Nano and Green Technology Conference

BRIEF PROFILES OF SPEAKERS AND SESSION CHAIRS

Dr. Thomas Abraham, Conference Chairman

Dr. Abraham is president and founder of Innovative Research and Products, Inc. (www.innoresearch.net), an industry and market analysis company based in Stamford, CT. Dr. Abraham has been conducting market research in advanced materials for 25 years. Starting as Director of the Advanced Materials Group at Business Communications Co. (BCC) of Norwalk, CT, Dr. Abraham became its Vice President of Research. Dr. Abraham is experienced both as a materials scientist and technical economic analyst in the field of advanced and nano materials. Dr. Abraham has completed over 50 multi-client market research studies in advanced materials and systems, nanomaterials and nanotechnology. Dr. Abraham has been a frequent invited speaker on the state of the nano and advanced material industries at various international meetings.

One of the most important studies Dr. Abraham undertook was for the Office of Technology Assessment of the U.S. Congress on the "Strategies for Advanced Ceramic Materials in the U.S." Dr. Abraham has also conducted technology transfer and commercialization studies for several companies and major laboratories. Dr. Abraham was selected to be part of the US delegation to Australia in February 2008 at the US-Australia Cooperative Workshop on Sustainable Nanomanufacturing held in Brisbane and Melbourne where he delivered the keynote address on the state of the nanomaterials and

nanotechnology industry. Dr. Abraham has organized ten international conferences in Fine and Nano Powders, Nanoparticles, Nanotechnology and Nanomaterials. A graduate of Columbia University (MS and PhD.), Dr. Abraham had worked earlier for Brookhaven National Laboratory and the University of Denver.

Clare Allocca

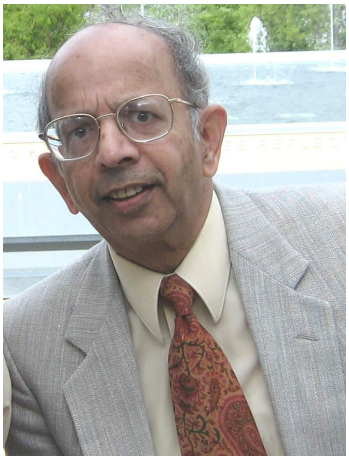
Ms. Clare Allocca is the Director of External Needs Assessment at the National Institute of Standards and Technology (NIST). She has 23 years of experience in the conduct of advanced materials, surface engineering, and measurement technology R&D, program management, strategic planning, customer engagement and process development/implementation.

She holds Bachelor of Science Degrees in Materials Science and Engineering and Geochemistry from the Massachusetts Institute of Technology; a Master of Science Degree in Ceramic Engineering from the University of Illinois at Urbana-Champaign; and an Executive Master of Science Degree in the Management of Technology from the University of Pennsylvania (Wharton Business School / School of Engineering). Before joining NIST, she was a Senior Materials Engineer for Pratt & Whitney engaged in the development of advanced ceramic composites for jet engines.

Dr. Tomas Base

Dr. Base is an academic researcher at the Academy of Sciences of the Czech Republic, Institute of Inorganic Chemistry in Rez near Prague. Born in Benesov

near Prague, Central Bohemia, tomas graduated with M.Sc. degree from Chemistry at Charles University in Prague, in 2002 and Ph.D. at the Institute of Chemical Technology in Prague, in 2007. He was a guest scientist at Swiss Federal Laboratories for Materials Testing and Research in St. Gallen (Empa), 1 August- 31 October 2009. Major scientific interests include cluster chemistry, and the interactions between thiolated carborane clusters and various metal surfaces.



Dr. Rameshwar N. Bhargava

Dr. Bhargava completed his Ph.D in Solid State Physics from Columbia University in 1966. He has been involved with industrial research for over 40 years in organizations like IBM, Bell Laboratories and Philips Research. The last position, he held was Scientific Advisor, the top scientific position in world-wide Philips Research. Over the years, he has been involved in the research and development of opto-electronics including LEDs and lasers, medical research, electronic materials, optical recording, displays and nanotechnology.

