size and Support Defects on Model Catalysts", DOE, 55800129, $360,000 added to existing account, 9/1/02 - 8/31/05
34. "Size-Selective Cluster Deposition, Applied to Monopropellant Catalyst Issues", AFOSR, $374,375, 55900261, 2/03 - 12/31/05
35. "IRAS supplemental equip request for Cluster Deposition Studies of the Effects of Cluster Size and Support Defects on Model Catalysts" DOE, $76,310
36. "Two-Year Extension for Special Creativity (Mode-selective differential scattering studies of ion-molecule reaction dynamics)", NSF, 8/1/04 - 7/31/06, $335,059
37. "Acquisition of a Regional-use Surface Analysis System", one of four co-PIs, NSF Chemical Instrumentation, 12/13/04 - 12/31/07, $739,800.

38. "Model Catalysts by Size-Selected Cluster Deposition", DOE, 11/1/05 - 10/31/09, $413,500 (55800129)
39. "Size-Selected Cluster Deposition and Single-Electron Tunneling, Applied to Catalyst Issues", PI, with C. Williams co-PI, AFOSR, 12-1-2005 - 11/30/2008, $401,519 (55900319)
40. "Soluble Catalysts to Improve Jet Fuel Combustion and Fuel Heat Sink Capacity", AFOSR (STTR Phase I with TDA Inc. Total budget $100,000/9 mo.and the Utah subcontract is $37,266 (9/15/06-6/15/07) (54901042)
41. "Enhanced Tactical Fuel Design: Boron/Catalyst Core/Shell Nano-Particle Evaluation", ONR, 3/07, 36 months, $190,208 (55900339)
42. "Experimental and theoretical study of mode-specific vibrational dynamics in polyatomic ion chemistry", NSF, 36 months $528,375 (58501262) 5 % Cal Year Effort
43. "Soluble Catalysts to Improve Jet Fuel Combustion and Fuel Heat Sink Capacity", AFOSR (STTR Phase II with TDA Inc. Utah subcontract is $274,618 for 24 months). (9/1/07-8/31/09) (54901123) (6 month extension to 3/31/10) 4% Cal Year Effort
44. "Enhanced Tactical Fuel Design: Boron/Catalyst Core/Shell Nano-Particle Evaluation" ONR, three years, $274,983 (2/1/08 – 1/31/1) (55900360) 3% Cal Year Effort
45. "Nanocatalysts in Propulsion: Mechanisms and Optimization" AFOSR MURI (Anderson PI, 5 co-PIs) $5.5M (8/1/08 – 7/31/13) 55900371 8% Cal Year Effort 55900371
46. "A Pressure-Dependent Detailed Chemical Kinetic Model for JP-10 Combustion" ONR NAVAIR STTR Phase I (Prime contractor: Reaction Engineering Inc., Anderson role as consultant planning phase II effort).
47. "Single trapped nanoparticles as a tool for surface chemistry under extreme conditions", U of U Research Foundation SEED, $22,400 (51003347)
48. "Method for preparing air-stable, unoxidized boron particles with functional coatings", Next Stage Micro Grant from UofU Technology Commercialization Office. $5k, 11/09 - 5/10
49. "Model Catalysis by Size-Selected Cluster Deposition", DOE, (Nov. 1 2009 – Feb. 28 2014, 52 months) $624,000 . 6% Cal Year Effort. 55800129
50. "Scale-up and medium scale tests of functionalized boron nanoparticles for pyrotechnic and other applications", Technology Commercialization Project, UofU Research foundation, $69,333, two years.
51. " Supplement to "**Nanocatalysts in Propulsion: Mechanisms and Optimization"** for Boron Nano Particle Studies", AFOSR 18 months, $126,501 (55900371)
52. "A Pressure-Dependent Detailed Chemical Kinetic Model for JP-10 Combustion", ONR STTR Phase II (REI inc prime contractor, Utah budget: $162,000, 2/15/11 - 8/15/12). 54901479
53. "IPA from Argonne to support Juan Wang", Argonne National Lab, $105,560, 1/1/11 – 12/31/12, 55800574
54. "Single Nanoparticle Trapping Studies of Size Dependent Chemistry and Optical Properties", NSF, $250,000, 8/1/2011 – 7/31/2014 58501620
55. " U of Utah Subcontract: CCI Phase I: Center For Energetic Nonequilibrium Chemistry At Interfaces (CENECI), $7500, 10/2011 – 9/2012. 54502277
56. "Catalyst and Fuel Interactions to Optimize Endothermic Cooling", AFOSR Basic Research Initiative, Scott Anderson PI with 7 co-PIs. $4.05M (10/1/2012 – 11/30/2015) Utah share $1.195M 55900462
57. "Nanoparticle Mass Spectrometry of Giant Quantum Dots" CINT user proposal. Provides materials for NPMS experiments.
58. "Gas phase photophysics of DNA-templated Au and Ag nanoparticles", CINT user proposal (will provide materials for NPMS).
59. "Renewal of "Nanoparticle Mass Spectrometry of Giant Quantum Dots" , CINT user proposal (will provide materials for NPMS).
60. "Metalloid Cluster Building Blocks and their Inclusion into Composite Networks", ONR MURI. Kit Bowen PI, Anderson co-PI. Utah budget $1,049,862, Anderson time commitment = 1.0 month/year 54503193 (7/6/16-7/5/2020). N00014-15-1-2681

