



### Jay A. Switzer

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Switzer is the Donald L. Castleman Distinguished Professor of Chemistry at Missouri University of Science and Technology (formerly, University of Missouri, Rolla). He also is a senior investigator at the Materials Research Center. Switzer received his BS degree in chemistry from the University of Cincinnati, and his PhD degree in

inorganic chemistry from Wayne State University. After receiving his PhD degree, he joined Union Oil Company of California (UNOCAL) as a senior research chemist. His research at UNOCAL was on photoelectrochemistry and the electrochemical processing of photovoltaic cells. In 1986, Switzer joined the Materials Science and Engineering Department of the University of Pittsburgh as an associate professor. In 1990, he moved to the University of Missouri, Rolla, as a professor of chemistry. Switzer has spent most of his career working on the electrodeposition of nanostructured metal oxide semiconductors, magnetic materials, and catalysts. He is best known for his work on the electrodeposition of epitaxial metal oxides, oxide superlattices, and chiral surfaces. Switzer is a principal editor for the *Journal of Materials Research*.



### Gary Hodes

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Hodes has been with the Weizmann Institute of Science, Israel, since 1972. He obtained both his BSc degree in chemistry and PhD degree in electrochemical H/D separation on Pd from the Queen's University of Belfast in 1968 and 1971, respectively. His research has covered liquid junction and thin-film solar cells, chemical and

electrochemical deposition of semiconductors, and quantum dot films. More recently, Hodes has concentrated on chemical bath deposition of semiconductors, in particular ZnO, and uses this deposition method to make semiconductor-sensitized nanoporous solar cells, which is another of his research interests.



### Philippe Allongue

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Allongue is a research director at the Centre National de la Recherche Scientifique at Ecole Polytechnique, Physique de la Matière Condensée in France. He received his electrical engineering degree and master's degree in materials science in 1980 and obtained his PhD degree in 1988 from the University Pierre et Marie Curie, Paris. Allongue was a postdoctoral fellow with Heinz Gerischer at the Fritz-Haber Institute, Berlin, from

1990 to 1992. His current research interests include fundamental aspects of electrodeposition, magnetic materials, electrochemical nanostructuring, and organic functionalization of silicon surfaces.



### Kyoung-Shin Choi

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Choi is an associate professor of chemistry at Purdue University. She received her BS and MS degrees from Seoul National University in South Korea in 1993 and 1995, respectively. She received a PhD degree from Michigan State University in 2000 and then spent two years at the University of California, Santa Barbara, as a postdoctoral researcher. She was a visiting scholar at the National Renewable Energy

Laboratory (NREL) during the fall of 2008. Choi's current research combines solid-state chemistry, electrochemistry, and materials chemistry to address materials-related issues of electrode materials for use in electrochemical and photoelectrochemical devices. She was a recipient of a 2006 Alfred P. Sloan Research Fellowship, the 2007 American Chemical Society ExxonMobil Faculty Fellowship in Solid-State Chemistry, and the 2010 Iota Sigma Pi-Agnes Fay Morgan Research Award. Choi is currently serving as one of the 2011 volume organizers for *MRS Bulletin* and the 2011 chair elect of the ACS-DIC solid state chemistry subdivision.



### Yuval Golan

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Golan is currently director of the Ilse Katz Institute for Nanoscale Science and Technology at Ben-Gurion University (BGU). He studied chemistry at the undergraduate level (Tel-Aviv University) and then obtained his doctorate degree from the Weizmann Institute of Science in 1996. His PhD degree studies were focused on electrodeposition of semiconductor nanomaterials. Golan was a postgraduate research associate in the Materi-

als Research Lab at the University of California, Santa Barbara, from 1996 to 1999, where he worked on semiconductor thin films and nanoparticle interactions. Since 1999, he has been with the faculty of the BGU Department of Materials Engineering, where he is currently chair of undergraduate studies. Golan has been mainly active in research on chemically deposited thin films and nanomaterials. He has published nearly 100 peer-reviewed research papers.