In 1993, he left Philips Research to establish Nanocrystals Technology to develop applications of Nanophosphors, Nanomagnets and other Nanomaterials in the field of lighting, imaging , displays and biotechnology. Through his pioneering discovery of quantum confined atom based nanomaterials, he has been successful in modifying properties of a single atom by caging it in 5 nm size nanocrystals. These quantum confined atom based magnetic nanophosphors have successfully shown the enhancement of contrast in MRI as well as proven the concept of targeted drug delivery.

Dr. Bhargava is a world renowned leader in the field of LEDs and has contributed profusely in their development over the past 40 years. He has contributed to over 100 publications and 25 issued Patents including the 15 patents in Nanotechnology. He is the Fellow of IEEE and American Physical Society.

Manu Bhat

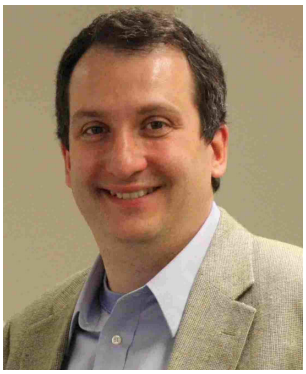
Manu Bhat is currently a junior in the Jerome Fisher Program of Management and Technology at the University of Pennsylvania. He is pursuing a BSE in Systems Engineering along with concentrating in Finance and Management at the Wharton School of Business. For the past few years, Manu was worked with Nanocrystals Technology on both the research and business development aspects of the company. Moving into the future, Manu would like to focus on the business development of nanotechnology startups and gain more experience with pushing technological innovation.

Dr. Samuel Brauer

Dr. Brauer is the founder of Nanotech Plus, LLC an alliance of consultants focused on the business of nanotechnology offering analysis and operational assistance in this burgeoning field to major corporations, small materials companies, venture and angel investors, and other financial institutions. Established in 2004, the firm's projects have ranged from evaluating patent portfolios to estimating markets for novel therapeutics.

Prior to Nanotech Plus, he was with the Business Communications Company for

7 years, leading market research on a broad range of advanced materials topics including polymer nanocomposites, carbon nanotubes, advanced polymer composites, DNA micro arrays and *in vitro* toxicology. He received his doctorate in bioinorganic chemistry involving chromium carcinogenesis from Dartmouth in 1990 and did a postdoctoral stint on protein structure at UC Davis.



Dr. Charles Brumlik

Dr. Brumlik is president and co-founder of Nanobiz, LLC. (http://www.nanobizllc.com), a firm assisting in assessing and commercializing cross-disciplinary advanced materials and industrial processes. Charles Brumlik is also a business and patent attorney who advises Fortune 500 companies, angels, venture capital groups, and startup technology companies around the world. Dr. Brumlik specializes in commercialization, due diligence, and technology sourcing in alternate energy, materials, cleantech and nanotechnology. Representative areas include membranes, separations, chemical functionalization, ultrafine particles, high surface area materials, cermets, displays, solid state lighting, sensors, and electronics. Commencing with his Ph.D. dissertation entitled "Nanochemistry and Nanomaterials" at Texas A&M, Dr. Brumlik has 20 years of experience working with nanotechnology. He has over 20 nanotechnology publications and patents in nanotechnology including nanoparticle hydrogen storage, electrochemical energy storage, and related processes.

Vincent Caprio, Session Chair

Mr. Caprio is a founder and the Vice President of the national NanoBusiness Alliance and sits on the Alliance's Board of Directors, as well as the Board of Directors of the Emerging Industries Alliance of New York State. Mr. Caprio is one of the foremost advocates for government funding of nanotechnology at both the State and Federal levels. Mr. Caprio has testified before the state legislatures of New York and Connecticut, and has participated in the NanoBusiness Alliance's public policy tour of Washington, D.C. for the past seven years. Mr. Caprio is the founder and event director of the NanoBusiness Alliance Conference which finished its 7th year this past December 2008. During the past fours years (2006-2009), Mr. Caprio was an invited speaker and guest lecturer at several nanotechnology conferences.

