

J. G. Tobin, University of Wisconsin-Oshkosh

Education:

1983 Ph.D, Physical Chemistry, University of California-Berkeley
1978 BS, Chemistry, with Distinction from the University of Wisconsin-Madison

Research and Professional Experience:

2015-Present: Lecturer, Univ. of Wisc.-Oshkosh, <http://www.uwosh.edu/facstaff/tobin/welcome>
2013-Present: Affiliate, Lawrence Berkeley National Laboratory, Berkeley, CA
1989–2015: Staff Scientist/Principal Investigator, Lawrence Livermore Natl Lab, Livermore, CA
1983–1989: Assistant Professor of Chemistry, University of Wisconsin-Madison

2016 Spring Teaching Assignments

- Workshop Physical Science 101
- Physics 108 Lab
- Chemistry 106 Lab

2016 Publications

- C.H. Booth, S. A. Medling, J. G. Tobin, R. E. Baumbach, E. D. Bauer, D. Sokaras, D. Nordlund, and T.-C. Weng, "Probing the f-state configuration of URu₂Si₂ with U LIII -edge resonant x-ray absorption spectroscopy," Phys. Rev. B **94**, 045121 (2016).
- P. Söderlind, A. Landa, J. G. Tobin, P. Allen, S. Medling, C. H. Booth, E. D. Bauer, J. C. Cooley, D. Sokaras, T.-C. Weng, and D. Nordlund, "On the valence fluctuation in the early actinide metals," J. Electron Spectroscopy and Rel. Phen. **207**, 14 (2016).

2016 Invited Talks

- J.G. Tobin, "Covalency in Oxidized Uranium," 6th International Workshop on the Dual Nature of f-Electrons, Idaho Falls, Idaho, USA, June 6-10, 2016, <https://iwdn2016.inl.gov/SitePages/Home.aspx>
- J.G. Tobin, "MaRIE, Electron Correlation in Pu, & An Idea," MaRIE Workshop on "Opportunities for New X-Ray Sources to Shed Light on Mesoscale Functional Materials," Santa Fe, NM, USA, July 21-22, 2016, <http://www.lanl.gov/science-innovation/science-facilities/marie/index.php>

2016 International Committees

- Actinide X-ray Absorption Spectroscopy Conference (AnXAS), Scientific Advisory Committee, The Queen's College, University of Oxford, Oxford, UK, April 11-13, 2017, <http://envradnet.co.uk/anxas-conference/>.
- The Actinides 2017 Conference, International Advisory Committee, Sendai, Japan, July 9-14, 2017, <http://actinides2017.jp/>.

Research Publications

	194 total
Refereed Publications	138
Editorships	4
Book Chapter/Review Article	2
Proceedings and News Articles	50

Web of Knowledge

14-April-2015
H Index = 32

Synergistic Activities:

2014 Fellow, American Physical Society
2002-2013 Outreach to Russian Laboratories: 8 visits to Russia (Moscow, VNIIEF, VNIITF)
2003-2015 Head, Actinides Steering Committee, MRS Actinides Symposia Series
2010-2015 Chair, Actinides and Rare Earths Focus Sessions at the AVS Intl Symposia
2009 Co-Lead Organizer, Actinides 2009 Int'l Meeting, San Francisco, CA

