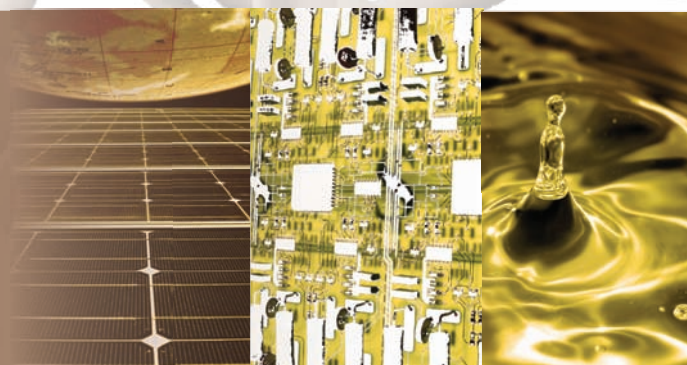


OECD Conference on Potential Environmental Benefits of Nanotechnology: Fostering Safe Innovation-Led Growth

15-17 July 2009,
OECD Conference Centre, Paris - France



Speakers Biographies



ORGANISATION FOR ECONOMIC
CO-OPERATION AND DEVELOPMENT

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Opening Session

Mario Amano

Deputy Secretary-General
Organisation for Economic Co-operation and Development

Mr. Mario Amano was appointed Deputy Secretary-General on 14 June 2007. He is in charge of Environment, the Development Cluster, the Policy Coherence dossier, G8 Co-ordination and the Executive Committee.

Prior to joining the OECD, Mr. Amano, a Japanese national, was Acting Executive Director of the Korean Peninsula Energy Development Organization from 2004-2007. During his successful 34-year career as a Japanese Foreign Affairs Official, Mr. Amano worked on policy issues in the areas of macroeconomic management, trade frictions, development aid, foreign investment, environment and energy. From 1976 to 2000, he was involved in an increasingly senior capacity in all G8 Summit Meetings. Mr. Amano served as Japan's chief negotiator for the Trade Related Investment Measures in the Uruguay Round and as Consul-General in Houston from 2001 to 2004.

In 1988-1989, Mr. Amano was in the Permanent Delegation of Japan to the OECD, where he covered the Council, Budget Committee and Ministerial Meetings. Mr. Amano has an economics degree from the University of Tokyo and a Special Diploma in Social Studies from University of Oxford.

Plenary Session One: Setting the Scene

Edward W. Manning

President
Tourisk Inc.
Canada

Dr. Edward W. Manning is President of Tourisk Inc., an international consulting firm providing planning and management of tourism destinations and World Heritage sites, development of indicators of sustainability, and participatory environmental management for impacted communities. His focus is on integration of social, environmental and economic approaches to decision-making, and in the creation of decision support systems for governments in addressing issues of sustainability. He has more than 30 years experience as an environmental planner, geographer and sustainable tourism consultant, and as manager of a number of development projects for international agencies. His former posts include Director of Sustainable Development and Environmental Management for the Canadian government agency providing expertise to national and international agencies and governments; and Executive Manager, Sustainable Tourism, for Tourism Canada.

Dr. Manning has worked in more than 50 countries in the creation and implementation of improved methods for planning environmentally and culturally sensitive areas and reduction of the ecological and social footprint of human activities. He is the lead consultant on indicators of sustainability for the UN World Tourism Organization, advisor to World Wildlife Fund programs Cuba and the Caribbean, and international advisor to the UN Industrial Development Organization for its coastal development program in Africa. He has managed environmental cleanup projects in China, Pakistan, Argentina, and the Black Sea countries, sustainable tourism development projects in Thailand, Mexico, China, Hungary, Argentina, Saudi Arabia, the Maldives, Croatia, the Philippines and Canada, and has published 23 books and over 90 articles on sustainable development and environmental management topics. He is also the principal author of the original sustainable development strategies for 13 Canadian government departments and agencies a lecturer on environmental management, and sustainable development, at the Chinese Central Party School in Beijing, at the Black Sea University in Romania and at universities in Mexico, Slovakia, Chile, Malaysia, USA and Canada. He is the principal author of the 2004 UN World Tourism Organization Guidebook *Indicators of Sustainable Development for Tourism Destinations*. He is currently working with an international NGO and a major international hotel chain on establishing best practice for GHG reduction standards, and on a project developing a sustainable development master plan for a community in one of Canada's national parks. Dr. Manning is former President of the Canadian Association of Geographers, a former director of the Social Science Federation of Canada, a Governor of the Royal Canadian Geographical Society, Associate Director Environment, for the Foundation for International Training, Adjunct Research Professor in the Geography Department of Carleton University and a member of the Canadian Association for the Club of Rome.

Morinobu Endo

Professor
Faculty of Engineering
Shinshu University
Japan

Prof. Morinobu Endo studied electrical engineering at Shinshu University in Nagano, Japan, and obtained a PhD in 1975 from the University of Orleans, France. It is in his PhD work that he has developed the synthesis method of carbon nanotubes, and showed that it was a tubular structure for the first time. In 1990, he became a professor of the Department of Electrical and Electronic Engineering, Shinshu University. His current interests are science and application of nanocarbons such as carbon nanotubes, and the development of high-performance energy storage devices such as Lithium ion battery, electric double layer capacitor, and fuel cell.