Mr. Caprio is a 20-year publishing and tradeshow industry veteran with an impressive track record of launching events focusing on emerging technology markets. Mr. Caprio joined the NanoBusiness Alliance as the founder and event director in 2002, to steer the launch of the highly successful *NanoBusiness Alliance* event series www.nanobusiness2008.com and www.nanoenergysummit.org as well as *The Emerging Technologies Conference* in association with MIT's *Technology Review Magazine*. Mr. Caprio has served as a consultant to leading nanotechnology research and advisory firm Lux Research, for its *Lux Executive Summit* in 2005 & 2006. Prior to joining the NanoBusiness Alliance, Mr. Caprio was event director for Red Herring Conferences, producing the company's *Venture Market* conferences and *Annual Summit* reporting to Red Herring Magazine founder and publisher Tony Perkins.

Mr. Caprio graduated from Villanova University in 1979 with a B.S in Accounting and completed a MBA from Northeastern in 1987. Mr. Caprio is a member of Villanova University's Financial Club and serves as an active member of Villanova's President Club. Mr. Caprio serves on the Board of Trustees for the Easton Community Center in Easton, CT. In the summer of 2008, Mr. Caprio was appointed to the Board of Directors for the Fabricators & Manufactures Association Communications, Inc. based in Rockford, IL.

Dr. Robert Cook

Dr. Cook is Deputy Chief of the Ceramics Division and Leader of the Nanomechanical Properties Group at the National Institute of Standards and

Technology (NIST), Gaithersburg, Maryland, U.S.A., where he has been since 2005. He received a B.Sc.(Hons I) in Physics from Monash University, Melbourne, Australia in 1981 and a Ph.D. in Physics from the University of New South Wales, Sydney, Australia in 1986, spending time as a Guest Researcher at NIST in 1982 and 1984. In 1985 he joined the Physical Sciences department of IBM Research, Yorktown Heights, New York, first as a post-doctoral researcher and then as a research staff member and for a time as a senior manager. From 1998-2004 he was a Professor of Materials Science and Engineering at the University of Minnesota. The author of over 130 peer-reviewed publications and 14 patents, his research interests center on mechanics and mechanical properties of materials, especially fracture. In 2008, he received a U.S. Department of Commerce Silver Medal for Scientific/Engineering Achievement for his role in the development of the first gold nanoparticle reference materials for biomedical applications.

Dr. Dana Durham, Session Chair

Dr. Durham is an associate with Nanobiz, LLC (www.nanobizllc.com), a firm assisting in commercializing cross-disciplinary advanced materials and industrial processes. Dana has expertise in Product Lifecycle Management, strategy development and technology assessment. Prior to joining Nanobiz, Dana served as R&D director for several Fortune 500 companies providing materials to the semiconductor and flat panel display industries. He holds 38 US patents.

Dr. Jaime R. Gomes

Jaime R. Gomes, Ph.D. is Professor of Textile Chemistry, Minho University, Portugal. Gomes did his PhD in 1982 at Leeds University, UK, on the subject of Reactive Dyes for Celulosic Fibres, and his supervisor was one of the inventors of such dyes in 1956, Professor Rattee, head of the Department of Colour Chemistry. On returning to Portugal, he worked for one year at ICI as a technical Director, in 1986. Dr. Gomes went into consulting at the same time as he lectured and gained experience at developing projects with textile finishing industry during the following years. Dr. Gomes then returned to the University full time and in 1989 became Associate Professor.

In 2002, he became a full professor. His research moved from dyes to liposomes in 1990 and microcapsules in 1996. He was head of Department of Textiles in 1992 for two years. Dr. Gomes has 20 scientific papers and 50 proceedings of international conferences, peer refereed. He started research in nanoparticles about two years ago.

Dr. Anthony P. Green

Anthony P. Green, Ph.D., is Vice President, Technology Commercialization Group: Life Sciences for Ben Franklin Technology Partners of Southeastern Pennsylvania (BFTP/SEP) and Ben Franklin Director of The Nanotechnology Institute™ (NTI). Dr. Green is also Visiting Research Professor, School of Biomedical Engineering, Drexel University.

At BFTP/SEP, Dr. Green is focused on Ben Franklin's larger and region-wide technology partnerships and major initiatives, include the NTI, the Mid-Atlantic Nanotechnology Alliance (MANA®), new and evolving life sciences initiatives including the IP Donation Program and Keystone Innovation Zones (KIZs), university/industry partnerships in advanced textiles and emerging contaminants and the development and implementation new commercialization models. Dr. Green has over 30 years experience in the biotechnology industry, with a specialization in the research, development and commercialization of cutting-edge technologies primarily in small, emerging companies, including Centocor and Puresyn. Dr. Green earned his Bachelor of Science degree in Immunology, with Honors, from Brown University, in Providence, Rhode Island and his Ph.D. from Temple University School of Medicine, in Microbiology and Immunology.

