



## The MRS Awards Program honors outstanding contributions to materials research



### Guo to receive MRS Innovation in Materials Characterization Award

Jinghua Guo, a senior scientist at Lawrence Berkeley National Laboratory (LBNL), an adjunct professor in the Department of Chemistry and Biochemistry at the University of California, Santa Cruz, and a Fellow of the American Physical Society, is being honored with the Materials Research Society (MRS) Innovation in Materials Characterization Award “for pioneering *in situ/operando* soft x-ray spectroscopy characterization of interfacial phenomena

in energy, catalysis and chemical materials science.”

Guo’s research focuses on soft x-ray spectroscopy (XAS, XES, and RIXS) of materials and the study of energy conversion, energy storage, and catalytic

processes. He has built *in situ/operando* cells for the soft x-ray spectroscopy study of catalytic and electrochemical solid/gas and solid/liquid interfaces in realistic reaction conditions.

Soft x-ray spectroscopy offers electronic structure characterization of materials in energy conversion, energy storage, and catalysis regarding functionality, complexity of material architecture, and chemical interactions. His work has shown

the power of *in situ/operando* soft x-ray spectroscopy characterization techniques of interfacial phenomena revealing the mechanism of charge transfer and chemical transformation of solid/gas and solid/liquid interfaces of energy storage and catalytic materials in a realistic environment.

Guo received a BSc degree in optical engineering from Zhejiang University, China, a MS degree in physics from the Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, and a PhD degree in physics from Uppsala University, Sweden. He continued as a postdoc at Uppsala University, and then as a junior faculty member in the Physics Department. He then moved to the Advanced Light Source facility at LBNL in 2001, and is currently a senior scientist and Photon Science Operation RIXS Program Lead. The award is endowed by Gwo-Ching Wang and Toh-Ming Lu.



### Duan to receive Mid-Career Researcher Award

Xiangfeng Duan, University of California, Los Angeles (UCLA), will receive the Mid-Career Researcher Award “for contributions to rational design and assembly of layered materials for electronic, photonic and energy devices.” The award recognizes exceptional achievements in materials research made by mid-career professionals. The recipient must also demonstrate notable

leadership in the materials area.

Duan’s research interests include nanoscale materials, devices, and their applications in electronic and energy technologies. His laboratory’s research focuses on rational design

and synthesis of highly complex nanostructures with precisely controlled chemical composition, structural morphology, and physical dimensions; fundamental investigations of new chemical, optical, electronic, and magnetic properties; and exploration of new technological opportunities arising in these nanoscale materials.

Duan received his BS degree from the University of Science and

Technology of China in 1997, and his PhD degree from Harvard University in 2002. He joined UCLA as a Howard Reiss Career Development Chair in 2008, and was promoted to associate professor in 2012 and full professor in 2013. Duan has published more than 300 papers and holds 45 issued US patents. He has received the Young Investigator Award from the International Union of Materials Research Societies and Singapore Materials Research Society and the Beilby Medal and Prize from the Institute of Materials, Minerals and Mining, and the Royal Society of Chemistry. He is currently an elected Fellow of the Royal Society of Chemistry and the American Association for the Advancement of Science.

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