CURRICULUM VITAE

Sue B. Clark, Ph.D.

April, 2015

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EXPERIENCE:

Regents Professor with tenure, Chemistry Department
Staff Scientist, Nuclear Radiation Center
Washington State University, Pullman, August 2011 - Present

Board Member, US Nuclear Waste Technical Review Board
Appointed by President Barack Obama
Arlington VA, August 2011 – October 2014

Distinguished Professor with tenure, Chemistry Department
Washington State University, Pullman, August 2002 – July, 2011

Interim Dean, College of Sciences
Washington State University, Pullman, July 1, 2010 – December 31, 2010

Interim Vice Chancellor for Academic Affairs
Washington State University, TriCities, January 2008 – August 2008

Departmental Chairperson, Chemistry Department
Washington State University, Pullman, August 2004 – December 2007

E. R. Meyer Distinguished Associate Professor with tenure, Chemistry Department
Staff Scientist, Nuclear Radiation Center
Washington State University, Pullman, August 2000 - 2002

Assistant Professor, Chemistry Department
Staff Scientist, Nuclear Radiation Center
Washington State University, Pullman, August 1996 – August 2000

Assistant Research Professor, Biogeochemistry Division
Savannah River Ecology Laboratory, February 1992 - August 1996

Adjunct Assistant Professor, Environmental Systems Engineering Department
Clemson University, May 1991 - August 1996

Senior Scientist, Interim Waste Technology Division
Westinghouse Savannah River Laboratory, May 1989 - February 1992

Visiting Research Scientist, Leuven, Belgium
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CURRICULUM VITAE

Sue B. Clark, Ph.D.

EDUCATION:

Ph.D., Inorganic/Radiochemistry (1989), The Florida State University, Tallahassee, FL 32306
Research Advisor: G. R. Choppin

M.S., Inorganic/Radiochemistry (1987), The Florida State University, Tallahassee, FL 32306
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B.S., Chemistry (1984), Lander College, Greenwood, SC 29649

PEER-REVIEWED PUBLICATIONS:

*Undergraduate student who conducted research in my group
†Graduate student who conducted research under my direction
‡Post-doctoral associate or visiting scientist who conducted research in my group

1. L. W. McDonald, J. A. Campbell, and S. B. Clark (2014). "Failure of ESI Spectra to Represent Metal-Complex Solution Composition: A Study of Lanthanide−Carboxylate Complexes", dx.doi.org/10.1021/ac401751r, Analytical Chemistry.
2. Y. Z. Cong, D. Bottenus, B. W. Liu, S. B. Clark, and C. F. Ivory (2013). "ITP of Lanthanides in Microfluidic PMMA Chip", Electrophoresis, DOI: 10.1002/elps.201300382.
3. P. D. Schumacher†, J. L. Doyle†, J. O. Schenk and S. B. Clark (2013). "Electroanalytical Chemistry of the Lanthanides and Actinides", Reviews in Analytical Chemistry, 32(2), 159-171.
4. D. R. Dixon, S. B. Clark, and C. F. Ivory (2012). "One-dimensional simulation of lanthanide isotachophoresis using COMSOL", Electrophoresis, 33(5), 880-888.
5. P. D. Schumacher†, S. M. Miley*, J. O. Schenk, and S. B. Clark (2011). "Optimization of Nd(III) pre-concentration on a rotating disk mercury film electrode in aqueous solution", Proceedings of Radiochimica Acta., 1: 21-25.
6. P. D. Schumacher†, N. A. Woods*, J. L. Doyle†, J. O. Schenk, and S. B. Clark (2011). "Cathodic Pre-Concentration of f-Elements on a Mercury Film Carbon Fiber Microelectrode", Analytical Chemistry, 83(12): 4788-4793.
7. H. Kurosaki† and S. B. Clark (2011). "Chromatographic separation of Am and Cm", Radiochimica Acta, 99(2): 65-69. DOI 10.1524/ract.2011.1801.
8. C. R. Armstrong†, K. L. Nash, P. R. Griffiths, S. B. Clark (2011). "Spectroscopic and thermal study of françoisite-(Nd)", American Mineralogist. 96(2-3): 417-422.
9. P. D. Schumacher†, K. Fitzgerald*, J. O. Schenk, and S. B. Clark (2011). Preconcentration of f-Elements from Aqueous Solution Utilizing a Modified Carbon Paste Electrode, Analytical Chemistry,83(4): 1388-1393.
10. C. R. Armstrong†, A. R. Felmy, and S. B. Clark (2010). "Solubility of triuranyl diphosphate tetrahydrate (TDT) at 23° C and 50°C", Radiochimica Acta; DOI 10.1524/ract.2010.1752. Vol 98 (9-11), 549-554.
11. Z. Zhang, G. Helms, K. L. Nash, and S. B. Clark (2010). "Uranyl photochemistry: decarboxylation of gluconic acid", Radiochimica Acta; DOI 10.1524/ract.2010.1758. Vol 98 (9-11), 589-594
12. P. D. Schumacher†, N. A Woods*, J. O. Schenk, and S. B. Clark (2010). "Rapid preconcentration of trivalent lanthanide elements on a mercury film from aqueous solution using rotating disk electrode voltammetry", Analytical Chemistry, 82: 5663–5668.

PUBLICATIONS (Continued):