61. "Purchase of a Portable Near-Infrared Array Spectrometer for Shared Use", Albaugh Scientific Equipment Endowment, Anderson PI, Gerton co-PI, $28,980.
62. "Nanochemical Strategies for Propulsion Enhancement", AFOSR, Anderson PI with 3 co-PIs, $1,200,000 (March 15, 2016 – Mar. 14 2019). Anderson time commitment = 1.0 month/year, 55900553
63. "TEM Sample Holder for Dynamic, In-Situ Electrochemical and Liquid Experiments", UofU Research Instrumentation Fund, $150,500, Anderson PI
64. "Heated, Variable Pressure Gas Cell for Operando TEM Nano-Imaging for Propulsion Enhancement", AFOSR DURIP, $229,351 (Sept. 30, 2016 – Sept. 29, 2017)
65. "Solar Fuels Collaboration" Flinders University, Gunther Andersson PI, (8/1/2016 – 10/31/2019) $31,500k to Utah (54503510)
66. "CCI Phase I: Center for Synthetic Organic Electrochemistry (CSOE).", NSF, $1.8M (9/1/2017 – 8/30/2020), Shelley Minteer PI, with 4 co-PIs. Anderson share = ~$360k (58502440)
67. "Gas-Phase Nanoparticle Dynamics and Kinetics by Single Nanoparticle Mass Spectrometry", DOE DE-SC0018049, 55800863, $424,221, 9/1/2017 – 8/30/2020.
68. "Understanding and Controlling Metal-Hydrocarbon Fuel Interactions for Hypersonics. AFOSR FA9550-19-1-0261, Scott Anderson PI, Anastassia Alexandrova and Hai Wang co-PIs, $1M (55900694), (5/1/2019 – 4/30/2022)
69. "Size-selected sub-nano electrocatalysis". DOE, DE-SC0020125, Scott Anderson PI, Anastassia Alexandrova and Phillipe Sautet co-Is, $830,332 (9/1/2019 – 8/31/2022).
70. "CCI Phase II: Center for Synthetic Organic Electrochemistry (CSOE)", NSF, Minteer PI, Anderson one of 13 co-PIs, $19,997,545 9/1/2020 – 8/31/2025.
71. "Microreactor for Sub-Nano Cluster Catalysis of Fuel Endothermic Chemistry", AFOSR/DURIP, FA9550-20-1-0170 (55900719) $124,823 (7/15/2020 – 7/14/2021)
72. "Single Nanoparticle Chemistry and Spectroscopy: Heterogeneity Effects and Structure-Reactivity Correlations", DOE, $451,935, (9/1/2019 – 8/31/2023). DE-SC0018049 0.5 months
73. "Developing and Validating Sub-Nano Catalysts for Endothermic Cooling" AFOSR (Alexandrova (UCLA) PI, Anderson co-PI) $899,994/3 years FA9550-22-1-0381 0.5 month
74. "Supplement to Size-selected sub-nano electrocatalysis" DOE (Anderson PI, with Alexandrova and Sautet co-PIs) $267,266, Utah portion $153,302/1 year.
75. "Size-selected sub-nano electrocatalysis", DOE (Anderson PI, 2 co-PIs) 55800938, DE-SC0020125, three years, $899,999 (9/1/23 – 7/31/26) 0.5 months
76. "Single Nanoparticle Chemistry and Spectroscopy: Heterogeneity Effects and Structure-Reactivity Correlations", DOE DE-SC0018049, UofU 55800863 $150,000, (9/1/2023 – 6/30/2025). 0.5 months

Research Grants - Pending:

