


Jason P. Rolland

Guest Editor for this issue of *MRS Bulletin*

Diagnostics For All, Cambridge, MA, USA; tel. 617-494-0700; and email jrolland@dfa.org. Rolland is the senior director of research at Diagnostics For All. He has a BS degree in chemistry from Virginia Tech and a PhD degree in polymer chemistry from the University of North Carolina at Chapel Hill. His background is in biomaterials, microfluidics, and nanofabrication. He was formerly director of research and development at Liquidia Technologies, NC. Rolland is a co-inventor of the PRINT platform,

which allows for the fabrication of engineered nanoparticles with controlled size, shape, and chemistry. He received the National Starch & Chemical Company Award for Outstanding Graduate Research in Polymer Chemistry (2007).

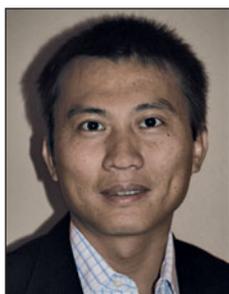

Devin A. Mourey

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John D. Brennan

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Yi Cui

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Cui received his BS degree in chemistry from the University of Science and Technology of China in 1998 and his PhD degree in chemistry from Harvard University in 2002. He went on to work as a Miller Postdoctoral Fellow at the University of California, Berkeley. In 2005, he became a professor in the Department of Materials Science

and Engineering at Stanford University. He leads a group of researchers working on nanomaterials for energy, electronics, and biotechnology. He has received the Wilson Prize from Harvard University (2011), the KAUST Investigator Award (2008), the ONR Young Investigator Award (2008), the MDV Innovators Award (2007), and the Technology Review World Top Young Innovator Award (2004).


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Fridley is a PhD student in the Bioengineering Department at the University of Washington. Her graduate research focuses on paper microfluidics for improved diagnostic capabilities in clinics and low-resource settings. She holds a SB degree in biological engineering from the Massachusetts Institute of Technology, and is currently a National Science Foundation Graduate Research Fellow.


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Holstein is a PhD student in the Department of Bioengineering at the University of Washington. Her research interests include low-cost diagnostics, paper microfluidics, and point-of-care medicine. She holds a BS degree in biomedical engineering from Boston University and is currently a National Science Foundation Graduate Research Fellow.


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Hu is an assistant professor in the Department of Materials Science and Engineering at the University of Maryland College Park. He received his BS degree in applied physics from the University of Science and Technology of China (USTC) in 2002. He completed his PhD studies in experimental physics under George Gruner at UCLA, focusing on carbon nanotubes based nanoelectronics. In 2006, he joined Unidym Inc.

as a co-founding scientist. He worked with Yi Cui at Stanford University from 2009 to 2011 on paper and textile energy devices. His research interests include Li-ion batteries, solar cells, and printed electronics.


Erdem Karabulut

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Karabulut is currently a graduate student at KTH, Royal Institute of Technology in Stockholm, Sweden. He received his BS degree in chemistry from Gazi University, Turkey, in 2005 and his MS degree in bioengineering from Yildiz Technical University, Turkey, in 2008. He has been a visiting researcher at Stanford University in 2012. His current research involves layer-by-layer thin films and coatings of cellulose nanofibrils.


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Lewis is a PhD candidate in the Department of Chemistry at The Pennsylvania State University. In 2011, he earned a BS degree in biochemistry and molecular biology from Ursinus College. His research interests include paper-based microfluidic devices and point-of-care diagnostics for resource-limited environments.



E. Jane Maxwell

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Maxwell is a postdoctoral fellow in the group of George M. Whitesides at Harvard University. She received her BSc degree from McGill University and a PhD degree in analytical chemistry from the University of British Columbia, where she worked with David Chen. In 2011, she received a postdoctoral fellowship award from the Natural Sciences and Engineering Research Council of Canada (NSERC). Her research inter-

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Aaron D. Mazzeo

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Mazzeo is currently an assistant professor at Rutgers University, and he is a former postdoctoral fellow of the Whitesides Group. He completed a PhD degree under the direction of David Hardt at MIT in the Department of Mechanical Engineering, where he also received his undergraduate (SB) and master's degrees (SM). His current research interests focus on advanced manufacturing of soft material-based

systems with an emphasis on coatings, actuation, and disposable flexible electronics.



