



BING SHEU

XIAONING
JIANG

Measuring and Characterizing Nanotechnology

THE ADVANCEMENT OF NANOTECHNOLOGY has been closely related to the development of nanometrology and nanocharacterization. Property measurements of nanomaterials and nanostructures, nanofabrication process metrology, and nanodevice performance evaluations present a great challenge to conventional metrology and characterization instruments because of the difficulties associated with nanoscale dimensions. It is our pleasure to introduce Prof. Guangyong Li and Prof. Zuobin Wang as the guest editors of this special issue of *IEEE Nanotechnology Magazine* on nanometrology and nanocharacterization.

Dr. Li is an associate professor in the Department of Electrical and Computer Engineering at the University of Pittsburgh. He received his Ph.D. degree in electrical engineering from Michigan State University, East Lansing, in 2006. His research interests include scanning probe microscopy; nanodevices and biosensors; the modeling, simulation, and

characterization of solar cells; and micro/nanorobotic systems. He has published more than 60 articles in journals and 70 papers in conference proceedings. Dr. Li and his coauthors received the 2006 IEEE Transactions on Automation Science and Engineering Best Paper Award. He served as vice president of conferences (2017–2018) and vice president of technical activities (2014–2015) for the IEEE Nanotechnology Council. Dr. Li chaired the 17th IEEE International Conference on Nanotechnology in Pittsburgh in July 2017 and cochaired the July 2020 version of this same conference in virtual format.

Dr. Wang is a professor and the director of the International Research Center for Nano Handling and Manufacturing of China, Changchun University of Science

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and Technology. He has also been a visiting professor with the University of Bedfordshire, United Kingdom, since 2009. He received his Ph.D. degree in optical engineering from the University of Warwick, United Kingdom, in 1997, sponsored by the Sino-British Friendship Scholarship Scheme. His research interests include nanomanipulation, nanomanufacturing, and nanomeasurements and their applications in materials and biomedicine. He has published more than 100 papers in journals and conference proceedings.

Dr. Wang is the founding chair of the IEEE International Conference on Manipulation, Manufacturing and Measurement on the Nanoscale (3M-NANO) and serves as vice president and executive secretary of the 3M-NANO International Society. **N**