13. N. A. Wall, S. B. Clark, and J. McHale (2010). "Synthesis and characterization of 1:1 layered uranyl silicate mineral phases", Chemical Geology, 274: 149-157.
14. C. R. Armstrong and S. B. Clark (2010). "Delineating hydrated uranyl phosphates: Powder XRD and ATR-IR studies", IOP conference series: Materials and Engineering Science, 9, 021040.
15. S. B. Clark and J. I. Friese† (2009). "Using capillary electrophoresis to separate trivalent f-elements based on their speciation when complexed with simple organic ligands", Journal of Radioanalytical and Nuclear Chemistry, 282(2): 329-333.
16. A. D. Choiniere†, R. F. Payne†, C. M. Knaack, S. M. Smith, and S. B. Clark (2009). "Distribution of uranium, plutonium, and ^{241}Am in soil samples from Idaho National Laboratory", Journal of Radioanalytical and Nuclear Chemistry, DOI 10.1007/s10967-009-0339-5.
17. S. B. Clark, K. Nash, P. Benny, A. Clark, N. Wall, D. Wall, and C. S. Yoo (2009). "Radiochemistry education at Washington State University: Sustaining academic radiochemistry for the nation", in Current Status, Trends, and Needs in Radiochemical Education: The U.S. and Abroad, American Institute of Physics Conference Proceedings #1164, R. Zeisler, K. Unlu, and S. Heller-Ziesler, eds., pp. 22-29.
18. Z. Zhang†, G. Helms, S. B. Clark, G. Tian, P. L. Zanonato, and L. F. Rao (2009). "Complexation of U(VI) by gluconate in acidic solutions: A thermodynamic study with structural analysis", Inorganic Chemistry, 48: 3814-3824.
19. S. B. Clark and M. Douglas (2009). "Transuranium and fission product cation partitioning into U(VI) silicate solid phases", Proceedings of the Nuclear and Radiochemistry Symposium, January 7-10, 2009, Mumbai, India.
20. Z. Wang, J. M. Zachara, C. Liu, P. L. Gassman, A. R. Felmy, and S. B. Clark (2008). "A cryogenic fluorescence spectroscopic study of uranyl carbonate, phosphate, and oxyhydroxide minerals", Radiochimica Acta, 96(9-11): 591-598.
21. R. F. Payne†, S. B. Clark, and J. T. Elliston (2008). "Radioanalytical approach to determine ^{238}Pu, $^{239+240}$Pu, ^{241}Pu, and ^{241}Am in soils," Journal of Radioanalytical and Nuclear Chemistry, 277(1): 269-274.
22. H. Zhang, J. P. Herman, H. Bolton, Z. Zhang‡, S. Clark, and L. Xun (2007). "Evidence that bacterial ABC-type transporter imports free EDTA for metabolism", Journal of Bacteriology, 189(22): 7991-7997.
23. Z. Zhang†, B. Bottenus*, S. B. Clark, G. Tian, P. Zanonato, and L. Rao (2007). "Complexation of Gluconic Acid with Nd(III) in Acidic Solutions: A Thermodynamic Study" Journal of Alloys and Compounds, 444: 470-476.
24. A. Khasanova, S. N. Kalmykov, I. Perminova, and S. B. Clark (2007). "Neptunium redox behavior and sorption onto goethite and hematite in the presence of humic acids with different hydroquinone content", Journal of Alloys and Compounds, 444: 491-494.
25. Z Zhang†, P. Gibson, S. B. Clark, G. Tian, P. Zanonato, and L. Rao (2007). "Lactonization and Protonation of Gluconic Acid: A Thermodynamic and Kinetic Study by Potentiometry, NMR and ESI-MS", Journal of Solution Chemistry, 36(10): 1187-1200.
26. S. Serkiz, W. Johnson, L. Wile, and S. B. Clark (2007). "Environmental availability of uranium in an acidic acid plume at the Savannah River Site", Vadose Zone Journal, 6(2): 354-362.

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27. M. H. Lee‡, Y. J. Park, K. Y. Jee, W. H. Kim, and S. B. Clark (2007). "Study of an alpha track analysis and fission track analysis for determining the hot particles contaminated with Pu and U isotopes", Applied Radiation and Isotopes, 65(1): 85-91.

28. A. P. Novikov, S. N. Kalmykov‡, S. Utsunomiya, R. C. Ewing, F. Horreard, A. Merkulov, S. B. Clark, V. V. Tkachev, and B. F. Myasoedov (2006). "Colloid transport of plutonium in the far-field of the Mayak Production Association, Russia", Science, 314:638-641.

29. Z. Zhang†, S. B. Clark, G. Tian, P. L. Zanonato, and L. Rao (2006). "Protonation of *D*-gluconate and its complexation with Np(V) in acidic to near neutral solutions", Radiochimica Acta, 94: 531-536.

30. C. G. Shepler†, L. C. Hull, T. E. Letain, T. C. Hazen, H. Nitsche, and S. B. Clark (2006), "The interaction of U(VI) with *Bacillus sphaericus*", Geochimica et Cosmochimica Acta, 69: 233-238.

31. S. E. Pepper‡, L. C. Hull, B. N. Bottenus*, and S. B. Clark (2006), "The influence of oxalate on the partitioning of trivalent f-elements to hematite", *Recent Advances in Actinide Science*, Royal Society of Chemistry, pp. 140-142.

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33. I. E. Vlasova, S. N. Kalmykov, S. B. Clark, S. B. Simakin, A. Y. Anokhin, and Y. A. Sapozhnikov (2006), "Combination of alpha track analysis, fission track analysis, with SEM-EDX and SIMS to study spatial distribution of actinides", *Recent Advances in Actinide Science*, Royal Society of Chemistry, pp. 98-100.

34. S. E. Pepper‡, L. C. Hull, B. N. Bottenus*, and S. B. Clark (2006). "Adsorption of lanthanum to goethite in the presence of gluconate", Radiochimica Acta, 94: 229-237.

35. *Separations for the Nuclear Fuel Cycle in the 21st Century*, G. J. Lumetta, K. L. Nash, S. B. Clark, and J. I. Friese, eds. (2006). American Chemical Society Symposium Series No. 933, 348 pages.

36. K. L. Nash, G. J. Lumetta, S. B. Clark, and J. I. Friese (2006). "Significance of the Nuclear Fuel Cycle in the 21st Century", American Chemical Society Symposium Series No. 933, *Separations for the Nuclear Fuel Cycle in the 21st Century*, G. J. Lumetta, K. L. Nash, S. B. Clark, and J. I. Friese, eds., pp. 3-20.

37. Pepper, S. E. ‡, B. N. Bottenus*, L. C. Hull, C. G. Shepler†, and S. B. Clark, (2006), "The Influence of Simple Organic Ligands on the Partitioning Mechanism of the Trivalent f-Elements to Goethite", American Chemical Society Symposium Series No. 933, *Separations for the Nuclear Fuel Cycle in the 21st Century*, G. J. Lumetta, K. L. Nash, S. B. Clark, and J. I. Friese, eds., pp. 277-292.

38. M. H. Lee‡, M. Douglas†, and S. B. Clark, (2005), "Development of in situ fission track analysis for detecting fissile nuclides in contaminated solid particles", Radiation Measurements, 40: 37 – 42.

39. M. H. Lee‡ and S. B. Clark, (2005), "Activities of Pu and Am Isotopes and Isotopic Ratios in a Soil Contaminated by Weapons Grade Plutonium", Environmental Science and Technology, 39(15): 5512-5516.

