

Meet the Authors



Adele L. Boskey is the Starr Chair in Mineralized Tissue Research at the Hospital for Special Surgery in New York. She holds professorships in biochemistry, physiology, biophysics, and systems biology at Weill Medical College and

Graduate Medical School of Cornell University (Ithaca, NY), and in the field of bioengineering at Cornell and City College of New York. A physical chemist by training, her research focuses on understanding bone and tooth formation *in vitro* and *in vivo*. A Fellow of the American Association for the Advancement of Science, she introduced infrared microspectroscopy and imaging to bone research.



Richard G. Burns is a professor of environmental microbiology at the University of Queensland, Australia. He received his doctorate from London University, was a postdoctoral fellow at UC Davis, USA, and then a lecturer in

soil microbiology at UC Berkeley. He was for many years at the University of Kent, Canterbury, UK. He has authored or edited books on various aspects of soil microbiology and biochemistry. Dr. Burns has served on numerous national and international committees and has been on the editorial board of many journals. Currently he is a Chief Editor of *Soil Biology & Biochemistry*. Earlier this year, he received a lifetime achievement award for his contributions to our understanding of terrestrial enzymology.



Ivana Fenoglio graduated in 1992 and received her PhD in medicinal chemistry at the University of Torino, Italy, in 1997. She first worked in the field of medicinal chemistry at the State University of New York, Stony Brook, then held a

postdoctoral position at the University of Torino, where she is now permanently employed. Her current research covers the chemical aspects of the toxicity of inorganic particulates and the biocompatibility of materials, in particular, their surface properties and reactivity toward organic molecules, and free radical reactions examined by the ESR technique. She is the author of more than 40 papers.



Bice Fubini was educated at the University of Torino, Italy, where she is now a full professor of chemistry in the Faculty of Pharmacy and head of the Interdepartmental Center "G. Scansetti" for Studies on Asbestos and other Toxic Particulates. She

introduced a new quantitative, physical chemistry approach to understanding the toxicity of mineral particles and fibers based on their physical-chemical properties, especially their surface reactivity, surface free radicals,

and surface hydrophilicity. Dr. Fubini has authored over 180 scientific papers and 20 review articles and book chapters, and has been invited to several workshops organized by international, European, and American agencies as an expert on the assessment of fiber and particle toxicity.



Eileen Gentleman is a postdoctoral researcher in the Department of Materials at Imperial College London, where she is exploring the use of human embryonic stem cells to treat heart failure. She earned her PhD in biomedical engineering

from Tulane University, where her research focused on using collagen-based biomaterials for engineering soft tissues. In 2005 she served as a Christine Mirzayan Science and Technology Graduate Policy Fellow at the National Academy of Engineering, where she examined methods for assessing technological literacy. Her research interests include tissue engineering, stem cell biology, cell-biomaterial interactions, and orthopaedic biomechanics.



Julian R. Jones is a Royal Academy of Engineering and EPSRC Research Fellow at the Department of Materials, Imperial College London, where he heads a research group in bioactive materials and scaffolds for regenerative medicine. He

was awarded the fellowship in 2004 following a Lloyds Tercentenary Foundation Fellowship. He completed his PhD at Imperial in 2002, after joining the department with an MEng in metallurgy and the science of materials from the University of Oxford. In 2004 he was awarded the Silver Medal by the Institute of Materials, Mining and Minerals (IOM3) for outstanding achievement in materials science by a young researcher.



Professor Dame **Julia Polak** graduated from the University of Buenos Aires, Argentina, obtained her postgraduate training in the UK, and is director of the Tissue Engineering and Regenerative Medicine Centre, Imperial College. Dame Polak is a

member of several prestigious panels, including the Steering Group of the UK Stem Cell Immunology Programme, the Tissue Engineering Society International, and the Academy of Medical Sciences. She has received numerous international and national honours and awards, including Dame Commander of the British Empire (DBE), Distinguished Lecturer at the Royal College of Surgeons, and several honorary doctorate degrees. Dame Polak has served as European editor of *Tissue Engineering* and is co-founder of Novathera Inc., which develops regenerative medicine products. She also received a heart and lung transplant 11 years ago and is one of the longest-living transplant survivors in the UK.



Hervé Quiquampoix is Directeur de Recherche at the Institut National de la Recherche Agronomique. He received his PhD in biophysics in 1985 from the Université Paris 6. He has held positions in Guadeloupe, Versailles and Montpellier. He has also

been visiting scientist at the University of Oxford and associate professor at the University of Naples. His research focuses on the biotic and abiotic factors controlling the activity of proteins in soils. He recently coordinated a European contract on the fate of prions in soil. He is now Head of the Group Proteins in the Environment at the INRA Center of Montpellier.



Nita Sahai is an associate professor at the University of Wisconsin-Madison (UW), with joint appointments in the Departments of Geology and Geophysics, Chemistry and the interdepartmental Environmental Chemistry and Technology Program.

Her research focuses on the structure-reactivity aspects of the biomolecule-mineral-water interface, human cell and model membrane interactions at mineral surfaces, controlled biomineralization and bioceramics structure-reactivity. She has received the NSF Post-Doctoral Fellowship and the NSF CAREER award, among other grants, and is a co-PI on UW's NASA Astrobiology Institute. She serves as associate editor for *Geochemical Transactions* and edited *Medical Mineralogy and Geochemistry*, volume 64 of the *Reviews in Mineralogy & Geochemistry Series*.



Michael D. Ward received his PhD degree at Princeton University in 1981, followed by a Welch postdoctoral fellowship at the University of Texas, Austin. His research interests include organic solid-state chemistry, crystal engineering, functional

organic materials, polymorphism, the role of biominerals in biomedicine and disease, atomic force microscopy, and electrochemistry. Michael has worked in industry at Standard Oil of Ohio and Dupont, Delaware, and in academia at the University of Minnesota, where he was named a Distinguished McKnight University Professor. Currently, he is at New York University, developing the new Molecular Design Institute, Department of Chemistry. Ward serves as an editor for the journal *Chemistry of Materials*.



Jeffrey A. Wesson, MD, PhD, is an associate professor of medicine/nephrology at the Medical College of Wisconsin in Milwaukee, Wisconsin, USA. He obtained his PhD in polymer physical chemistry from the University of Wisconsin-Madison and

worked as a research scientist at the Eastman Kodak Company in Rochester, New York. He left Kodak to start a career in medicine in 1990, completing his MD, internal medicine residency, and nephrology fellowship at the Medical College of Wisconsin, before joining the faculty there in 1999. His research interest in kidney stones has focused on the interactions of macromolecules with calcium oxalate crystal surfaces and their effects on growth, aggregation, and adhesion.