#### **Frank Osterloh**

#### Guest Editor for this issue of *MRS Bulletin* University of California, Davis, CA 95616, USA; e-mail Osterloh@chem.ucdavis.edu.

Osterloh is an associate professor in the Department of Chemistry at the University of California, Davis (UCD). After receiving his PhD degree in chemistry in 1997 from the Carl von Ossietzky Universität in Oldenburg, Germany, he completed postdoctoral training at Harvard University with Professor Richard H. Holm. Since his faculty appointment at UCD in 2000, Osterloh's work has focused on the chemistry

and physical properties of inorganic nanoparticles and their function as chemical sensors and solar energy conversion devices.



#### **Bruce Parkinson**

Guest Editor for this issue of *MRS Bulletin* Department of Chemistry, University of Wyoming, WY 82071, USA; bparkin1@uwyo.edu.

Parkinson is a professor in the Department of Chemistry and the School of Energy Resources at the University of Wyoming (UW). He received his BS degree in chemistry at Iowa State University in 1972 and his PhD degree from the California Institute of Technology in 1977. Parkinson also was a postdoctoral scientist at Bell Laboratories in 1978. He then spent time at the Ames Labora-

tory and the Solar Energy Research Institute (now known as the National Renewable Energy Laboratory). He moved to the Central Research and Development Department of the DuPont Company in 1985, and in 1991, he became professor of chemistry at Colorado State University until his departure in 2008, when he joined UW. Parkinson's current research includes materials chemistry, UHV surface chemistry, and photoelectrochemical energy conversion. He has more than 175 peer-reviewed publications, holds five U.S. patents, and is a fellow of the AAAS.



#### **R. Morris Bullock**

Pacific Northwest National Laboratory, PO Box 999, K2-57, Richland, WA 99352, USA; tel. 509-372-6589; and e-mail bullock@pnl.gov. Bullock is a laboratory fellow at Pacific Northwest National Laboratory (PNNL) and is the director of the Center for Molecular Electrocatalysis, an Energy Frontier Research Center funded by the U.S. Department of Energy. He received his BS degree from the University of North Carolina at Chapel Hill, and his PhD degree from the University of Wisconsin, where he worked for Chuck Casey. Bullock was a post-

doctoral researcher with Jack Norton at Colorado State University from 1984 to 1985. Before joining PNNL, he was at Brookhaven National Laboratory (Long Island, NY) from 1985 to 2006.



## Kazunari Domen

University of Tokyo, Japan; tel. +81-3-5841-1148; and e-mail www.domen.t.u-tokyo.ac.jp. Domen is a professor at the University of Tokyo. He received his BSc degree (1976), his MSc degree (1979), and his PhD degree (1982) in chemistry from the University of Tokyo. Domen joined the Tokyo Institute of Technology in 1982 as an assistant professor and was subsequently promoted to associate professor in 1990 and professor in 1996. He moved to the University of Tokyo in 2004. His current research interests include heterogeneous catalysis and materials

chemistry, with particular focus on surface chemical reaction dynamics, photocatalysis, solid-acid catalysis, mesoporous materials, and fuel cell catalysts.

DOI: 10.1557/mrs.2010.6



### Daniel DuBois

#### Pacific Northwest National Laboratory, PO Box 999, K2-57, Richland, WA 99352, USA; tel. 509-375-2331; and e-mail daniel.dubois@pnl.gov.

DuBois is a laboratory fellow at Pacific Northwest National Laboratory (PNNL) and is the associate director of the Center for Molecular Electrocatalysis, an Energy Frontier Research Center funded by the U.S. Department of Energy. He received his BA degree from the University of Indianapolis, and his PhD degree from The Ohio State University, where he worked for Devon Meek.

DuBois performed his postdoctoral studies with Roald Hoffmann at Cornell University and with professor Gareth Eaton at the University of Denver. DuBois also worked at the National Renewable Energy Laboratory (Golden, CO) from 1981 to 2005. His research interests include the catalytic interconversion of fuels and electricity, synthetic organometallic and inorganic chemistry, and thermodynamic studies relevant to catalysis.



#### Akihiko Kudo

Department of Applied Chemistry, Tokyo University of Science, 1-3 Kagurazaka, Shinjuku-Ku, Tokyo 162-8601, Japan; tel. 81-3-5228-8267; and e-mail a-kudo@rs.kagu.tus.ac.jp.