Biographical Sketch of J. G. Tobin, University of Wisconsin-Oshkosh

Some Key Actinide Publications

- K.T. Moore, M.A. Wall, A.J. Schwartz, B.W. Chung, D.K. Shuh, R.K. Schulze, and **J.G. Tobin**, "The Failure of RS Coupling in the 5f States of Pu", Phys. Rev. Lett. **90**, 196404 (2003).
- **J.G. Tobin**, B.W. Chung, R. K. Schulze, J. Terry, J. D. Farr, D. K. Shuh, K. Heinzelman, E. Rotenberg, G.D. Waddill, and G. Van der Laan, "Resonant Photoemission in f-electron Systems: Pu and Gd", Phys. Rev. B **68**, 155109 (2003).
- G. van der Laan, K.T. Moore, **J.G. Tobin**, B.W. Chung, M.A. Wall, and A.J. Schwartz, "Applicability of the spin-orbit sum rule for the actinide 5f states," Phys. Rev. Lett. **93**, 097401 (2004).
- **J.G. Tobin**, K.T. Moore, B.W. Chung, M.A. Wall, A.J. Schwartz, G. van der Laan, and A.L. Kutepov, "Competition Between Delocalization and Spin-Orbit Splitting in the Actinide 5f States," Phys. Rev. B **72**, 085109 (2005).
- S.W. Yu, **J.G. Tobin**, and P. Söderlind, "An Alternative Model for Electron Correlation in Pu," J. Phys. Cond. Matter **20**, 422202 (2008), Fast Track Communication.
- S.-W. Yu, **J. G. Tobin**, J. C. Crowhurst, S. Sharma, J. K. Dewhurst, P. Olalde-Velasco, W. L. Yang, and W. J. Siekhaus, "f-f origin of the insulating state in uranium dioxide: X-ray absorption experiments and first-principles calculations," Phys. Rev. B **83**, 165102 (2011).
- **J.G. Tobin** and S.-W. Yu, "Orbital Specificity in the Unoccupied States of UO₂ from Resonant Inverse Photoelectron Spectroscopy," Phys. Rev. Lett, **107**, 167406 (2011).
- **J.G. Tobin**, S.-W. Yu, C.H. Booth, T. Tyliszczak, D.K. Shuh, G. van der Laan, D. Sokaras, D. Nordlund, T.-C. Weng, and P. S. Bagus, "Oxidation and Crystal Field Effects in Uranium," Phys. Rev. B **92**, 035111 (2015).
- **J.G. Tobin**, S.-W. Yu, R. Qiao, W.L. Yang, C.H. Booth, D.K. Shuh, A.M. Duffin, D. Sokaras, D. Nordlund, and T.-C. Weng, "Covalency in Oxidized Uranium," Phys. Rev. B **92**, 045130 (2015).

Some Key Invited Talks (Out of 106 during 1991–2014):

- **J.G. Tobin**, "Delocalization vs. Spin-Orbit Splitting in the Actinide 5f States," European Physical Society Meeting, Prague, Czech Republic, 2004.
- **J.G. Tobin**, "Using Nano-focused Bremsstrahlung Isochromat Spectroscopy to Determine the Unoccupied Electronic Structure of Pu," CEA-NNSA Workshop, Paris, France, 2005.
- **J. G. Tobin**, "Spin and orbital polarization: the key to explaining the unusual behavior of Pu and the actinides," Strongly Correlated Electron Systems Mtg, SCES05, Vienna, Aust., 2005.
- **J.G. Tobin**, "An alternative model for electron correlation in Pu," Pu Fut., Dijon, France, 2008.
- **J.G. Tobin**, "A Path Forward to Advanced Nucl. Fuels: Spectroscopic Calorimetry of Nuclear Fuel Matls," Wksp on Mat'l's Challenges in Nucl. Energy Tech., Oskarshamn, Sweden, 2009.
- **JG Tobin**, "Resonant Inverse Photoelectron Spectroscopy of the Oxides of Uranium and Cerium," 10th Intl Pu Wksp, Presidium of the Russ. Acad. Sci., Moscow, Russia, 2010.
- **JG Tobin**, "Orbital Specificity in the Unoccupied States of UO₂ from Resonant Inverse Photoelectron Spectroscopy," Dual Nature of 5f Electrons Workshop, Himeji, Japan, 2012.
- **JG Tobin**, "Recent Developments in the Pursuit of Act. Electronic Structure: From Inverse Photoemission to Pu Cluster Calculations," Atomic Weapons Est., Aldermaston, UK, 2013.
- **JG Tobin**, "Soft X-ray Spectroscopy of the Act.," Act. 2013 Intl. Conf., Karlsruhe, Germ. 2013.