Dr. Waguih S. Ishak

Dr. Waguih Ishak is Vice President and VP and Director of the newly-formed Corning West Coast Research Center in Santa Clara, California. After graduating from Cairo University (B.Sc. Honors in Electrical Engineering, '71) and Ain Shams University in Egypt (B.Sc. Maths Honors, '73), Ishak completed a M.Sc. and Ph.D. degrees in electrical engineering (Magnetic Bubble Memories) from McMaster University, Ontario, Canada, in 1975 and 1978, respectively and the Stanford Executive Program in 1999. Joining Hewlett-Packard Laboratories in 1978, he designed magnetic bubble propagation and detection circuits and surface acoustic wave (SAW) low-loss filters and nd becoming a project leader for Sources and Signal Processing Group in 1983 and responsible for many HP products such HP 8562 Microwave Spectrum Analyzer, HP 54121, HP54123 & HP54124 High-Speed Digitizing Scopes.

In 1987, Waguih became the manager of the Photonics Technology Department of the HP's Instruments & Photonics Laboratory. In 1995, Waguih was promoted to Director of the Communications & Optics Research Laboratory (CORL). In 2003, Waguih became the Director of the Photonics & Electronics Research Lab (PERL) at Agilent Labs (Agilent was spun off by HP in 1999), responsible for the R&D programs in photonics, high-speed electronics, sensors, semiconductor test, wireless communications and consumer electronics. In 2005, Waguih became the Vice President and Chief Technology Officer at Avago Technologies. In 2007, Waguih joined Corning Incorporated in the current position. Waguih has authored about 80 journal and conference papers, and four chapters in the "Handbook of Electronic Instruments." He is a Fellow of the IEEE and was named an inventor on seven US patents.

Dr. George John

George John, Ph.D., is Associate Professor of Chemistry, the City College of the City University of New York (CUNY). His research interests are in the broad area of organic and macromolecular materials chemistry; specifically includes

biobased organic synthesis, self-assembled soft materials for functional applications, templated synthesis of nanoparticles, green chemistry, understanding growth mechanisms of nanostructures and designing new structures and multifunctional nanocomposites. He is in the editorial team of two international journals, Journal of Biobased Materials and Bioenergy and Green Nanotechnology. Prof. John's research on biobased materials has been widely acclaimed in many journals and publications including Nature, Newsweek, New Scientist and in the New York Times.

Dr. Debra L. Kaiser

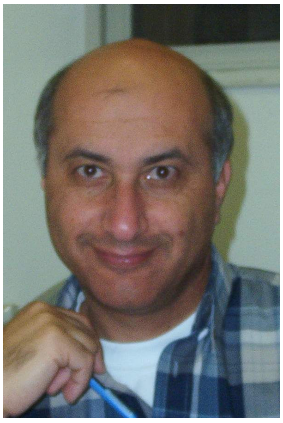
Dr. Kaiser holds a B.S. (Lehigh University 1979), M.S. (Colorado School of Mines 1980) and Sc.D. (Massachusetts Institute of Technology 1985), all in materials science and engineering. After completing her graduate studies, she was a Postdoctoral Research Fellow at IBM Research working on semimagnetic semiconductors and high temperature superconductors. She has been a member of the Ceramics Division in Materials Science and Engineering Laboratory at NIST since 1988 and has served as Chief of the Ceramics Division since 2003. Work in the Ceramics Division focuses on measurements and standards for advanced inorganic materials and structures.

Dr. Philip Lippel, Session chair

Dr. Lippel is an expert consultant on both the science and policy behind innovative nanotechnology. His work in the field includes stints in government, industry, and academia. As a senior policy analyst at the National Nanotechnology Coordination Office, Dr. Lippel provided top level scientific support to the director; helped to keep Congress, the public, and other interested parties up to date on federally funded nanotechnology research and development; and liaised with companies, NGOs, and state agencies interested in nanotechnology commercialization. He served as a U.S. delegate to the Working Party on Nanotechnology at the Organisation for Economic Co-operation and Development and was the founding Executive Secretary for two working groups of the Nanoscale Science, Engineering, and Technology Subcommittee of the National Science and Technology Council.