PUBLICATIONS (Continued):

40. M. Douglas†, S. B. Clark, J. I. Friese†, B. W. Arey, E. C. Buck, and B. D. Hanson (2005), "Neptunium(V) Partitioning to Uranium(VI) Oxide and Peroxide Solids," Environmental Science and Technology, 39: 4117 - 4124.

41. M. Douglas†, S. B. Clark, J. I. Friese†, B. W. Arey, E. C. Buck, B. D. Hanson, S. Utsonomiya, and R. C. Ewing (2005), "Microscale Characterization of Uranium(VI) Silicate Solids and Associated Neptunium(V)," Radiochimica Acta, 93: 265-272.

42. S. B. Clark (2005), "The American Chemical Society's Summer Schools in Nuclear and Radiochemistry", Journal of Radioanalytical and Nuclear Chemistry, 263(1): 107-110.

43. R. Zeisler, S. B. Clark, S. J. Parry, G. R. Choppin, P. R. Danesi, M. Rossbach, C. Williamson, Z. F. Chai, S. F. Heller-Zeisler (2005), "Nuclear science manpower and education needs", Journal of Radioanalytical and Nuclear Chemistry, 263(1): 103 – 106.

44. L. F. Rao, Z. C. Zhang†, P.L. Zanonato, P. Bernardo Di, A. Bismondo, S. B. Clark (2004), "Complexation of Thorium (IV) with Acetate at Variable Temperatures," Dalton Transactions, 18**:** 2867-2872**.**

45. D. Rai, D. Moore, N. Hess, L. Rao, and S. B. Clark (2004), "Chromium (III) Hydroxide Solubility in the Aqueous Na^+ - OH^- - $H_2PO_4^-$ - HPO_4^{2-} - PO_4^{3-} - H_2O System: A Thermodynamic Model", Journal of Solution Chemistry, 33(10): 1213-1242.

46. M. H. Lee‡, Y. Y. Yoon‡, S. B. Clark and S. E. Glover (2004), "Distribution and Geochemical Association of Actinides in a Contaminated soil as a Function of Grain Size", Radiochimica Acta, 92(9-11): 671-675.

47. S. Utsunomiya, L. Wang, M. Douglas†, S. B. Clark, and R. C. Ewing, (2003), "The Effect of Ionizing Radiation on Uranophane", American Mineralogist, 88(1): 159-166.

48. B. Ritherdon‡, C. Phelps‡, H. Neff*, A. G. Sowder†, and S. B. Clark (2003), "Stability of U(VI) Solid Phases in the U(VI)-Ca^{2+}-SiO_2-OH System", Radiochimica Acta, 91(2): 93-96.

49. H. Kurosaki†, S. M. Loyland Asbury†, S. B. Clark, and J. Navratil (2002), "A Flow-through Sequential Extraction Approach Developed from a Batch Extraction Method", Environmental Science & Technology. 36(22): 4880-4885.

50. M. Douglas†, S. B. Clark, S. Utsunomiya, and R. C. Ewing (2002), "Cesium and Strontium Incorporation into Uranophane, $Ca[(UO_2)(SiO_3OH)]_2 \cdot 5H_2O$", Journal of Nuclear Science and Technology, Supp. 3, 504-507.

51. H. Kurosaki†, S. Lamont‡, R. Filby, S. B. Clark, and D. R. Peterman (2002), "DevelopingCombined Fission Track Analysis and Alpha Track Analysis to Study the Spatial Distribution of U and Pu Sorbed to Environmental Particles", Journal of Nuclear Science and Technology, Supp. 3, 493-496.

52. C. A. Delegard and S. B. Clark (2002), "Plutonium in Non-Ideal Systems", a review published in *Advances in Plutonium Chemistry*: 1967-2000, D. C. Hoffman (ed.), ANRCP Press, pp. 118-168.

53. R. C. Ewing, F. Chen, and S. B. Clark (2002), "An Empirical Method for Calculating Thermodynamic Parameters for U(VI) Phases: Applications to Performance Assessment Calculations", *The Use of Thermodynamic Databases in Performance Assessment*, Nuclear Energy Agency, 93-103.

PUBLICATIONS (Continued):

54. J. I. Friese†, B. Ritherdon‡, S. B. Clark, Z. Zhang†, L. Rao, and D. Rai (2002), "Chromatographic Separation and Characterization of Hydrolyzed Cr(III) Species", Analytical Chemistry, 74(13): 2977-2984.

55. L. Rao, Z. Zhang†, J. I. Friese†, B. Ritherdon‡, S. B. Clark, N. J. Hess, and D. Rai (2002), "Oligomerization of Chromium(III) and its Impact on the Oxidation of Chromium(III) by Hydrogen Peroxide in Alkaline Solutions", Journal of the Chemical Society – Dalton Transactions, **2**, 267-274.

56. D. Rai, N. J. Hess, L. Rao, Z. Zhang†, A. R. Felmy, D. A. Moore, S. B. Clark, and G. J. Lumetta (2002), "Thermodynamic model for the Solubility of $Cr(OH)_3$(am) in Concentrated NaOH and NaOH-$NaNO_3$ Solutions", Journal of Solution Chemistry, 31(5): 343-367.

57. S. M. Loyland-Asbury†, S. P. Lamont‡, and S. B. Clark (2001), "Plutonium Partitioning to Colloidal and Particulate Matter in an Acidic, Sandy Sediment: Implications for Remediation Alternatives and Plutonium Migration", Environmental Science & Technology, 35(11): 2295-2300.

58. S. M. Loyland†, M. Yeh‡, C. Phelps‡, and S. B. Clark (2001), "Effects of Supercritical Fluid Extractions on Metal Ion Partitioning as Indicated by Sequential Extractions", Journal of Radioanalytical and Nuclear Chemistry**,** 248(2): 493-499.

59. A. G. Sowder†, S. B. Clark, and R. A. Fjeld (2001), "The Impact of Mineralogy in the U(VI)-Ca-PO_4 System on the Environmental Availability of Uranium", Journal of Radioanalytical and Nuclear Chemistry, 248(3): 517-524.

60. S. M. Loyland†, S. M. Lamont‡, S. E. Herbison*, and S. B. Clark (2000), "Actinide Partitioning to an Acidic, Sandy Lake Sediment", Radiochimica Acta, 88(9-11): 793-798.

61. A. G. Sowder†, S. B. Clark, and R. A. Fjeld (2000), "Dehydration of Synthetic Autunite Hydrates", Radiochimica Acta, 88(9-11): 533-538.

