



DANE MORGAN

UW-Madison

Dane Morgan obtained a B.S. in physics from Swarthmore College and an M.S. and Ph.D. in physics from U.C. Berkeley, the latter in 1998. He was a Postdoctoral Researcher and Research Scientist at MIT until 2004 and is now a Professor in Materials Science and Engineering and co-director of the Wisconsin Materials Institute at the University of Wisconsin-Madison. His work combines thermostatics and thermokinetics analysis with

atomic scale calculations to understand and predict materials properties.

A major focus of Dane's work is materials informatics and energy applications, including fuel cells, batteries, and nuclear materials. He also works in the areas of electron emitter cathodes, high-pressure geoscience and defect properties in semiconductors. His work has involved:

- Computational materials science for materials design
- Ab initio electronic structure and multiscale methods for large time / length scales and thermokinetics
- Ab initio based modeling of electrochemical systems and processes
- Machine learning techniques for accelerating materials analysis and discovery
- Additional application areas: nuclear materials and earth mantle materials

Dane has done extensive consulting work for industry, and in 2011 he served as vice president of research at Pellion Technologies, an energy technology startup company. He has graduated/trained over 50 students and postdocs and has published over 210 papers. At UW-Madison, Dane is the Harvey D. Spangler Professor of Engineering and a University of Wisconsin Vilas Scholar who has won multiple top paper awards.