As a AAAS Science and Technology Policy Fellow at the National Science Foundation, he worked on a variety of science communication and policy issues—including nanotechnology and science education—in NSF's Office of Legislative and Public Affairs. Dr. Lippel also built scanning tunneling microscopes (STMs) and used them for nanotechnology research (at the IBM Almaden Research Center and as a faculty member in the Physics Department of the University of Texas at Arlington); founded and served as President of L Cubed Consulting, which developed educational uses of STMs with support from NSF's Small Business Innovation Research Program; and was a Member of Technical Staff at Agilent Technologies, where he designed network test equipment and was active with telecommunications standards groups.

He received an A.B. in Physics and in Theatre from Williams College, and the M.S. and Ph.D. degrees in Physics from Brandeis University.



Prof. Shlomo Magdassi

Dr. Shlomo Magdassi is a professor of applied chemistry, at the Casali Institute of Applied Chemistry and the center of Nanoscience at the Hebrew University of Jerusalem, Israel. His research focuses on colloid chemistry, and in particular on formation, stabilization and applications of novel micro and nanoparticles. In addition to basic scientific research he conducts industrial R&D projects for various companies, such as in digital printing, cosmetics and pharmaceutics. He is the author of over a hundred scientific publications, and the editor of three

books: Surface Activity of Proteins , Novel Cosmetic Delivery Systems and The Chemistry of Inkjet Inks. He also has about 130 patents and patent applications (about 40 inventions), which are related to applications of dispersed systems in various industries.

Dr. **Brij Moudgil**

Dr. Moudgil is Distinguished Professor and Alumni Professor of Materials Science and Engineering, and Director of Particle Engineering Research Center, University of Florida, Gainesville, FL

Dr. K.A. Natarajan

Dr. Natarajan is presently Honorary Professor and Raja Ramanna Fellow at the Department of metallurgy, Indian Institute of Science, Bangalore, India. He did his M.S. and Ph.D degrees specialising in Mineral beneficiation and Hydrometallurgy from the University of Minnesota, USA. The Indian Institute of Science, Bangalore conferred on him the degree of Doctor of Science in 1992 for his pioneering research contributions in Minerals bioprocessing.

He is a Fellow of several academies such as the Indian Academy of Sciences, Indian National Academy of Engineering and the National Academy of Sciences. He has received several medals and awards such as the National Metallurgist Award by the Ministry of Mines, Govt. of India, National Mineral award by the Ministry of Mines. Govt. of India, Alumni Award of Excellence in Engineering Research by the Indian Institute of Science, Bangalore, Kamani Gold medal of the Indian Institute of Metals and the Hindustan Zinc Gold Medal. He has also

been honored with the presentation of Biotech Product and Process Development & Commercialisation Award 2003, Dept. of Biotechnology, Govt. of India. He has also been conferred with the National Metallurgist Award for the year 2006 from the Ministry of Steel, Govt. of India for his outstanding contributions in the field of mineral processing and hydrometallurgy for enrichment of ores, extraction of valuable metals, detoxification of mine and metallurgical plant effluents. He is on the Editorial board of several international journals in the area of Mineral processing. His areas of research include Mineral processing, Hydrometallurgy, Minerals bioprocessing, Corrosion engineering and Environmental control.
He has published over 300 research papers in leading international journals in the above areas. He was the Chairman of the Department of Metallurgy, Indian Institute of Science, Bangalore during the period 1999-2004.

Dr. Zorica Cranjak Orel

Dr. Zorica Crnjak Orel is a Scientific Counsellor and Program and Project leader at the National Institute of Chemistry, Ljubljana, Slovenia. Her research interests are in the broad area of inorganic materials nanocomposites and in preparation and characterizations of semiconducting thin films and powder, optical and structural properties of semi-conductors, preparation and characterization of nanoparticles (TiO2, CeO2, V-oxide, SnO2, CuO, Cu2O, ZnO, Cu). She is an author of more than 90 papers with more than 600 citations, more than 60 papers in conference proceedings, invited lectures, 12 patents for coatings for solar collectors, which have been produced and sold on Slovenian and international markets since 1985.She is in steering committee for different conference and is an evaluation expert for several Slovenian and European agencies. She won many awards and grants (Fulbright grant, Clarkson and Oxford Brookes University) and has an excellent collaboration with industry. She was invited lecturer at many international conferences, universities and institutes all over the world. She is the author of few international patents Publications: more than 90 papers, more than 600 citations, more than 60 papers in conference proceedings invited lectures, 11 Slovenian patents, and 2 international patents.