62. M. Yeh‡, A. P. Maddison†, and S. B. Clark (2000), "Temperature Dependence of Chloride Complexation for the Trivalent *f*-elements", Journal of Radioanalytical and Nuclear Chemistry, 243(3): 645-650.

63. M. Yeh‡, T. Reidner, K. L. Bray, and S. B. Clark (2000), "A Spectroscopic Investigation of Temperature Effects on Solution Complexation in the Eu^{3+}-Acetate System", Journal of Alloys and Compounds, 303: 37-41.

64. *Radionuclide Speciation in Real Systems* (1999), D. T. Reed, L. F. Rao, and S. B. Clark, eds., Plenum Publishing Corporation.

65. A. G. Sowder†, S. B. Clark, and R. A. Fjeld (1999), "The Transformation of Uranyl Oxide Hydrates: The Effect of Dehydration on Synthetic Metaschoepite and Its Alteration to Becquerelite," Environmental Science & Technology**,** 33(20): 3552-3557.

66. F. Chen, R. C. Ewing, and S. B. Clark, (1999) Response to comment on: "The Gibbs free energies and enthalpies of formation of U^{6+} phases: An empirical method of prediction (vol 84, pg 650, 1999)", American Mineralogist, 84(7-8): 1208-1208

67. F. Chen, R. C. Ewing, and S. B. Clark, (1999) "The Gibbs free energies and enthalpies of formation of uranium (VI) phases: An empirical method of prediction", American Mineralogist, 84(4): 650-664.

PUBLICATIONS (Continued):

68. F. W. Whicker, T. G. Hinton, K. A. Orlandini, S. B. Clark, (1999), "Uptake of natural and anthropogenic actinides in vegetable crops grown on a contaminated lake bed", Journal of Environmental Radioactivity, 45(1): 1-12.

69. R. Wong†, W.C. Burnett, S. B. Clark, and B. S. Crandall (1999), "An improved assay for the determination of gross alpha and beta activities in soil via liquid scintillation counting", *in*: Environmental Radiochemical Analysis, (ed., G.W.A. Newton) Royal Society of Chemistry, Special Publication No. 234, 242-264.

70. S. B. Clark, R. C. Ewing, and J. C. Schaumloffel‡ (1998), "A Method to Predict Free Energies of Formation of Mineral Phases in the U(VI)-SiO_2-H_2O System", Journal of Alloys and Compounds, 271: 189-193.

71. M. Yeh‡, A. P. Maddison†, and S. B. Clark (1998), "The Effect of Elevated Temperature on the Complexation of Am^{3+} with Chloride," Biological Trace Element Research.

72. W. F. Kinard, D. R. Hunter, and S. B. Clark (1998), "Applications of Laser Photoacoustic Spectroscopy Using an Optical Parametric Oscillator to the Study of Complexation Equilibria in Dilute Aqueous Solutions", Journal of Radioanalytical and Nuclear Chemistry, 235(1-2): 11-16.

73. S. E. Glover†, R. H. Filby, and S. B. Clark (1998), "Determination of ^{232}Th in Human Tissues by Pre-concentration neutron activation analysis with yield determination using ^{227}Th", Journal of Radioanalytical and Nuclear Chemistry, 234(1-2): 65-70.

74. S. E. Glover†, R. H. Filby, and S. B. Clark (1998), "Determination of isotopic thorium in biological samples by combined alpha spectrometry and neutron activation analysis", Journal of Radioanalytical and Nuclear Chemistry, 234(1-2): 201-208.

75. S. E. Glover†, R. H. Filby, S. B. Clark, and S. P Grytdal* (1998), "Optimization and Characterization of a Sulfate Based Electrodeposition Method for Alpha Spectroscopy of Actinide Elements Using Chemometric Analysis", Journal of Radioanalytical and Nuclear Chemistry, 234(1-2): 213-218.

76. A. G. Sowder†, S. B. Clark, and R. A. Fjeld (1998), "The Effect of Sample Matrix Quenching on the Measurement of Trace Uranium Concentrations in Aqueous Solutions Using Kinetic Phosphorimetry", Journal of Radioanalytical and Nuclear Chemistry, 234(1-2): 257-260.

77. S. B. Clark, A. L. Bryce†, A. D. Leuking*, J. Gariboldi*, and S. M. Serkiz (1998), "Factors Affecting Trivalent *f*-element Adsorption to an Acidic Sandy Soil" in *Sorption of Metals by Earth Materials: Mechanisms, Rates, Factors, and Models*, E. A. Jenne, ed., Academic Press, 149-164.

78. D. R. Corbett†, W. C. Burnett, P. H. Cable, and S. B. Clark (1998), "A Multiple Approach to the Determination of Radon Fluxes from Sediments", Journal of Radioanalytical and Nuclear Chemistry, 236(1-2): 247-252.

79. W. C. Burnett, R. Wong†, S. B. Clark, and B. Crandall (1998), "Direct Counting of Soil Wafers – An Improved Total Alpha/Beta Screening Analysis", Journal of Radioanalytical and Nuclear Chemistry, 235(1-2): 173-178.

80. T. G. Hinton, M. A. Malek, C. Sherony*, and S. B. Clark (1998), "Operationally-Defined Availability from Sequential Extractions Compared to Plant Uptake of ^{137}Cs and ^{90}Sr", Journal of Radioanalytical and Nuclear Chemistry, 235(1-2): 185-190.

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81. D. R. Corbett†, W. C. Burnett, P. H. Cable, and S. B. Clark (1997), "Radon Tracing of Groundwater Input into Par Pond, Savannah River Site", Journal of Hydrology, 203(1-4): 209-227.

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83. P. M. Bertsch, D. B. Hunter, P. R. Nuessle, and S. B. Clark (1997), "Molecular Characterization of Contaminants in Soils by Spatially Resolved XRF & XANES Spectroscopy", Journal of Physics IV, France, 7(C-2): 817-818.

84. P. G. Allen, G. S. Siemering*, D. K. Shuh, J. J. Bucher, N. M. Edelstein, C. A. Langton, S. B. Clark, T. Reich, and M. A. Denecke (1997), "Technetium Speciation in Cement Waste Forms by X-ray Absorption Fine Structure spectroscopy", Radiochimica Acta, 76(1-2): 77-86.

85. S. B. Clark, W.H. Johnson†, M. A. Malek, S. M. Serkiz, and T. G. Hinton (1996), "A Comparison of Sequential Extraction Techniques to Estimate Geochemical Controls on the Mobility of Fission Product, Actinide and Heavy Metal Contaminants in Soil", Radiochimica Acta, 74: 173-179.