THESES COMPLETED IN ANDERSON GROUP

1. "Experimental and Theoretical Studies of Boron and Aluminum Cluster Ions", Luke Hanley, Stony Brook Ph.D. May 1988
2. "Multiphoton Ionization Vibrational State Selective Studies of Acetylene Cation Reaction Dynamics", Thomas M. Orlando, Stony Brook Ph.D. August 1988
3. "Chemistry and Reaction Mechanisms of Aluminum and Boron Cluster Ions", Stephen A. Ruatta, Stony Brook Ph.D. August 1990.
4. "Multiphoton Ionization State Selection Studies of Polyatomic Ion-Molecule Reactions", Baorui Yang, Stony Brook Ph.D. August 1990
5. "Studies of Ion-C_{60} Collisions with a Triple Sector Guided Ion Beam Instrument" James Francis Christian, Stony Brook Ph.D. August 1992.
6. "Size Dependent Chemistry of Boron and Carbon Cluster Ions", Paul Andrew Hintz, Stony Brook Ph.D. December 1992.
7. "Ion-Molecule Reaction Dynamics and Application to Collisions of Alkali Ions with Fullerenes",

Zhimin Wan, Stony Brook Ph.D. December, 1992.
8. “Structure and Electronic Effects on the Reactivity of Small Carbon and Boron Cluster Ions”, Marianne Barbara Sowa-Resat, Stony Brook Ph.D. December, 1994
9. “Data Analysis and VUV generation for Ion-Molecule Reactions” Jui-tsen Huang, Stony Brook MS December 1994
10. “Effects of B:O:H Stoichiometry on the Reactivity of Boron Oxide Cluster Ions”, Jason Neil Smolanoff, Stony Brook MS May 1995
11. "Reactant State-Selection and Product Energy Disposal in Polyatomic Ion-Molecule Reactions", Yu-hui Chiu, Stony Brook Ph. D. May 1996
12. "Reaction Dynamics of Multiphoton Ionization State-Selected Polyatomic Ion Molecule Reactions", Hunghsin Fu, Stony Brook Ph.D. August 1997
13. "Ion Beam Studies of Atomic and Molecular Collisions with C_{60}: Fragmentation, Charge Transfer, and Chemistry at Surface and Endohedral Sites", Yousef Jamil Basir, Utah Ph.D. December 1997.
14. "Studies on Strained Molecules by Flow Tube Reactor Guided Ion Beam Mass Spectrometry:, Zhi Li, Ph.D. May 1999
15. “Cluster Ion Reactions Studied by Ion Beam Techniques”, Adam Łapicki, Ph.D. Aug. 2000
16. “Ion-Molecule Reaction Dynamics Studied by MATI and REMPI Techniques”, Ho-Tae Kim, Ph. D. Feb., 2001
17. "Model Catalysts Prepared by Size-Selected Metal Nanocluster Deposition", Masato Aizawa, Ph.D. May 2003
18. "Thermal Decomposition of JP-10 by Flow Tube Reactor Guided-Ion Beam Mass Spectrometry" Shamit Nakra, MS (Chem. and Fuels Eng.) May 2004.
19. "Studies of Size-Selected Gold and Iridium Cluster Catalysts", Sungsik Lee, Ph.D. Dec. 2004.
20. "Spectroscopic Studies of NO_2 and Water via Resonance-Enhanced Multi-Photon Ionization and Photo-electron Spectroscopy, and Dynamical Studies with Vibrationally State Selected NO_2 Cations", Brady W. Uselman, Ph.D. May 2007.
21. “Studies of size-selected iridium, gold, and palladium clusters supported on metal oxide surfaces”, Tianpin Wu, Ph.D. Dec. 2009
22. “Nanoparticulate fuel additives and combustion catalysts”, Brian Van Devener, Ph.D. Dec. 2009
23. “Studies of size-selected palladium and iridium model catalysts”, William E. Kaden, Ph.D. May, 2010
24. “State-Selected Ion-Molecule Studies of $[NO_2 + C_2H_2]^+$ and $H_2O^+ + NO_2$”, Jason M. Boyle, Ph. D. May 2011
25. “Preparation and Characterization of Surface-Functionalized Boron Nanoparticles for Fuel and Propellant Applications”, Jesus Paulo L. Perez, Ph.D. Dec. 2013
26. “Fundamental studies of palladium and platinum size-selected model catalysts”, F. Sloan Roberts, Ph.D. May, 2014
27. “Cluster Size Effects in Platinum Electrocatalysis”, Alexander von Weber (Masters, Physics, University of Konstanz), December 2014
28. “New Methods and Developments in Nanoparticle Mass Spectrometry and Mode and Bond Specific Reactions of HOD^+”, David M. Bell, Ph.D., December 2014.
29. “Novel Mechanochemical Approaches for the Synthesis of Surface-Functionalized Metal Nanoparticles”, Brandon W. McMahon, Ph. D., December, 2014.
30. “Investigating the Effects of Pdn Cluster Size and the Alumina Support Thickness on the Electronic Structure, Geometry, and Catalytic Activity, Probed Via the CO Oxidation Reaction”, Matthew D. Kane, Ph. D., December, 2014
31. “The Photophysics And Surface Chemistry Of Trapped Nanoparticle Ions As Studied By Ion Trap Nanoparticle Mass Spectrometry”, Collin R. Howder, Ph.D., December 2015
32. “Electronic Characterization of Size-Selected Platinum Clusters and Modification through Atomic Layer Deposition”, Yang Dai, Ph.D. May 2017
33. “Fundamental Studies of Catalytic Dehydrogenation on Alumina-Supported Size-Selected Platinum Cluster Model Catalysts”, Eric Baxter, Ph.D. May 2018

