

Taku Watanabe

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- OBJECTIVE** Seeking a tenure track faculty position in chemical engineering
- EDUCATION** **Ph.D. in Materials Science and Engineering**, University of Florida, May 2008
Advisor: Prof. Simon R. Phillpot
Dissertation: “*Thermal Transport in Uranium Dioxide and Diamond by Atomic Level Simulation*”
M.S. in Physics, University of Florida, May 2004
Advisor: Prof. Pierre Sikivie
B.E. in Physics, Stevens Institute of Technology, May 2000
Advisor: Prof. Edward A. Whittaker
GPA in physics 3.77/4.00, Class rank 1
- RESEARCH EXPERIENCES** **Postdoctoral Fellow**, Prof. Sholl’s group, School of Chemical & Biomolecular Engineering, Georgia Institute of Technology, Atlanta, GA, May 2008 – present
Graduate Assistant, Dr. Phillpot’s group, Department of Materials Science and Engineering, University of Florida, Gainesville, FL, May 2004 – April 2008
Internship, Mentor: Dr. Srinivasan G. Srivilliputhur, Los Alamos National Laboratory/MST-8, Los Alamos, NM, June 1 - September 30, 2006
Graduate Assistant, Dr. Sikivie’s group, Department of Physics, University of Florida, Gainesville, FL, Jan 2002 – April 2004
- PUBLICATIONS**
1. Watanabe, T., S. Keskin, S. Nair, and D.S. Sholl, Phys. Chem. Chem. Phys., (2009), in press.
 2. Andersson, D.A., T. Watanabe, C. Deo, and B.P. Uberuaga, Phys. Rev. B, (2009) **80** 6, 060101
 3. Watanabe, T., S.G. Srivilliputhur, P.K. Schelling, J.S. Tulenko, S.B. Sinnott, and S.R. Phillpot, J. Amer. Cer. Soc., (2009) **92** 4, p. 850-856.
 4. Vega, D.A., T. Watanabe, S.B. Sinnott, S.R. Phillpot, and J.S. Tulenko, Nucl. Tech. (2009) **165** 3, p. 308-312.
 5. Ni, B., T. Watanabe, and S.R. Phillpot, J. Phys.-Cond. Matt. (2009) **21** 8, 084219.
 6. Nerikar, P., T. Watanabe, J.S. Tulenko, S.R. Phillpot, and S.B. Sinnott, J. Nucl. Mater. (2009) **384** 1, p. 61-69.
 7. Yao, M., T. Watanabe, P.K. Schelling, P. Keblinski, D.G. Cahill, and S.R. Phillpot, J. Appl. Phys. (2008) **104** 2, p. 024905.
 8. Watanabe, T., S.B. Sinnott, J.S. Tulenko, R.W. Grimes, P.K. Schelling, and S.R. Phillpot, J. Nucl. Mater. (2008) **375** 3, p. 388-396.
 9. Shukla, P., T. Watanabe, J.C. Nino, J.S. Tulenko, and S.R. Phillpot, J. Nucl. Mater. (2008) **380** 1-3, p. 1-7.
 10. Watanabe, T., B. Ni, S.R. Phillpot, P.K. Schelling, and P. Keblinski, J. Appl. Phys. (2007) **102** 6, 063503.
 11. Angadi, M.A., T. Watanabe, A. Bodapati, X.C. Xiao, O. Auciello, J.A. Carlisle, J.A. Eastman, P. Keblinski, P.K. Schelling, and S.R. Phillpot, J. Appl. Phys. (2006) **99** 11, 114301
- SELECTED PRESENTATIONS**
- “Computational Study of Small Molecules with the Open Metal Sites in Cu-BTC and CPO-27-Ni” (oral presentation), AIChE, Nashville, November 13, 2009
 - “Molecular Adsorption in Metal-Organic Frameworks using Density Functional Theory” (poster presentation), GRC Inorg. Chem., University of New England, June 20, 2009

- “CO adsorption on AuPd(111) surfaces” (poster presentation), Computation and Energy: Search for Renewable and Sustainable Energy, Emory University, March 2, 2009
- “Radiation Damage and Thermal Transport in UO₂ by Atomic Level Simulations” (oral presentation), Woodruff NRE Seminar Series, Georgia Institute of Technology, December 4, 2008
- “Radiation Damage in UO₂ by Molecular Dynamics Simulation” (**invited talk**), CAARI, Dallas, August 12, 2008
- “Thermal Transport in Nuclear Fuel: Insights from Simulation” (oral presentation), ITCC29-ITES17 Session B26 Nuclear, June 27, 2007
- “Thermal Transport of Selected Oxide Ceramics for Nuclear Fuel Application by Molecular Dynamics Simulation” (poster presentation), FSMS, University of Florida, June 8, 2007
- “Thermal Transport in Nanocrystalline Ceramics by Atomic-Level Simulation” (oral presentation), MRS Session II7: Modeling and Simulation: Methods and Applications, San Francisco, April 13, 2007
- “Molecular Dynamics Simulation of Thermal Transport and Radiation Damage in UO₂” (oral presentation), TMS Session: Microstructural Processes in Irradiated Materials: Defect Clusters and Fundamental Radiation Effects, Orlando, March 1, 2007
- “Read-Shockley Model and Diamond Grain Boundaries” (poster presentation), UCSB ICMR Workshop, August 16, 2006
- “Molecular Dynamics Simulation of Radiation Damage on Uranium Dioxide” (oral presentation), LANL Student Symposium, Los Alamos, August 3, 2006
- “Read-Shockley Model and Diamond Grain Boundaries” (poster presentation), Florida AVS conference, March 2006
- “Extended Read-Shockley Model for Thermal Transport of Diamond Grain Boundaries by Molecular Dynamics Simulation” (oral presentation), Applied Diamond Conference, Argonne National Laboratory, May 19, 2005

AWARDS

Honorable mention in materials science, Florida AVS poster presentation, March 2006
Best teaching assistant award, Department of Physics in University of Florida, December 2002
Alfred M. Mayer Prize, Stevens Institute of Technology, May 2000

TEACHING EXPERIENCE

Teaching Assistant, *Materials*, undergraduate level, Materials Science and Engineering, University of Florida, Gainesville, FL, Spring 2005
Teaching Assistant, *Materials Laboratory*, undergraduate level, Materials Science and Engineering, University of Florida, Gainesville, FL, Fall 2004
Teaching Assistant, *Physics Laboratory 1 and 2*, undergraduate level, Department of Physics, University of Florida, Gainesville, FL, Fall 2000

PROFESSIONAL ACTIVITY

Reviewer for the Journal of Applied Physics

PROFESSIONAL AFFILIATIONS

Materials Research Society
 American Institute of Chemical Engineers
 Alpha Sigma Mu honor society

LANGUAGES

Japanese (native), English (fluent)

REFERENCES

Available upon request