Dr. Henrich H. Paradies

Dr. Paradies is a Distinguished Visiting Professor at *The University of Salford*, *Joule Physics Laboratory*, and Institute for Materials Research, Manchester (U.K.), also a Guest Professor at the *CNRS* & *Institut Charles Gerhardt de Montpellier* and of the *Ecole Nationale Supérieure de Chemie de Montpellier* (France). He received a Ph. D. in Chemistry (Physics), in Biochemistry (Medicine) and an M.D. from the Westfälische Wilhelms University (Münster, Germany). From 1968 -1974 he was awarded postdoctoral fellowships of the Deutsche Forschungs Gemeinschaft) working in *Cambridge (*U.K.), *Uppsala* (Sweden), London (*Kings College*) and in the *Max Planck Institutes* in Heidelberg & Berlin. After holding chairs at the *Free University of Berlin* and the *University of Applied Sciences* (Campus Iserlohn, Germany), and Visiting Professorships at *Cornell University* (Ithaca), *Louisiana State University* (Baton Rouge), and *The Ohio State University*, he has been associated with *The University of Salford* since 1999. His research interests include self-assemblies of complex natural materials, biomaterials applied as antiviral entities, surface engineering, nano-& mesogenic particles, and 2D and 3D polymer brushes.

Alton Parrish

Market Analyst Alton Parrish has a Bachelor of Fine Arts degree from the University of North Carolina. He has over 25 years of experience as a journalist and market research analyst. He served as a reporter, news director and managing editor for Houston News Service and Metro News Service in Houston, TX before entering the field of market research. Recent work includes

"*Nanofabrication Equipment for IT and Electronics"* and "*Fuel Cells, Hydrogen Energy And Related Nanotechnology*," published by Innovative Research and Products, Inc. He ha s also published a number of studies for Business Communications Company among them are: *"Carbon Capture and Storage Technology," "Holography for Industrial Applications," "Market Potential For Metal-Air Fuel Cells" and "Portable Power Devices: Industry Review and Market Projections."*

Dr. Robert K. Prud'homme

Dr. Prud'homme is a professor in the Department of Chemical Engineering, Director of the Engineering Biology Program at Princeton University. He received his BS at Stanford University and his PhD from the University of Wisconsin at Madison under Professor Bob Bird. He has served on the executive committees of the American Institute of Chemical Engineers Materials Science Division and the U.S. Society of Rheology. Currently he is the President of the U.S. Society of Rheology. He has served as the chair of the Technical Advisory Board for Material Science Research for Dow Chemical Company, which directs Dow's materials research programs, and he was on the Board of Directors of Rheometric Scientific Inc., the leading manufacturer of rheological instrumentation. His awards include the NSF Presidential Young Investigator Award, Princeton School of Engineering and Applied Science Outstanding Teaching Award, the Sydney Ross Lectureship at RPI, the Bird,Stewart and Lightfoot Lecturer at the University of Wisconsin, and the Midland Macromolecular Institute Visiting Professor in Midland Michigan. He has been the organizer and Chair of the Gordon Conference on Ion Containing Polymers, and the Society of Petroleum Engineers Forum on Stimulation Fluid Rheology, in addition to organizing numerous sessions at AIChE, ACS, and SOR meetings. He is currently the Director of the Princeton-University of Minnesota-Iowa State NSF NIRT Center on nanoparticle formation. His research interests include rheology and self-assembly of complex fluids. Systems of interest are biopolymer solutions and gels, surfactant mesophases, and polymer/surfactant mixtures. The goals of the studies are to understand how weak molecular-level interactions can

be used to tune macroscopic bulk properties and phase behavior. Application of the work is directed at nanoparticle formation for the drug delivery, controlled release, targeting, and imaging.