34. "Tuning Electronic Structure and Catalytic Stability for Size-selected Cluster Catalysts with Atomic Layer Deposition", Timothy J. Gorey, Ph.D. April 2020
35. "Nanoparticle Mass Spectrometry: Temperature Measurement and Kinetics for Carbon Sublimation and Oxidation", Bryan A. Long, Ph.D. May 2020
36. "Mechanosynthesis and Characterization of Aluminum and Iron Nanoparticles", Jiang Yu, Ph.D. Aug. 2021.
37. "The O_2 Oxidation Kinetics Of Individual Carbon And Silicon Nanoparticles At High Temperatures", Daniel J. Rodriguez, Ph.D. May 2022

PEOPLE IN THE ANDERSON GROUP

Graduate Students	**Degree**	**Date**	**Current**
Luke Hanley	Ph. D.	May, 1988	Univ. Ill. Chicago
Thomas M. Orlando	Ph. D.	August 1988	Georgia Tech
Baorui Yang	Ph. D.	August 1990	Micron Technologies
Steven A. Ruatta	Ph. D.	August 1990	3D systems
James M. Christian	Ph. D.	August 1992	Radiation Monitoring Devices .
Zhimin Wan	Ph. D.	December 1992	Eaton Corp.
Paul A. Hintz	Ph. D.	December 1992	LaSalle Univ.
Yu-hui Chiu	Ph. D.	May 1996	Busek, Inc.
Hunghsin Fu	Ph. D.	August 1997	Chung Yuan Christian Univ.
Marianne Sowa	Ph. D.	December 1994	NASA Ames Research Center
Jui-tsen Huang	MS	December 1994	UMC, Taiwan
Sarah Sambasivan,	Ph. D.	May 1997	Brookhaven
Yousef Basir	Ph. D.	September 1997	MDS Pharma Services
Jason Smolanoff	MS	May 1995	Pres. CISO Investigations
Adam Lapicki	Ph. D.	August 2000	Tokyo Inst. Tech
Zhi Li	Ph.D.	May 99	
Ajith Wijayawardhan	MS	June 1997	
Marcus Menzel	2 quarter rotation for Diplomarbeit 1997		
Masato Aizawa	Ph.D.	May 2003	Director, Panasonic R and D
Hotae Kim	Ph.D.	Feb. 2001	Kumoh Nat. Inst. Tech.
Marian Popescu	M.S.	May 2001	USMC
Shamit Nakra	M.S. (ChemE)	May 2004	UofU ChemE PhD program
Sungsik Lee	Ph.D.	December 2004	Argonne/APS
Jae-wook Choi	visiting student from Seoul Nat. Univ. 2001-2002		
Brady Uselman	Ph.D.	May 2007	
Tianpin Wu	Ph.D.	Aug 2009	Argonne/APS
Brian van Devener	Ph.D.	Aug 2009	Research Scientist, HzO
William E. Kaden	Ph.D.	Aug 2010	U. Central Flordia (AP)
Jason Boyle	Ph.D.	Dec. 2010	NSWC / Dublin School
Darby K. Lewis	M.S.	Dec 2011	iDope
Mark Wirth	M.S.	Aug 2012	Physics grad school
Jesus Paulo Perez	Ph.D.	Dec 2013	UofU COE
Sloan Roberts	Ph.D.	May 2014	SLAC
Alexander von Weber	M.S. (U. Konstanz)	Sept 2014	TU Muenchen
William Kunkel	D.N.F		
David Bell	Ph.D.	Dec 2014	PNNL
Brandon McMahon	Ph.D.	Dec 2014	Mylan Laboratories
Matthew Kane	Ph.D.	Dec 2014	Mylan Laboratories
Collin Howder	Ph.D.	Dec 2015	Micron Technologies
Yang Dai	Ph.D.	May 2017	(postdoc MIT)