86. A. G. Sowder†, S.B. Clark, and R.A. Fjeld (1996), "The Effect of Silica and Phosphate on the Transformation Kinetics of Schoepite to Becquerelite and Other Uranyl Phases", Radiochimica Acta, 74: 45-49.

87. S. B. Clark and G. R. Choppin, (1996), "A Comparison of the Dissociation Kinetics of Rare Earth Element Complexes with Synthetic Polyelectrolytes and Humic Acid", in *Humic and Fulvic Acids: Isolation, Structure, and Environmental Role*, J. S. Gaffney, N. A. Marley, and S. B. Clark, eds., American Chemical Society Symposium Series 651, 207-218.

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90. J. T. McCloskey†, M. C. Newman, and S. B. Clark (1996), "Predicting the Relative Toxicity of Metal Ions using Ion Characteristics: Microtox® Bioluminescence Assay", Environmental Toxicology and Chemistry, 15(10): 1730-1737.

91. A. L. Bryce† and S. B. Clark (1996), "Nickel Desorption Kinetics from Hydrous Ferric Oxide in the Presence of EDTA", Colloids and Surfaces A, Physicochemical and Engineering Aspects, 107: 123-130.

92. S. B. Clark (1995), "Separation and Determination of Radiostrontium in Calcium Carbonate Matrices of Biological Origin", Journal of Radioanalytical and Nuclear Chemistry - Articles, 194(2): 297-302.

93. A. L. Bryce†, W. A. Korniker, A. L. Elzerman, and S. B. Clark (1995), "Response to Comment on 'Nickel Adsorption to Hydrous Ferric Oxide in the Presence of EDTA: Effect of Component Addition Sequence' ", Environmental Science & Technology, 29: 3072-3072.

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94. J. F. Lee, S. Bajt, S. B. Clark, G. M. Lamble, C. A. Langton, and L. Oji (1995), "Chromium Speciation in Hazardous, Cement-based Waste Forms", Physica B – Condensed Matter, 208(1-4): 577-578.

95. W. H. Johnson†, S. M. Serkiz, L. M. Johnson*, and S. B. Clark (1995), "Uranium Partitioning under Acidic Conditions in a Sandy Soil Aquifer", *Proceedings of Waste Management 95*, Tucson, AZ, February 26-March 2, 1995.

96. D. K. Shuh, N. Kaltsoyannis, J. J. Bucher, N. M. Edelstein, S. B. Clark, H. Nitsche, T. Reich, E. A. Hudson, I. Al Mahamid-Al Rifai, P. Torretto, W. Lukens, K. Roberts, B. C. Yee, D. E. Carlson, A. Yee, B. Buchanan, T. Leighton, W. S. Yang, and J. C. Bryan, (1994), "Environmental Applications of XANES: Speciation of Tc in Cement after Chemical Treatment and Se after Bacterial Uptake", Materials Research Society Symposium Proceedings, 344: 323-328.

97. L. F. Rao, G.R. Choppin, and S.B. Clark (1994), "Study of Metal-humate Interactions by Cation Exchange," Radiochimica Acta, 66-7: 141-147.

98. J. R. Cadieux, S. B. Clark, R. A. Fjeld, S. Reboul†, and A. Sowder† (1994), "Measurement of Actinides in Environmental Samples by Photon-electron Rejecting Liquid Scintillation", Nuclear Instruments and Methods in Physics Research 353: 534-538.

99. A. L. Bryce†, W.A. Kornicker, A.L. Elzerman, and S.B. Clark (1994), "Nickel Adsorption to Hydrous Ferric Oxide in the Presence of EDTA: Effect of Component Addition Sequence", Environmental Science & Technology, 28(13): 2353-2359.

100. W. H. Johnson†, S. M. Serkiz, and S. B. Clark (1994), "Determination of Site specific Distribution Coefficients of Mixed Waste Contaminants using an *In-situ* Approach", *Proceedings of the 27th Midyear Topical Meeting of the Health Physics Society: Managing Radioactive and Mixed Waste*; Health Physics Society National Meeting; Albany, NY; February 13-16, 1994.

101. S. Bajt, S. B. Clark, S. R. Sutton, M. L. Rivers, and J. V. Smith (1993), "Synchrotron X-ray Microprobe Determination of Chromate Content using X-ray Absorption Near-edge Structure", Analytical Chemistry, 65(13): 1800-1804.

102. G. R. Choppin and S. B. Clark (1991), "The Kinetic Interactions of Metal Ions with Humic Acids", Marine Chemistry, 36(1-4): 27-38.

103. S. B. Clark, N. M. Park, and R. C. Tuckfield (1991), "The Effect of Sample Collection Device and Filter Pore Size on Concentrations of Metals in Groundwater Samples", *Proceedings of the Fifth National Outdoor Action Conference on Aquifer Restoration, Groundwater Monitoring, and Geophysical Methods*, National Water Well Association, Las Vegas, NV, May, 1991.

104. S. B. Clark and E. L. Wilhite (1991), "Low Level Liquid Waste Disposal at the Savannah River Site: A Large Scale Demonstration of Saltstone", *Waste Management 1991 Proceedings*, American Nuclear Society and University of Arizona, Tucson, AZ, February, 1991.

105. S. B. Clark and G. R. Choppin, (1990), "Kinetics of Rare Earth Metal Binding to Aquatic Humic Acids", in *Chemical Modeling of Aqueous Systems II*, D. C. Melchior, R. L. Basset, eds., American Chemical Symposium Series 416: 519-525.

RESEARCH SUPPORT AND CONTRACTS:

Since joining the Chemistry Department at WSU in 1996, I have worked independently and in collaboration with colleagues to generate over ***$18 million*** in extramural funding. In addition, to date I have raised the external funds (Department of Energy, Department of Homeland Security, and the US Nuclear Regulatory Commission) to support three tenure-track faculty positions in the Chemistry Department.