Shefali B. Oza

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Oza is a PhD student in the Department of Bioengineering at the University of Washington. She is currently working on developing low-cost paper-based diagnostics for global health applications. She received an SB degree in physics and an SB degree in anthropology from the Massachusetts Institute of Technology and an MSc degree in epidemiology from the London School of Hygiene and Tropical Medicine. Prior

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Phillips is the Martarano Assistant Professor of Chemistry at The Pennsylvania State University. He earned his PhD degree from UC Berkeley in 2004 and trained as a postdoctoral fellow at Harvard. His research interests include developing inexpensive but high-performance diagnostic devices for use in resource poor environments in the developing world; and designing new classes of stimuli-responsive plastics that display amplified and autonomous responses to external chemical and physical signals.

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Clémence Sicard

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Sicard is a postdoctoral fellow at McMaster University working on bioactive paper with John D. Brennan. She earned her PhD degree in material sciences from Paris VII in 2010. Her current research is focused on biohybrid materials for the development of new sensing devices. Her research interests include biomaterials, bioencapsulation, printing techniques, and spectroscopic measurements.



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Wågberg is a professor in Fibre Technology at the KTH Royal Institute of Technology in the Department for Fiber and Polymer Technology. He is a member of the Royal Swedish Academy of Engineering. Wågberg leads the Fiber Technology team, with work focusing on molecular tailoring of fibers and cellulose fibrils and a fundamental characterization of the colloidal chemical behavior of cellulose nanofibrils. His focus is also on physical modification methodologies that can be used in aqueous media at neutral pH and room temperature.



George M. Whitesides

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Whitesides is the Woodford L. and Ann A. Flowers University Professor at Harvard University. He received an AB degree from Harvard in 1960 and a PhD degree from the California Institute of Technology (with J.D. Roberts) in 1964. He was a faculty member at the Massachusetts Institute of Technology from 1963 to 1982 before

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Paul Yager

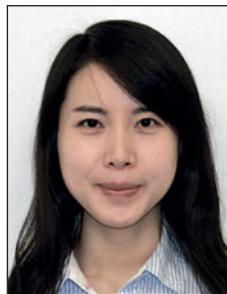
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Yager has an AB degree in biochemistry (Princeton) and a PhD degree in chemistry (University of Oregon, 1980). After seven years at the Naval Research Laboratory, he joined UW Bioengineering, becoming its Chair in 2008. Since 1992, his lab has focused on the development of microfluidic devices for monitoring biomedical analytes. The lab's goal is to increase access to health care through decentralization of biomedical diagnostic testing in the developed and developing worlds. A primary focus now is on developing instrument-free medical diagnostics based on low-cost two-dimensional paper networks.

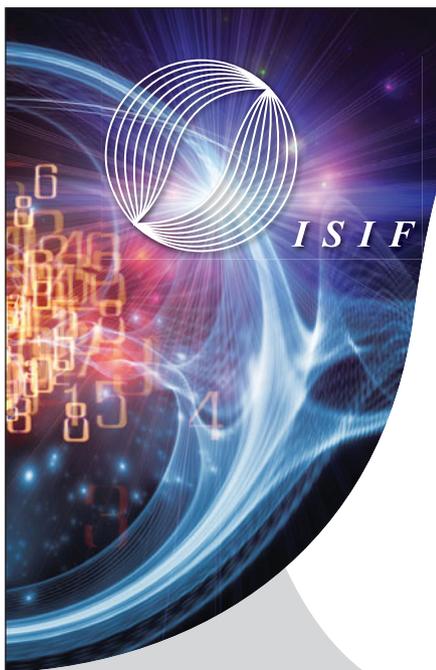
diagnostic testing in the developed and developing worlds. A primary focus now is on developing instrument-free medical diagnostics based on low-cost two-dimensional paper networks.



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 Zhu is currently a research associate at the University of Maryland. She received her PhD degree in wood chemistry and paper making technology at South China University of Technology. Her work focuses on flexible and transparent electronic devices and Na-ion battery research. Since 2009, she has worked at Nanjing Forestry University as an assistant professor. She conducted research on materials science and processing of degradable and renewable biomaterials from natural wood with Gunnar Henriksson at the KTH Royal Institute of Technology in Sweden.



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- I Materials and Devices for Drug Delivery, Biosensors and Diagnostics
- J Materials for Developmental Biology

Nanocarbon Materials—Experiment, Theory and Devices

- K Diamond, Graphene and Carbon Nanotubes

IMPORTANT DATES

Abstract Submission Ends April 30, 2013
 Preregistration Opens Early May, 2013
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