Jiang Yu	Ph.D.	Aug. 2021	LAM research (Shanghai)
Eric T. Baxter	Ph.D.	Aug. 2018	PNNL
Tim Gorey	Ph.D.	May 2020	LANL
Bryan Long	Ph.D.	Aug. 2020	AFRL/Kirtland
Daniel Rodriquez	Ph.D.	May 2022	LANL
Ashley C. Cass			
Tonya Jensen			
Chris Lau			
Guangjing Li			
Marc Malek			
Abigail Friese			
Ilsa Young	M.S.	May 2021	
Autumn Fuchs			
Zihan Wang			

Visiting Scientists/Postdocs	**Home/Previous Institution**	**Dates**
Zhong-kao Jin	Physics Dept. Fudan University	9/86 - 12/87
Su-yu Chiang	SRRC Taipei	8/93 - 7/94
Jorg Glathaar	Univ. Giessen (Maier)	1/94 - 2/95
Jurgen Eckwert	Univ Giessen (Maier)	10/94 - 9/95
Dilrukshi Peiris	Univ. Florida (Eyler)	1/95 - 7/96
Jun Qian	Rochester (Farrar)	8/95 - 7/98
Kevin Boyd	Houston (Rabalais)	9/96 -6/99
Masato Aizawa	Kyushu (visiting MS)	8/96 - 3/97
Hanae Haouari	City College (Lindsay/Lombardi)	2/97-2-98
Richard Green	Stanford (Zare)	5/97 - 6/00
Marianne Sowa-Resat	Bogazici University (visiting prof)	Summer 99
Travis Taylor	UC Berkeley (Neumark)	1/00 - 7/00
Jianbo Liu	ALS Berkeley (Ng)	2/00-8/06
Jihwa Lee	Chem. Eng., Seoul Nat. Univ. (Visiting Prof)	9/01 - 8/02
Lu Jun	USTC visiting	1/03 - 12/03
Chaoyang Fan	Fritz-Haber-Institut der MPG (Jacobi)	5/03 - 7/05
Dae-Jung Kim	Seoul Nat. University	4/08 – 7/12
Juan Wang	Eric Cool, Cornell	1/09 – 1/13
Sebastian Proch	Uni. Konstanz (DFG Fellow)	1/11 – 12/11
Tim Esser	Leipzig University (grad student)	Oct. 2015
Sam Pater	Flinders University (grad student)	July-Aug 2016
Yanli Wang	China Scholarship Council visitor	July 2018-July 2019
Liam Howard-Fabretto	Flinders University (grad student)	March-April 2019
Gunther Andersson	Flinders University	April 2019
Tsugunosuke Masubuchi	Keio University	May 2020 –

Undergraduates	**Major**	**Dates**
May Calingo	Chem	1984-1985
Leigh Smith	Chem	1985-1986
Wilson Moya	Chem	1985-1986
Joel Lynnaugh	Chem	1986-1987
Mohammad H. Eslami	Chem/Biochem.	1984-1987
Susan Gabusi	Chem	1985-1987
Harry Guttman	Chem	1986-1987
Peter Liao	EE	1987-1988
John Rodriguez	EE	1987-1989