Currently Funded:

$1,787,000	10/1/10 to 9/31/15	*U.S. Department of Defense – Defense Threat Reduction Agency*, "Rapid, Ligand-assisted Capillary Electrophoresis Methods for Actinide Determinations by Mass Spectrometry".
$300,000	1/1/13 to 12/31/15	*U.S. Department of Energy – National Nuclear Security Administration*, "Modern Instrumental Radiochemistry Techniques (MIRT)", in collaboration with Brienne Bottenus at PNNL.
$300,000	10/1/12 to 9/31/15	*U.S. Department of Energy – National Nuclear Security Administration*, "Modern Isotope Radiochemical separations", in collaboration with Lori Metz and Brienne Seiner at PNNL.
$450,000	9/1/10 to 8/31/14	*U. S. Department of Energy – Basic Energy Science Program*, "Controlling actinide hydration in mixed solvent systems: Towards tunable solvent systems to close the nuclear fuel cycle".
$593,000	10/1/10 to 9/31/14	*U.S. Department of Energy – National Nuclear Security Administration*, "Strengthening Materials Accountability in Reprocessing Plants: Rapid, in-line monitoring of actinide isotopes and species during reprocessing"
$300,000	10/1/09 to 9/30/12	*U.S. Department of Homeland Security"*, "Nuclear Forensics Education Award Program at Washington State University".
$934,000	9/15/08 to 9/14/13	*National Science Foundation & Domestic Nuclear Detection Office, Academic Research Initiative*, "Improved Radiochemical Separations for Actinide Forensic Signatures".

AWARDS AND ACHIEVEMENTS (Selected):

2012 Recipient of the Francis P. Garvan–John M. Olin Medal, American Chemical Society.

Fellow, American Association for the Advancement of Science, 2012

Elected Member, Washington State Academy of Sciences, Physical Sciences Division, 2012

Fellow, America Chemical Society, 2010

Westinghouse Distinguished Professor of Materials Science and Engineering, WSU, 2002-2008

E. R. Meyer Distinguished Professor, WSU, College of Sciences, 1999-2001

Young Faculty Achievement Award, WSU, College of Sciences, 1998-1999

Young Investigator Award, National Academy of Sciences, Program on Nuclear Accidents and Radioactive Contamination, 1993-1994

PROFESSIONAL SERVICE:

International Service:

International Atomic Energy Agency, Consultancy for Nuclear Security/Nuclear Forensics, 2011
Editor, *Radiochimica Acta*, Oldenbourg Wissenschaftsverlag GmbH, 2009 - 2013
Editorial Advisory Board, *Radiochimica Acta*, Oldenbourg Wissenschaftsverlag GmbH, 2008 – 2009

National Advisory Committees:

Board of Directors, U.S. Council for Chemical Research, 2009 – 2011

Nuclear and Radiation Studies Board, National Research Council, 2005 – 2009
Within the NRSB, I currently serve on the following committees/studies:
- *Sustaining and Improving the Nation's Nuclear Forensics Capabilities*
- *Development and Implementation of a Cleanup Technology Roadmap for DOE's Office of Environmental Management*

Board on Radioactive Waste Management, National Research Council, 2004-2005
Served on numerous committees for this Board until it was incorporated into the NRSB. Examples of service include:
- *Committee on Science and Technology for the Hanford Site*
- *Committee on the Feasibility of Dose Assessment for U.S. Weapons Testing*
- *Committee on the Waste Isolation Pilot Plant (WIPP)*

Basic Energy Sciences Advisory Committee, Office of Science, USDOE, 2003 – present
Within BESAC, I have served on numerous committees, including:
- *Facing our Energy Challenges in a New Era of Science*
- *Directing Matter and Energy: Five Challenges for Science and the Imagination*
- *Committee of Visitors, Chemical Sciences, Geosciences, and Biosciences Division*
- *Basic Research Needs for Advanced Nuclear Energy Systems*
- *Basic Research Needs to Counter Terrorism, Nuclear Subcommittee*

Advisory Committee for the Environmental Remediation Division, Biological and Environmental Research Advisory Committee, Office of Science, USDOE, 2003-2005

National Educational Service:

National Director, American Chemical Society's Division of Nuclear Chemistry, Summer School Program in Nuclear and Radiochemistry, 2001-2006

University Service:

Interim Dean, College of Sciences, WSU Pullman, July 2010 – Dec 2010
Interim Vice Chancellor for Academic Affairs, WSU TriCities, Jan 2008 – Aug 2008
Chemistry Department Chair, 2004-2007
Strategic Planning Implementation Team, Office of the Provost, 2002 - 2004
Associate Director, Integrated Graduate Education and Research Training Program, Center for Multiphase Environmental Research, Washington State University, 1999-2003
Director of Graduate Studies, Chemistry Department, 2001 - 2003
Faculty Status Committee, Washington State University, 2001-2003
Reactor Safeguards Committee, Washington State University, 1996-1999

Professional Societies:

American Chemical Society
American Association for the Advancement of Science
Sigma Xi

Symposia Organized:

2015 Methods and Applications in Radioanalytical Chemistry, April 12-17, 2015, Kona, HI

2014 Plutonium Futures – the Science, September 7-12, 2014, Las Vegas, NV

2014 Eighth International Conference on Isotopes and Expo, August 24-28, 2014, Chicago, IL

2010 PacifiChem Conference, Honolulu, Hawaii, December 2010, "Spectroscopic, Radioanalytical and Nuclear Methods for Security Applications".

Fall 2010 National Meeting of the American Chemical Society, Boston, MA, September 2010. "Aqueous Chemistry and Thermodynamics of Actinides and Fission Products - A Tribute to Volker Neck"

236th National Meeting of the American Chemical Society, Aug. 17 – 21, 2008, Philadelphia, PA. "Research related to the Environmental Management Mission of the Department of Energy".

227th National Meeting of the American Chemical Society, Mar. 28 – Apr. 1, 2004, Anaheim, CA. "Separations for the Nuclear Fuel Cycle in the 21st Century".

23rd International Rare Earth Research Conference, July 13-18th, 2002, Davis, CA. "Environmental Chemistry of the Light *f*-elements".

American Chemical Society, Fall 1999, New Orleans, LA. *"The Scientific Basis for Regulatory Issues in Radioactive Waste Management*". Symposium co-sponsored by the Divisions of Nuclear Science and Technology, and Chemistry and the Law.

International Meetings – Service and Technical Programs:

Advisory Committee, Emerging Trends in Separation Science and Technology (SESTEC-2010). March 1-4, 2010, at Indira Gandhi Centre for Atomic Research (IGCAR) Kalpakkam, India.

Conference Co-Chair, 11th International Conference on the Chemistry and Migration Behavior of Actinides and Fission Products in the Geosphere; Kennewick, WA, September 21 – 25, 2009

International Steering Committee, International Conferences on the Chemistry and Migration Behavior of Actinides and Fission Products in the Geosphere.

International Steering Committee, Workshop on Radionuclide Migration and Waste Disposal, Beijing, China, Oct. 12 – 16, 2008.

