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Professional Preparation

1996 University of California, Santa Cruz, Physics, Ph.D.
1989 University of California, San Diego, Physics, B. S.

Appointments

2000–present Principal Investigator, Chemical Sciences Division, Lawrence Berkeley National Laboratory
1999–present Staff Scientist, Chemical Sciences Division, Lawrence Berkeley National Laboratory
1997–1999 Postdoctoral Associate, University of California, Irvine and Los Alamos National Laboratory
1997–1997 Postdoctoral Associate, Lawrence Berkeley National Laboratory

Selected Professional Service

Stanford Synchrotron Radiation Laboratory Proposal Review Panel, Member 2013-present
Divisional Associate Editor for Physical Review Letters, 2008-present
Co-chair of *Symposium Y, "Actinides - Basic science, applications, and technology,"* Materials Research Society Spring Meeting, San Francisco, April 9-13, 2012.
Lawrence Berkeley National Laboratory Library Committee, Member 2005-2010, Chair June 2005-2010
Co-chair of the *SSRL Workshop: Advanced Topics in Analysis and Applications*, SLAC National Accelerator Center, Menlo Park, Oct. 15, 2008.
Stanford Synchrotron Radiation Laboratory Users' Executive Committee, Member 1999-2003, Vice-chair in 2001, Chair in 2002, ex-officio 2003.
Co-chair of the *Stanford Synchrotron Radiation Laboratory User Meeting*, Menlo Park, Oct. 2001

Selected Publications

- [1] C. H. Booth, F. Bridges, G. H. Kwei, J. M. Lawrence, A. L. Cornelius, and J. J. Neumeier, "Direct relationship between magnetism and MnO_6 distortions in $\text{La}_{1-x}\text{Ca}_x\text{MnO}_3$." *Phys. Rev. Lett.* **80**, 853 (1998).
- [2] C. H. Booth, F. Bridges, G. H. Kwei, J. M. Lawrence, A. L. Cornelius, and J. J. Neumeier, "Lattice effects in $\text{La}_{1-x}\text{Ca}_x\text{MnO}_3$ ($x=0\rightarrow 1$): Relationship between distortions, charge distribution, and magnetism." *Phys. Rev. B.* **57**, 10440 (1998).
- [3] C. H. Booth, D. E. MacLaughlin, R. H. Heffner, R. Chau, M. B. Maple and G. H. Kwei, "Pd/Cu site interchange and non-Fermi-liquid behavior in UCu_4Pd ." *Phys. Rev. Lett.* **81**, 3960 (1998).

- [4] C. H. Booth, and F. Bridges, "Improved self-absorption correction for extended x-ray absorption fine-structure measurements." In *Proceedings of the 12th International Conference on X-ray Absorption Fine Structure (XAFS XII)*; Malmo, Sweden; June 22-27, 2003. *Physica Scripta* **T115**, 202 (2005).
- [5] C. H. Booth, M. D. Walter, M. Daniel, W. W. Lukens, and R. A. Andersen, "Self-contained Kondo effect in single molecules." *Phys. Rev. Lett.* **95**, 267202 (2005).
- [6] C. H. Booth, M. D. Walter, D. Kazhdan, Y.-J. Hu, W. W. Lukens, E.D. Bauer, L. Maron, O. Eisenstein, and R. A. Andersen, "Decamethylterbocene Complexes of Bipyridines and Diazabutadienes: Multiconfigurational Ground States and Open-shell Singlet Formation." *J. Am. Chem. Soc.* **131**, 6480 (2009).
- [7] C. H. Booth, D. Kazhdan, E. Werkema, M. D. Walter, W. W. Lukens, E. D. Bauer, Yung-Jin Hu, L. Maron, O. Eisenstein, M. Head-Gordon, and R. A. Andersen, "Intermediate-valence tautomerism in decamethylterbocene complexes of methyl-substituted bipyridines." *J. Am. Chem. Soc.* **32**, 17536 (2010).
- [8] C. H. Booth, Yu Jiang, D. L. Wang, J. N. Mitchell, P. H. Tobash, E. D. Bauer, M. A. Wall, P. G. Allen, D. Sokaras, D. Nordlund, T.-C. Weng, M. A. Torrez, and J. L. Sarrao, "Multiconfigurational Nature of 5f Orbitals in Uranium and Plutonium Intermetallics." *PNAS* **109**, 10205 (2012).

Selected Invited Talks

- [1] American Physical Society March Meeting, Atlanta, Georgia, March 1999. "Local structure, hole localization and magnetism in CMR perovskites."
- [2] International Conference on X-Ray Absorption Fine Structure, XAFS XI, Aiko, Japan, July 2000. "Lattice disorder in strongly-correlated lanthanide and actinide intermetallics."
- [3] Physics Department Colloquium, University of California, Davis January 28, 2002. "Non-Fermi liquid behavior in *f*-electron intermetallics: new state of matter or cruel joke?"
- [4] The International Conference on Strongly Correlated Electron Systems, Vienna, Austria, July 22-26, 2005. "Kondo and the nanoscale: evidence of size effects in intermetallic nanoparticles and organometallic molecules."
- [5] UC Berkeley College of Chemistry Inorganic Seminar, September 10, 2010. "Configuration interaction effects in cerium and ytterbium metallocenes: Kondo-like contributions to bonding in nanoscale systems."
- [6] Physics and Chemistry of the Heavy Elements Symposium, Santa Fe, June 20-22, 2012. "Strong correlations as multiconfigurational *f*-orbital states: From lanthanide organometallics to actinide Intermetallics."
- [7] American Chemical Society Spring Meeting: Symposium in Honor of Richard G. Haire, New Orleans, LA, April 7-12, 2013. "Multiconfigurational nature of 5f orbitals in uranium and plutonium and their intermetallic compounds."
- [8] International Conference on Actinides, Karlsruhe, Germany, July 21-26, 2013. "Multiconfigurational ground states in actinide intermetallics from resonant x-ray emission spectroscopy."