George Tsepetis	Chem	1989-1990
Ilyse Goldman	Chem	1990-1992
Nichole Kline	Chem (REU W. Kentucky University)	Summer 1993
Kevin Steppe	Chem (REU Grinnell)	Summer 1996
Thomas M. Cantrell	Chem Eng	Fall 1997
Chad Adams	Chem (exchange U. Alabama, Tuscaloosa)	Fall 1997
Brent Mantooth	Chem/CompSci (REU Mercer U, Macon GA)	Summer 1998
Ben Varco-Merth	Chem (REU Whitman College, WA)	Summer 2001
Brian van Devener	Chem	5/01 -7/02
Jason Boyle	Chem (REU E. Mich)	Summer 2003
David Bell	Chem (REU U. Wisc)	Summer 2007
Christian Morris	Chem	Spring 2008
Darby Lewis	Chem	Fall 2008 -Aug 2009
Ethan H. Volpa	Chem Phys	May 2009- Aug 2010
Ashley Beckstead	Chem	Jan 2010 – Dec. 2011
Eric T. Baxter	Chem	Fall 2010 – Spring 2011
Clayton Edgerton	Chem	Summer 2011 –Spring 2012
Michael Rosenfelder	Phys (U. Konstanz – Bachelor's thesis)	April – Oct 2013
Daniel Johnston	Chem/MatSci	Jan 2014 – May 2014
Zhiyuan Feng	Chem	Jan 2014 – May 2014
Zackery Gray	Chem	May 2014 – Aug 2014
Cody Barnhill	Chem E	Oct. 2014 – May 2015
Alexandra Shamir	Chem	Jan 2015 – May 2015
Eliot Lakner	Chem (REU, U. Ala)	Summer 2016
Abigail Friese	Chem	Spring 2016 – 2018
Aaron Goh	Phys	Spring 2017
Kiara Camareno	Chem E (REU U Puerto Rico)	Summer 2017
Baily Filoso	Chem	Spring 2018
Clifford Levitt	Chem (U Mich, Flint)	Summer 2018
Cole Scholtz	Chem (REU U Central Missouri)	Summer 2018
Brinton Wise	Chem/Biochem	Fall 2018 – Spring 2019
Zack Whipple	Chem	Fall 2018 – Spring 2019
Harrison McKnight	Chem	Spring -Summer 2019
Madeline Schultz	Chem (REU CalPoly)	Summer 2019
Bradley Allen	Chem	Spring 2019
Susanna An Tang	Chem	Spring 2019
Vian Rosal	Chem	Fall 2022 – Spring 2023
Audrey Burrows	CoS (SRI program)	Spring 2023-
Michael O'Brian	CoS (SRI program)	Spring 2023-
Anne (Yiqing) Meng	CoE	Fall 2023-

High School Students

Bao Nguyen	AMES	Summer 2007
Emma Van Burns	Roland Hall	Summer 2009
Ryan Johnson	Jordan High School	Fall 2013 - Spring 2014
Kevin Furukawa	Juan Diego Catholic HS	Summer 2014
Rex Alley	Juan Diego Catholic HS	Summer 2015
Jonathan Waung	Juan Diego Catholic HS	Summer 2016
José Galang	Juan Diego Catholic HS	Summer 2017
Ryan Williamson	Juan Diego Catholic HS	Summer 2018
Matthew Perkins	Juan Diego Catholic HS	Summer 2019

Teaching Activities (exclusive of research courses)

Year	Spring Semester	Fall Semester
1983		CHE 143 Honors Lab
1984	CHE 304 Instrument Lab CHE 693 Phys. Chem. Seminar	CHE 521 Quantum Chemistry CHE 693 Phys. Chem. Seminar
1985	CHE 304 CHE 693 Phys. Chem. Seminar	CHE 521 CHE 693 Phys. Chem. Seminar
1986	CHE 304 CHE 693 Phys. Chem. Seminar	CHE 521 CHE 693 Phys. Chem. Seminar
1987	CHE 304 CHE 693 Phys. Chem. Seminar	CHE 133 General Chem. Lab CHE 693 Phys. Chem. Seminar
1988	CHE 357 (development) CHE 693 Phys. Chem. Seminar	CHE 357 Spectrosc. Lab CHE 693 Phys. Chem. Seminar
1989	CHE 693 Phys. Chem. Seminar CHE 527 Chemical and Nuclear Reaction Dynamics.	sabbatical leave
1990	sabbatical leave	CHE 143 Honors Lab
1991	CHE 532 seminar	CHE 143 Honors Lab
1992	CHE 532 seminar CHE 527 Dynamics	CHE 143 Honors Lab
1993	CHE 133 General Lab CHE 532 Seminar	CHE 527 Dynamics
1994	CHE 532 Seminar	CHE 305 P-Chem III

UTAH	Spring Quarter	Fall Quarter	Winter Quarter
1995	CHE 123 (General Chem)	CHE 123 (General Chem)	
1996	CHE 608 (Dynamics)	CHE 223 (General Chem) CHE 316 (Physical Chem)	
1997		CHE 316 (Physical Chem)	
1998	Spr Q. CHE 608	FallA CHE 6000	FallB 6010