Conference Chair, 4th International Conference on the Chemistry and Migration Behavior of Actinides and Fission Products in the Geosphere; Charleston, SC, December 12-17, 1993.

Consulting:

Battelle Memorial Institute, Pacific Northwest National Laboratory, National Security Directorate, 2004 - present.

Helmholtz Gemeinschaft, Research Centre Jűlich Karlsruhe Institute of Technology, and Forschungszentrum Rossendorf 2009, 2011, 2013, 2014.

TEACHING PORTFOLIO:

My teaching load is one lecture or laboratory course per academic semester. Courses I have recently taught include:

CHEM106 *General Principles in Chemistry* (3 hour undergraduate lecture, 350 students). Introductory chemistry for all undergraduate science and engineering majors. Topics included kinetics, thermodynamics, periodicity, basic nuclear and radiochemistry.

CHEM220 *Quantitative Analysis* (2 hour undergraduate lecture). Classical chemical analysis, systematic treatment of chemical equilibria including solubility, acid-base, redox, and complexation

CHEM398 *Chemistry and Careers:* Chemistry career guidance for undergraduates, development of resumes and interviewing skills, ethics and responsible conduct of research, the technical chemistry literature, student opportunities in chemistry, discussions of research topics, chemistry in the news, diversity in chemistry, etc.

CHEM 421/521 *Radiotracers and Radiochemistry* (2 hours, undergraduate lecture + 2 hours, graduate lecture). This course provides students with the opportunity to explore nuclear and radiochemistry. It is a combined undergraduate and graduate course. To provide the graduate students with an appropriate level of material, I meet with them separately where we explore the material in more depth and link fundamental concepts to current publications in the peer-reviewed literature.

CHEM481 *Introduction to Environmental Chemistry and Atmospheric Chemistry* (3 hours, undergraduate lecture). Part I of Environmental Chemistry. Lectures include origin and abundance of the elements, evolution of the solar system and Earth, geochronology, evolution of the atmosphere, our contemporary atmosphere, atmospheric photochemistry, perturbations to our atmosphere.

CHEM482 *Environmental Chemistry II: Aquatic and Terrestrial Chemistry* (3 hours, undergraduate lecture). Part II of Environmental Chemistry. Topics include soil chemistry, marine chemistry, and groundwater chemistry. Also includes the chemistry of the mineral:water interface and geochemical modeling.

CHEM489 *Environmental Chemistry Laboratory Projects* (3 hours, undergraduate laboratory). Capstone laboratory experience for students in Environmental Chemistry.

CHEM527 *Chemical Equilibria in Real Systems* (2 hours, graduate lecture). Equilibrium concepts applied to environmental and engineered systems. Topics covered include thermodynamics of solution speciation, adsorption, precipitation and nucleation.

CHEM520 *Advanced Analytical Chemistry* (3 hours, graduate lecture). This is a course that is taught by all the Analytical Chemistry Faculty as a team. I cover (1) analytical sampling, sample preparation and handling, limits of detection, and statistics of data analysis; and (2) molecular spectroscopy.

CHEM529 *Graduate Topics in Analytical Chemistry: Nuclear Forensics and Radioanalytical Chemistry* (3 hours, graduate lecture). Special topics course focused on the application of radioanalytical chemistry in nuclear forensics analysis. Topic covered include advanced radioanalytical methods, statistics in radiometric analysis, non-radiometric analysis in nuclear forensics, discussions of case studies, and the role of nuclear forensics/safeguards in nuclear nonproliferation policy.

GRADUATE STUDENTS:

Student	Thesis Topic	Degree/ Year	Position Obtained
A. Lines	Spectroelectrochemistry of the f-elements	PhD/2016	
H. Felmy	Actinide complexation im mixed solvent systems	PhD/2016	
S. Morrison	Radioanalytical methods for rapid radio-chemistry	PhD/2016	
K. Bennett	Electrokinetic separations of the f-elements	PhD/2015	
M. Kelley	Computational and experimental studies of f-element hydration	PhD/2015	
J. Doyle	Actinide electroanalytical chemistry	PhD/2014	
A. Donley	Actinide complexation in mixed solvent systems	PhD/2014	
M Snow	Environmental radiochemistry	PhD/2014	
L. McDonald	ESI-MS for Actinide Forensic Signatures	PhD/2013	Assistant Professor, Univ. of Utah
J. Hines	Rapid Separations for Forensic Analysis	PhD/2013	Post-doctoral fellow, Florida State University
R. Schumacher	Anodic Stripping Voltammetry Coupled to Capillary Electrophoresis	PhD/2011	LTC US Army, West-point Military Academy
H. Kurosaki	Environmental Chemistry of Cm(III)	PhD/2010	Staff scientist at ORNL
S. Holbrook	Am(III) Sorption to U(VI) Silicates	MS/2009	MS Staff Scientist, Oak Ridge National Lab
C. Armstrong	Uranyl and Neodymium Phosphates: Synthesis, Characterization, and Thermodynamic Studies	PhD/2009	Post-doctoral Assoc., U. Calif – Davis with Prof. A. Navrotsky
S. Chen	Non-U Actinide Sorption to U(VI) Silicate Minerals	MS/2008	Preceptor, General Chemistry, WSU
E. Finn	Capillary Electrophoresis and the Separation of Actinides	MS/2008	MS Staff Scientist, Pacific Northwest National Lab
R. Payne	Isotopic Ratios as Indicators of Pu Origin	PhD/2006	PhD Staff Scientist, Pacific Northwest National Lab
Z. Zhang	Temperature Dependence of Actinide Complexes with Glycolate	PhD/2006	Research Asst. Prof., Wash. State Univ.
C. Shepler	Bioremediation of U(VI)	PhD/2006	Instructor, Ga Inst. Of Technology
M. Douglas	Solid Solution Chemistry of the Actinides in U(VI) Solid Phases	PhD/2004	PhD Staff Scientist, Pacific Northwest National Lab

GRADUATE STUDENTS (continued):

J. Friese	Cr Speciation and Redox Kinetics in Highly Alkaline Systems	PhD/2002	PhD Staff Scientist, Pacific Northwest National Lab
H. Kurosaki	Flow-through Sequential Extraction of Actinides on Contaminated Sediments	MS/2001	Post-doctoral Assoc. Wash. St. Univ.
A. Maddison	Temperature Dependence of Pu Equilibria	MS/2001	Staff Scientist, Intl Atomic Energy Agency, Vienna
S. Loyland	Contaminant Cycling in a Stratified Limnological System	PhD/2000	Staff Scientist, Amersham Biosciences, NJ
S. Glover	Distribution of Thorium and Trace Elements in Human Tissue	PhD/1998	Staff Scientist, NIOSH, Cincinnati, OH.
[P1P]A. Sowder	The Formation, Transformation, and Stability of Uranyl Mineral Phases	PhD/1998	Electric Power Research Institute

[P1P]PhD in Environmental Engineering awarded by Clemson University.