Prof. Wan Y. Shih

Prof. Wan Y. Shih received a B.Sc. in physics in 1976 from Tsing-Hua University in Taiwan and completed his Ph.D. degree in Physics in 1984 from Ohio State University. Before she joined School of Biomedical Engineering, Science, and Health Systems at Drexel University as an Associate Professor in 2006, she was a Research Associate Professor in the Department of Materials Science and Engineering at Drexel University from 1993 to 2006, and a Research Scientist in Princeton Materials Institute at Princeton University from 1993 to 1999. Her research has covered a wide range of areas of materials and biomedical engineering. Her current research interest is to apply her expertise in piezoelectric materials and photo-luminescent semiconducting nanoparticles in biosensing and imaging applications. Prof. Shih has five patents granted, and twenty two patent and four provisional patents pending. She received the 1999 Edward C. Henry Electronics Division Best Paper Award from The American Ceramic Society. She has also been inducted to Drexel's 10^6 Club.

Dr. Ganesh Skandan

Ganesh Skandan earned his Ph.D in Materials Science and Engineering from Rutgers University, where he co-developed and patented processes for producing nanoscale particles. Shortly after his graduate work, Dr. Skandan co-founded

NEI Corporation. As Vice President R&D for six years at NEI, he led the development of an array of Nanomaterials technologies that today constitutes the technology platform that NEI is built on. As CEO of for the past five years, he has transitioned materials technologies into commercial products that have enabled NEI to grow into a diversified Advanced Materials company. Dr. Skandan also led the formation of an international joint venture, United Nanotech Products Limited (UNTPL), based in Kolkata, India. UNTPL manufactures Li-ion battery electrode materials.

Dr. Skandan was recognized as outstanding alumnus of the Graduate School at Rutgers University at its 50th anniversary. He is also the recipient of the Hoechst Celanese award for Graduate Excellence and the Yule Scholarship Fund (India) during his undergraduate education at the Indian Institute of Technology, Bombay.

Dr. Skandan has co-authored encyclopedia articles and technical papers, and has been awarded nine US patents. He is associated with the National Academy of Engineering through the Frontiers of Engineering Series Symposia.

Dr. Igor Sokolov

Dr. Sokolov received his undergraduate training at St. Petersburg State University, Russia (B.S., 1984) and his graduate training in the Soviet Bureau of Standards (Russian NIST), Ph.D. at 1991. Sokolov joined the faculty at Clarkson University in 2000 as an Assistant Professor in Physics. His current positions are Professor of Physics, Professor of Chemistry and Bimolecular Science, NY Center for Advanced Material Processing (CAMP) Professor, and the Director of NanoBio Laboratory (NABLAB).

Dr. Sokolov's research focuses on developing methods for controlling the architecture of self-assembled materials with structural features on the 1-100 nm length scale, and utilizing such materials for physical, chemical, and biological sensing, drug delivery, optics, development of composite materials with improved properties, etc. During his career, he was distinguished by a number of awards, including E.L.Ginzton International Fellowship Award from Stanford University, two Awards from Ministry of Education, Science, Sports and Culture of Japanese Government, Soros Research Awards, three awards as the best young researcher of the year from Soviet Bureau of Standards. He has 100+ refereed publications (1900+ citations, H-index is 21), 2 US patents, and 16 patents are pending, 79 invited lectures, seminars, conference presentations; participation in 74 conferences with contributed presentations. He is an active consultant with several major pharmaceutical and chemical companies.

Dr. P. Somasundaran

Professor Somasundaran is the La von Duddleson Krumb Professor at Columbia University School of Engineering and Applied Science, the Director of the Langmuir Center for Colloids & Interfaces and the founding director of the National Science Foundation Industry/University Cooperative Research Center for Particulate and Surfactant Systems.

He is a member of the U.S. National Academy of Engineering, the highest professional distinction conferred upon an engineer, and the equivalent national academies in China, India, Russia and the Balkans and winner of many awards including Richards Award, Ellis Island Medal of Honor, Gaudin Award, Taggart Award and the AIME Education Award etc.

His research interests are surface and colloid chemistry, polymer, surfactant and protein adsorption, flocculation/dispersion and biosurface phenomena, molecular interactions at surfaces using advanced spectroscopy, environmental engineering (waste treatment).