1999	Spr A	Spr B CHE 6080	Fall A CHE 6000	Fall B CHE 6000
2000	Spr A	Spr B CHE 6080		Fall B CHE 6010
2001	Spr A CHE 1220	Spr B CHE 1220	Fall A CHE 7000	
2002	sabbatical	Spr B CHE 7080	sabbatical	Sabbatical
2003		Spr B CHE 7080	CHE 3060	CHE 3060
2004		Spr B CHE 7780	CHE 3060	CHE 3060
2005		Spr B CHE 7080	CHE 7000	CHE 7010
2006		CHE 7780	CHE 3060	CHE 3060
2007	CHE 7780	CHE 7080		CHE 7010
2008	CHE 7780			CHE 7010
2009	CHE 7780	CHE 7080	SVPAA - USTAR	
2010	CHE 7780		Sabbatical	Sabbatical
2011	CHE 7780	Sabbatical	CHE 7000	CHE 7010
2012	CHE 7780		CHE 7000	CHE 7010
2013	CHE 7780		CHE 7000	CHE 7010

2014	CHE 7780			CHE 7010
2015	CHE 7780	Chem 7080	Chem 7000	CHE 7010
2016	CHE 7780		Chem 7000	CHE 7010
2017	CHE 7780		Chem 3060	CHE 3060
2018	CHE 7780		Chem 3060	CHE 3060
2019	CHE 7780		sabbatical	Sabbatical
2020	CHE 7780 (sab overload)			
2021	Chem 3060 CHE 7780		Chem 3060	Chem 3060
2022	CHE 7780			Chem 7010

Departmental and University Service (other than Student committees)
Academic Judiciary Committee of Arts and Sciences 1987 - 1991
Chemistry Graduate Director 1990 - 1994
Chemistry Department Machine Shop review committee and candidate review committees 1988 - 1995
Chemistry Graduate Education Committee (1995-98
Chemistry Organic Faculty Search Committee (1995-96)
Chemistry Technical Services Committee (Machine Shop) (1995 -98)
Academic Senator (winter 96)
Chemistry FOSSIL oversight committee (1996-2000)
Chemistry Inorganic Faculty Search Committee (1996-97)
Academic Senator (1997 -2000)
Physical Chemistry division chair (1997-1998)
Chemistry RPT subcommittee (1997-98)
Chemistry Faculty Search Committee (Chair) (1998-99)
Chemistry Space Committee (Chair) (1998-1999)
Chemistry Faculty Search Committee (Chair) (1999-2000)
Chemistry RPT subcomittee (Chair) (1999-2000)
Chemistry Faculty Search Committee (Chair) (2000-01)
Physical Chemistry division chair (2001)
Research Accounting Oversight Committee (2001-)
Chemistry Technical Services Committee (electronics/computers) (2002 -5)
Chemistry Grad. Admissions (2002 - 2003)
Chemistry Faculty search chair (2003)
Organizer (with Steve Blair): U of U mini-conference on Nanoscience and Nanotechnology, April, 2003
Organizer: U of Utah Strategic Planning Workshop on Micro- and Nano-scale Research, March 2004
Physical Chemistry Division Chair/advisory committee (2004-5)
Chemistry Faculty Search chair (2004-05)
Chemistry Faculty Search chair (2005-06)
Nanofab Executive Committee (College of Engineering) (2005-)
Chemistry Faculty Search chair (2006-07)
Chemistry RPT subcommittee (2006-7)
Chemistry Technical Services Committee (machine shop) (2005- 2012)

Chemistry Faculty Search chair (2007-8)
Physical division chair/advisory committee (2007-8)
SEED grant review committee (2007 - 10)
College of Science Retention Promotion Tenure committee (2008 -13)
Chemistry Graduate Ed Committee (2008 –9)
ChemSAC liason (2008-2011)
Physical Chemistry Division Chair/advisory committee (2009-10)
Chemistry Faculty search chair (2009-10)
Chemistry RPT subcommittee (2009-10)
co-Director, USTAR Alternative Energy Cluster (2009 -)
State EPSCoR proposal team (2009-2011)
Physical Chemistry Division Chair/advisory committee (2011-12)
Chemistry Faculty search chair, and USTAR search committee (2011-12)
Chemistry Faculty awards committee (2011-)
Chair, College of Science Retention Promotion Tenure committee (2011 -12)
Chemistry Dept. Faculty search chair (2012-13)
College of Science Retention Promotion Tenure committee 2012-13
Chemistry Dept. Faculty search chair (2013-14)
Assoc. Director for Microscopy and Surf. Analysis, Utah Nanofab and Microscopy Core 2013-
Chemistry Dept. Safety and Sustainability Committee (2013 -)
Chemistry Dept. Technical Support Committee Chair and stockroom (2014-2017)
Chemistry Department, RPT subcommittee chair (2017-2018)
Chemistry Department seminar committee 2017-18
Chemistry Dept. Technical Support Committee (electronics shop) (2018-)
Graduate Council internal review panel for Material Science and Engineering (2018)
College of Science Dean search committee, 2018-2019
Chemistry Department, RPT subcommittee chair (2020-2021)
Chemistry Department Faculty Search Chair (2020-2021)
Chemistry Department Technical Support Committee (Chair) 2021-