UNDERGRADUATE STUDENTS:

Student	Research Topic	Period of Research	Activity Upon Graduation
H. Felmy (U. Wa)	Calorimetry for actinide complexation by HMBA	Jun 2011 – Aug 2011	
K. O'Shea	Capillary Electrophoresis	Jan 2010 - present	
K. Fitzgerald	NMR Studies of Actinide-Gluconate Complexation	Jan 2010 - present	
N. Woods	Lanthanide Electrochemistry	Jan. 2009 - present	
M. Gott, BS Tenn Tech U	ESI-MS for Lanthanide-NTA Complexes	Jun 2010 – Aug 2010	Graduate school at U. Missouri - Columbia
S. Miley	Lanthanide and Actinide Separations by Capillary Electrophoresis	2009 –2010	Technician at PNNL
C. Heathman	Actinide Separations by Capillary Electrophoresis	2005 – 2007	Chemistry grad student at WSU
B. Bottenus	Actinide Complexation by Gluconate	2003 – 2006	PhD Staff Scientist, Pacific Northwest National Lab
E. Finn, BS Whitman College, WA	Ag Catalysis of Cr(III) Oxidation by Persulfate in NaOH	2001 - 2003	MS Staff Scientist, Pacific Northwest National Lab
T. Oshiro	Cr Hydrolysis and Aging	2000 - 2001	PhD Staff Scientist, Law. Livermore Natl Lab
S. Herbison	Fission Track Analysis of ^{239P}Pu in Sediments	1998 - 2000	Staff Chemist, Micron Technologies, ID
J. Hache	U(VI) Silicate Solid Phases	2000	Physician in PA
B. Herbison	Solid Solutions in U(VI) Solid Phases	2000 – 2002	Dentist in WA
M. Lewis	Temperature Effects on Uranyl Complexation with Acetate	1999 – 2000	Chemistry grad student at Univ. of Alaska, Fairbanks
H. Neff, BS Lewis Clark State College, ID	Synthesis of Cs and Sr Substituted U(VI) Solid Phases	1999	Pharmacist in ID
T. George	Solvent Extraction for Pu in Organic Fractions	1998 – 1999	Lab technician, University of Idaho
J. Sonken	Temperature Dependence of EuP^{3+P} Complexation with Oxalate	1997	High school chemistry teacher, Seattle, WA
B. Wilkinson	Method for Total Sediment Dissolution	1997	Analytical Chemist, Microtrace Co., ID

POST-DOCTORAL ASSOCIATES:

Name Univ. of Ph.D. Degree	Research Area	Period of Research	Current Position
Dr. Neetika Rawat BARC, India	Actinide Complexation in Mixed Solvent Systems	Nov. 2011 - present	Staff member, BARC, Mumbai, India
Dr. Laurent Vio, Univ. Lyon, France	Capillary electrophoresis and Microfluidic Devices	Jan. 2011 – Dec. 2011	Staff member, CEA, France
Dr Zhicheng Zhang, Wash. St. U.	Actinide Complexation Studies	Dec. 2006 – June 2007	Research Faculty, WSU
Dr. Sarah Pepper U. Manchester,UK	Actinide Adsorption Studies	Jan. 2003 – Nov. 2006	PhD Staff Scientist, Idaho Nat. Lab
Dr. Steve Lamont Wash. St. U.	Fission Track Analysis	Jan 2001 – June 2001	PhD Staff Scientist, Los Alamos Nat. Lab
Dr. Ben Ritherdon U. Manchester, UK	Chemistry of Cr and Pu in Alkaline Systems of Concentrated Electrolytes	Nov. 1998-Feb. 2001	Lecturer, Univ. of Newcastle, U.K.
Dr. Minfang Yeh U. of Kentucky	Temperature Dependence of Actinide Complexation	Aug. 1997-Nov. 1999	Staff Scientist, Brookhaven Nat'l Lab
Dr. Cindy Phelps U. of Idaho	Supercritical CO_2 Extraction of Actinides, Solid Solution Chemistry of U(VI) Phases	Nov. 1998-Aug. 1999	Asst. Prof., Chico State Univ., Chico, CA
Dr. J. Schaumloffel Wash. St. U.	Thermodynamic Modeling of the U(VI) Solid Phases	Dec. 1996-July 1997	Asst. Prof., State University of NY, Oneonta

RESEARCH SCIENTISTS:

Name Position Title	Research Area	Period of Research	Current Responsibilities
Dr. Zhicheng Zhang Assoc. Research Prof., WSU	Actinide Complexation	Nov. 2009 - present	General lab oversight; specific technical oversight in actinide coordination chemistry

VISITING SCIENTISTS:

Name Institution	Research Area	Period of Research	Current Position
Dr. Han Jun	Environmental radiochemistry	Jun 2012 – Aug 2012	Staff Scientist, INPC, Mianyang, China
Laurence Hull Idaho National Lab	Actinide Geochemistry	August 2004 – Aug. 2005	Staff Scientist, INL
Yoshitaka Minai Musashi University, Tokyo	Radionuclide Sorption on Geomedia	Dec 2004 – March 2005	Professor , Musashi University
Dr. Jing-Guo Hou Langzhou University, China	CE-ESI-MS Applied to Inorganic Speciation	Feb. 2002 – May 2004	Visiting Scientist, Georgia State University
Dr. Alena Paulenova Comenius University, Slovakia	Temperature Dependence of Actinide Complexation	Nov. '01- Aug. '03	Asst. Prof., Oregon State University
Dr. Myung Ho Lee Korean Atomic Energy Research Institute	Fission Track Analysis and Spatially Resolved Secondary Ionization Mass Spectrometry	Feb. '02 – Feb. '04	Korean Atomic Energy Research Institute
Dr. Yoon Y. Yoon Korean Institute of Geochemistry and Mineralogy	Neutron Activation Analysis and the Determination of Ultra-Trace Uranium	Sept. '02 – Sept. '03	Korean Institute of Geology and Minerals