### Ho Seong Jang

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Jang is a postdoctoral research associate in the Department of Chemistry at Purdue University with professor Kyoung-Shin Choi, where they work on the development of multi-junction electrodes with controlled nanostructures and up-conversion nanoparticles for solar energy conversion. He received his BS degree in materials science and engineering from Korea University, Seoul, Korea, in 2003, and his MS and

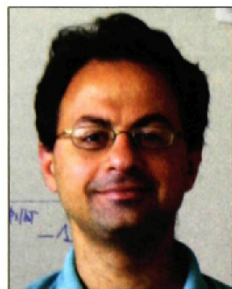
PhD degrees in materials science and engineering from the Korea Advanced Institute of Science and Technology, Daejeon, Korea, in 2005 and 2008, respectively. Jang's PhD degree work focused on luminescent materials, including inorganic phosphors and quantum dots.



**Daniel Lincot**

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Lincot is director of the Institute for Research and Development of Photovoltaic Energy, a joint institution between the Centre National de la Recherche Scientifique (CNRS), Électricité de France (EDF), and École nationale supérieure de chimie de Paris (Chimie ParisTech). He started research in 1978, with a PhD degree in the field of cadmium telluride solar cells at the solid-state physics laboratory of CNRS. After earning his PhD degree, Lincot joined CNRS at the laboratory of electrochemistry and analytical chemistry of Chimie-ParisTech in the field of semiconductor photoelectrochemistry. He became director of the Institute of Research and Development of Photovoltaic Energy in 2009. His research has a strong background in chemical and electrochemical processes for the synthesis of semiconductor thin films from solutions, especially chalcogenides (CdS, CdTe, ZnO, CuInSe<sub>2</sub>) for photovoltaic applications. Lincot received the silver medal of CNRS in 2004.



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Maroun is a researcher at the Centre National de la Recherche Scientifique at Ecole Polytechnique, Physique de la Matière Condensée, in France. He received his engineering degree from Ecole Polytechnique and his master's degree in solid-state physics in 1995 and obtained his PhD degree at Ecole Polytechnique in 1998. Maroun was a postdoctoral fellow with O. Magnussen at the University of Ulm, Germany, from 1998 to 2000. His current research interests include fundamental aspects of electrodeposition, electrochemical nanostructuring, and magnetic materials.



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McShane is a PhD degree student in chemistry at Purdue University under the supervision of Kyoung-Shin Choi. McShane received her BS degree in chemistry from the University of San Francisco in 2006. Her research focuses on the electrodeposition of Cu<sub>2</sub>O for photoelectrochemical and photovoltaic applications.

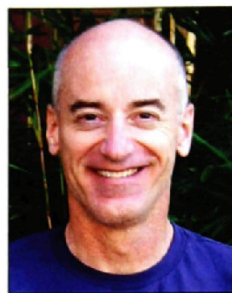


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Osherov is currently a PhD degree student working under the supervision of professor Yuval Golan in the Materials Engineering Department and the Ilse Katz Institute for Nanoscale Science and Technology at Ben-Gurion University. Her PhD degree research is focused mainly on investigation of the correlation between the growth conditions of thin lead chalcogenide films, their microstructure, and their physical properties.

Osherov's work to date has been summarized in 13 papers published—of which she is the lead author of six. Osherov is a recipient of the SIG4 prize awarded in 2010 by the electron crystallography special group of interest founded by the European Crystallography Association. She also received an award for the promotion of women in sciences and technology, funded by the Israeli Ministry of Science.



**Reginald M. Penner**

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Penner is a professor at the University of California, Irvine (UCI). He attended Gustavus Adolphus College in Saint Peter, MN, where he obtained BA degrees in chemistry and biology in 1983. Penner attended graduate school at Texas A&M University from 1983 to 1987, where he earned his PhD degree in chemistry while working with professor Charles Martin. Penner proceeded to postdoctoral appointments at Stanford University and California Institute of Technology, working with professor Nate Lewis, before joining UCI in 1990. Penner is an electrochemist whose research group develops methods based upon electrodeposition for making nanomaterials, such as nanowires, composed of metals, semiconductors, and polymers.



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Read is a PhD degree candidate in chemistry at Purdue University working under the supervision of Kyoung-Shin Choi. She received her BA degree in chemistry from the University of Virginia's College at Wise in 2006. Her research has focused on electrochemical shape control of cuprous oxide crystals, shape-dependent properties, and selective deposition of noble metal particles via preferential adsorption of additives. Read's current research focuses on delafossite-based electrodes for solar energy conversion.



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Seabold is pursuing his PhD degree in chemistry at Purdue University. He received a BS degree in chemistry from Bowling Green State University in 2006. His current research focuses on understanding and optimizing the factors that affect the performance of photoelectrodes, specifically at semiconductor/semiconductor, and semiconductor/liquid junctions.

