

Anja Mudring returns to Iowa State University

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It would be misleading to say that Anja Mudring, the Glenn Murphy Professor of Engineering in the Department of Materials Science and Engineering, is new to Iowa State.

In fact, the Bonn, Germany, native is enjoying a homecoming to one of her favorite research institutions when she begins her appointment this fall.

“The research community here is the best quality,” said Mudring, who is also a professor at Ruhr University Bochum in Germany. “The professional associations have been so rewarding here that Iowa State drew me back.”



Anja Mudring

Mudring first came to Iowa State in 2001 as a postdoctoral research fellow with John Corbett, a distinguished professor of chemistry and a senior scientist at the Ames Laboratory.

She was an affiliate professor at Iowa State in 2006 and has been a visiting scientist at Ames Laboratory since 2007.

She started her independent scientific career with a Liebig fellowship funded by the Fonds of the German Chemical Industry at the University of Cologne, Germany from 2001 where she finished her habilitation in 2003. Then she moved with her group to the Ruhr-University Bochum a Professor in Chemistry. She has been an adjunct professor at the University of Alabama since 2008.

Mudring’s research focuses on the properties and applications of ionic liquids, which are salts in a liquid state. While these liquids are known primarily for their use as environmentally friendly solvents, Mudring believes their best application lies in materials synthesis, such as phosphors for solar cells and lighting and nanoparticles for catalysis.

She will also lead a research project at the Critical Materials Institute, a new Energy Innovation Hub launched by the U.S. Department of Energy under leadership of the Ames

Laboratory. There, she will explore the role of ionic liquids in methods to recover rare earth and other critical materials for recycling and reuse.

Mudring hopes her work can foster an exchange of people and ideas between Europe and the U.S., especially between the Ruhr-University Bochum and Iowa State. The first students from Bochum will come in spring 2014 and the DFG Cluster of Excellence RESOLV at the Ruhr-University Bochum will also provide an excellent research environment for engineering and science students from Iowa State. Mudring encourages undergraduate and graduate students as well as post-doctoral researchers to contact her about research opportunities abroad.

“Science is very global these days, and that’s a benefit to all,” said Mudring. “We can identify difficult problems and assemble a team of good people to address them, and it doesn’t really matter where they come from.”

Mudring was first drawn to chemistry and science as a child. Her natural curiosity led to experiments in the basement with chlorine, which caused her insurance agent father to joke that the family might need to increase its coverage.

Her childhood passions resulted in a degree in chemistry from the University of Bonn, Germany in 1995. She completed her Ph.D. in chemistry in 2001 at the Max Planck Institute for Solid State Research in Stuttgart, Germany.

It’s the unpredictable discovery that keeps Mudring fascinated by the discipline.

“It happens when are doing an experiment for a different purpose but get results you don’t at all expect—something that takes you in a completely new direction. It’s feeling almost child-like again, looking at things with big eyes, discovering the world around you. I enjoy that purely curiosity-driven experience.”

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