External Review Panels and other outside service.
Sandia National Lab, Combustion Research Center Review Committee 1989.
Naval Research Lab, Chemistry Division Review, January 1994.
Chair, Panel on Atmospheric Effects of Solid Rocket Motor Plumes (AFOSR) Sept. 1995
Organizer: 12th ONR Propulsion Meeting, Salt Lake City, Aug 4-6, 1999
Pacific Northwest Nat. Lab, Review Committee, March 6 - 8, 2000
University of Idaho, Chemistry Dept. External Review Committee, Nov. 13-15, 2001
Organizer: Nano-clusters Focus Topic for 2002 APS March meeting, March 17-22, 2002
Argonne National Lab, LDRD review, August, 2002
DOE Catalysis Science Panel, May 2003
DOE Review Panel - Cluster Science Program/Argonne National Lab, Nov. 2003
Program committee for the International Conference on Clusters at Surfaces (Warnemunde, Germany, 2006)
Proposal Evaluation Board, Argonne Nat. Lab. Center for Nanoscale Materials, 2006 -
Organized and raised funds for the Bernice and Y.T. Lee Undergraduate Award, 2006 (award to be managed by the Chemical Society Located in Taipei).
Review board for US CRDF grants program.
Program board for the International Conference on Clusters at Surfaces (Warnemunde, Germany 2008)
Vice-Chair, Gordon Conf. on Gaseous Ions, 2009.
Organizer – Telluride Science Research Center workshop on “Ion Traps and Guides for Chemistry and Spectroscopy”, Telluride, CO, July 19 – 23, 2010
NASA Engineering and Safety Center review of monopropellant catalysts, Redmond, WA Feb. 1 – 2,

2011
Chair, Gordon Conf on Gaseous Ions, Hotel Galvez, Galveston, TX, Feb. 27 – Mar. 4, 2011.
Program review committee, Analysis program, Pacific Northwest National Lab, May 8 - 10, 2011
Discussion Leader, Dynamics of Molecular Collisions, July 10-15 2011
Program review committee, CPIMS program, Pacific Northwest National Lab, Aug. 15 – 17, 2011
Journal of Physical Chemistry, Editorial Advisory Board, 2012-2014
American Physical Society, Fellowship Committee (DCP), 2013 – 2015 (chair in 2015)
Discussion Leader, Gordon Conf. on Dynamics at Surfaces (Aug, 2013).
Surface Science, Editorial Advisory Board, 2015 –
Accounts of Chemical Research, Editorial Advisory Board, 2015 -
Co-Organizer (with Akira Terasaki and Nicola Gason), Frontiers of Metal Clusters and Nanostructures: From Fundamental Properties to Functionalities, Pacifichem 2015, Honolulu, HI, Dec. 15-20, 2015.
APS Division of Chemical Physics Vice Chair, 3/16 – 2/17
Co-Organizer (with Stefan Vajda), Cluster-Surface Interactions June 2016.
Selection Committee for 2017 Jankunas Award (APS DCP)
APS Division of Chemical Physics Chair Elect, 3/17 – 2/18
Program chair for APS DCP March 2018 meeting.
APS Division of Chemical Physics Chair, 3/18 – 2/19
DOE Separations and Analysis, PNNL review panel, 5/2017
DOE SGCSR review panel.
Selection Committee for 2020 APS Plyler Prize 2019
Selection Committee for 2017 APS Jankunas Award 2017-2020
Co-Organizer (with Atsushi Nakajima and Fengqi Song), Advanced Functional Clusters and Nanostructured Materials, Pacifichem 2020, Honolulu, HI, Dec. 15-20, 2020.
American Physical Society, March Meeting Task Force 2020
AFOSR Young Investigator Reviews 2019, 2020, 2021, 2022
AVS Surface Science Division Executive Committee 2021-2023