



Rising to Meet the Solar Energy Challenge

German and U.S. chemists discuss ways to advance solar energy chemistry

By Leslie A. Pray

On August 15, 2009, the German Embassy hosted a networking dinner in Washington, D.C., to discuss German-U.S. bilateral action in the wake of the first annual Chemical Sciences and Society Symposium (CS3). Thirty leading chemists from both countries attended the Embassy dinner, which was co-organized by the Gesellschaft Deutscher Chemiker (GDCh, German Chemical Society) and the American Chemical Society (ACS). CS3 was held three weeks prior, in Kloster Seeon, Germany, where chemists from China, Japan, Germany, the UK and U.S. met to identify major challenges in the chemical sciences that must be met before solar energy technologies can become an affordable option for widespread use.

Following welcome remarks by Christian Jörgens, Head of Section Science and Technology at the Germany Embassy (Washington, D.C.), and Wolfram Koch of GDCh, Robert Schlögl of Fritz-Haber-Institut der Max-Planck Gesellschaft (Berlin, Germany) summarized the highlights of CS3. Daniel Nocera, Massachusetts Institute of Technology (Cambridge, Mass.) made some additional introductory remarks about how the goal of the networking dinner was not to revisit the scientific topics addressed at CS3, as they will be described in a forthcoming white paper, but rather to “give funding agencies an idea about how they can help us, especially in a bilateral way, to move the solar agenda forward.”

Nocera opened the evening’s discussion by commenting on the role of the National Institutes of Health (NIH) postdoctoral program in catapulting biomedical research to the well-funded, prominent place it occupies today in U.S. science. He questioned whether solar energy research might similarly benefit from a comparable large-scale but bilateral postdoctoral program -- one that promotes transatlantic dialogue and encourages young

investigators in both Germany and the United States to become involved in international energy research. Dinner attendees brainstormed ways to set up such a program and debated how large it should be.

The focus of the discussion then shifted toward how to advance bilateral research efforts among already established chemists. Markus Behnke of the Deutsche Forschungsgemeinschaft (DFG, or German Research Foundation) and Luis Echegoyen of the U.S. National Science Foundation (NSF) described a multinational funding program, the International Collaboration in Chemistry between US Investigators and their Counterparts Abroad, or ICC. Founded in 2006, the ICC currently funds joint chemistry research projects between the U.S. and five countries (Austria, China, France, Germany, and the UK). In 2010, five additional countries, including Japan, will be included. In 2006, the ICC awarded \$1.9 million; in 2009, \$9.8 million. The awards are full-fledged research grants, with partnering laboratories in each country receiving the equivalent of US\$100-150 thousand per year from their respective national science funding agencies.

The ICC is not solely a German-U.S. bilateral program. However, it is one of the only formal programs currently in place serving as a conduit for bilateral efforts to advance the chemistry that is at the heart of solar energy technology. Echegoyen encouraged “chemists with solar energy research interests” to seek out synergistic collaborations with their foreign colleagues and apply.