Editorial

As of July 2016, I am taking on the task as Editor of *Sensors and Materials*.

My educational background is in applied physics and electrical engineering and I worked on the development of microelectromechanical systems (MEMS) for applications in harsh environments. For my doctorate, I conducted research in the areas of design, microfabrication, packaging, and performance of miniaturized sensors and actuators. I investigated microstructural characteristics and mechanical properties of thin-film materials, developed the requisite microfabrication technologies, and demonstrated the operation of the first surface micromachined silicon carbide transducers at high temperatures (up to 950 °C). Other projects from this period included the development of micromachined devices using electroless nickel plating and an icing onset detection system for potential aerospace applications. The latter work was partly described in my first publication is this journal [*Sensors and Materials* **12** (2000) 1].

My current research focuses on the development of medical devices to address unmet clinical needs by leveraging MEMS technology along with advances in biomaterials, electronics, and nanotechnology. Areas of emphasis include implantable and wearable wireless sensors for physiological monitoring as well as bioartificial organs based on silicon nanopore membrane (SNM) technology.

I am a professor at the University of California, San Francisco in the Department of Bioengineering and Therapeutic Sciences (BTS), a joint department of the UCSF Schools of Pharmacy and Medicine. I also serve as Technical Director of The Kidney Project, a collaborative effort to develop an implantable bioartificial kidney (http://kidney.ucsf.edu). Additionally, as the Director of the Biodesign Laboratory and a founding member of the UCSF Pediatric Device Consortium, I participate in multiple projects, including that on the development of a smart diaphragm that monitors fluorescence and impedance of cervical tissue during pregnancy to detect early signs of preterm birth. My laboratory is also adapting SNM technology to develop an implantable bioartificial pancreas for the treatment of Type 1 diabetes, as well as a high-efficiency gas exchange membrane for extracorporeal membrane oxygenation (ECMO) applications.

I am honored by the opportunity to bring my competencies in MEMS technology and biomedical devices to the editorial team, and I am looking forward to fruitful cooperation with the Editor-in-Chief Prof. M. Ishida and the Editors Profs. M. Toko and J. Wilde.

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