Kudo is a professor in the Department of Applied Chemistry, in the Faculty of Science, and the Research Institute for Science and Technology, Energy and Environment Photocatalyst Research Division at Tokyo University of Science (TUS). He received his BS degree in 1983 from TUS, his PhD degree in 1988 from the Tokyo Institute of

Technology, and was a postdoctoral fellow at the University of Texas, Austin, from 1988 to 1989. Kudo also was a research associate at the Tokyo Institute of Technology until 1995. He was a lecturer in 1995, an associate professor in 1998, and full professor in 2003 at Tokyo University of Science. His research interests include photocatalysts for water splitting, electrocatalysis, and luminescence materials.



#### Kazuhiko Maeda University of Tokyo, Japan; tel. +81-3-5841-1652; and e-mail kmaeda@ chemsys.t.u-tokyo.ac.up.

Maeda is currently an assistant professor at the University of Tokyo. He received his BSc degree from the Tokyo University of Science (2003), his MSc degree from the Tokyo Institute of Technology (2005), and his PhD degree from the University of Tokyo (2007). From 2008 to 2009, Maeda was a postdoctoral fellow at the Pennsylvania State University, working with Professor Thomas E. Mallouk. His research

interests include photocatalytic and photoelectrochemical water splitting using semiconductor particles of (oxy)nitrides, inorganic metal oxide nanosheets, and polymeric carbon nitride, combining nanotechnology and materials chemistry.



#### Mary Rakowski DuBois

#### Pacific Northwest National Laboratory, PO Box 999, K2-57, Richland, WA 99352, USA; tel. 509-375-2196; and e-mail mary.rakowskidubois@pnl.gov.

Rakowski DuBois is a scientist at Pacific Northwest National Laboratory (PNNL). She joined the faculty of the University of Colorado in 1976, after completion of her PhD degree at the Ohio State University with Daryle Busch and postdoctoral work with Earl Muetterties at Cornell University. In 2007, she moved to the Pacific Northwest National Laboratory at Rich-

land, Washington. Her research interests have included the syntheses and studies of organometallic and metallosulfur complexes that function as catalysts or models for heterogeneous catalysts.



Jenny Y. Yang Pacific Northwest National Laboratory, PO Box 999, K2-57, Richland, WA 99352, USA; tel. 509-372-4639; and e-mail Jenny.yang@pnl.gov.

Yang is a scientist at Pacific Northwest National Laboratory (PNNL) working in the Center for Molecular Electrocatalysis, an Energy Frontier Research Center funded by the U.S. Department of Energy. She received her BS degree from the University of California, Berkeley, and her PhD degree from the Massachusetts Institute of Technology

in 2007, where she worked with Professor Daniel Nocera. Yang then did her postdoctoral work at PNNL with Daniel DuBois. Her research interests include synthetic inorganic chemistry and small molecule catalysis relevant to the generation and utilization of chemical fuels.



#### Jin Zhong Zhang

University of California, Santa Cruz, CA 95064, USA; tel. 831-459-3776; and e-mail zhang@chemistry.ucsc.edu.

Zhang is a full professor of chemistry and biochemistry at the University of California, Santa Cruz (UCSC). He received his BSc degree in chemistry from Fudan University, Shanghai, and his PhD degree in physical chemistry from the University of Washington. He was a postdoctoral research fellow at the University of California, Berkeley, until he joined the faculty at UCSC in 1992. His recent research focuses on optical

and dynamic properties of nanomaterials and their applications in solar energy conversion and biomedical detection/therapy. Zhang is a fellow of the American Association for the Advancement of Science and the American Physical Society and has served as senior editor for the *Journal of Physical Chemistry* since 2004.



# High Resolution RBS

National Electrostatics Corporation has added Ångstrom level, High Resolution RBS to the RC43 Analysis System for nanotechnology applications. A single Pelletron instrument can now provide RBS, channeling RBS, microRBS, PIXE, ERDA, NRA, and HR-RBS capability, collecting up to four spectra simultaneously. Pelletron accelerators are available with ion beam energies from below 1 MeV in to the 100 MeV region.

www.pelletron.com Phone: 608-831-7600 E-mail: nec@pelletron.com Full wafer version of the model RC43 analysis end station with High Resolution RBS Detector.

National Electrostatics Corp.