Steve Mullins

Occupational Health and Safety Officer
Australian Congress of Trade Unions
Australia

Mr. Steve Mullins is the national health and safety policy officer for the peak trade union body in Australia, the Australian Council of Trade Unions (ACTU) representing the interests of almost two million union members and their families. Steve coordinates the activities of the occupational health and safety and workers' compensation unit and represents the ACTU on a number government health and safety advisory bodies.

Since 2005, Steve has been examining the occupational health and safety implications of nanomaterials and has been actively campaigning for improved safety standards for Australian workers. He wrote a chapter on the topic for a soon to be published book, 'Nanotechnology Risk Management: Perspectives and Progress'. Steve is also an Al Gore trained Climate Project presenter.

Geert van Calster

Collegium Falconis
Katholieke Universiteit Leuven
Member of the Brussels Bar
Belgium

Prof. van Calster is the director of KU Leuven's *Centre for Advanced Legal Studies (CALS)* (september 09 onwards) and director of studies of the Energy and Environmental Law LL.M. He holds a tenured chair of the Research Fund, K.U.Leuven.

Geert's expertise covers EC environmental law and EC economic law, EC and international energy law, international trade law; and international environmental law, subjects on which he publishes and speaks extensively. His most current research interests include the regulation of new technologies (nanotechnologies in particular), and climate change law. Formerly a visiting professor at Erasmus, Rotterdam; Monash, Melbourne; and Oxford, he is now also visiting professor at the China EU School of Law, Beijing.

Prof. Geert van Calster's work on the regulation of nanotechnologies, takes places within the multidisciplinary approach to nano at K.U. Leuven. Building on earlier work on legal issues surrounding risk analysis harmonisation, Geert researches the legal framework for embedding the technology. Prof van Calster and his team review in particular the 'SHE' (safety, health and environment) aspects of the technology, looking also however at international trade, intellectual property, governance and sustainable development concerns.

His work on the issues is published in i.a. *Nature – Nanotechnology*, *Nanoethics*, *European Environmental Law Review*, *Environmental Reporter*, and *Nanotechnology – Law and Business*.

Plenary Session Two: Life cycle perspectives

Caroline Baier-Anderson

Senior Health Scientist
Environmental Defense Fund
United States

Dr. Caroline (Cal) Baier-Anderson is a Senior Health Scientist with Environmental Defense Fund (EDF) and serves part-time as an Assistant Professor in the Department of Epidemiology and Preventive Medicine at the University of Maryland, Baltimore where she teaches a graduate course in risk assessment. Cal earned a Ph.D. in Toxicology in 1999 from the University of Maryland, Baltimore, after which she served as a technical advisor to communities living adjacent to hazardous waste sites through EPA-funded community assistance programs. Additional work experience includes risk assessment and risk communication consulting. As Senior Health Scientist at EDF she currently provides research and technical support for the development of policy recommendations regarding chemicals assessment and management.

Arnim von Gleich

Professor
University of Bremen
Germany

Prof. Arnim von Gleich is a political scientist and was co-founder, employee and member of the Board of the Institute for Ecological Economic Research gGmbH Berlin from 1986 to 1995; meanwhile he was visiting professor in Kassel. From 1994 to 2002 Professor for "Technology Assessment" at the Fachhochschule Hamburg. In addition to research and teaching numerous advisory activities, such as the membership of the Inquiry Commission "Protection of people and environment - objectives and framework for sustainable development" (1995 to 1998), and the appointment in the risk Commission of the Federal Government to "Reorganisation of procedures and structures of risk assessment and standard setting in the environmental health of the Federal Republic of Germany" (2000 to 2003). Since 2003 Professor for "Technology Shaping and Technology Development" at the University of Bremen. He is also a member of the Research Center for Sustainability Studies "Work-Environment-Technology".

James E. Hutchison

Professor
Department of Chemistry
University of Oregon
United States

Dr. Hutchison received his B.S. degree from the University of Oregon in 1986, earned his Ph.D. from Stanford University in 1991 (Ph.D. mentor James P. Collman) and completed his postdoctoral studies at the University of North Carolina, Chapel Hill (1992-1994 with Royce W. Murray). Dr. Hutchison joined the faculty at the University of Oregon (UO) in the fall of 1994 where he is currently the Lokey-Harrington Professor of Chemistry and Associate Vice President for Research and Strategic Initiatives. His research interests are in green chemistry, materials chemistry and nanoscience. He led the development of the UO's nation-leading program in "green" (environmentally-benign) organic chemistry, launched the university's pioneering Center in Green Nanoscience and is a member of the Governing Board of the ACS Green Chemistry Institute. He is a member of the leadership team for the Oregon Nanoscience and Microtechnologies Institute (ONAMI) and founded, and now directs, the ONAMI's Safer Nanomaterials and Nanomanufacturing Initiative. He has won a number of awards, including an NSF-CAREER award and the 2003 Oregon Academy of Science Outstanding Teacher of Science and Math in Higher Education. Hutchison is an Alfred P. Sloan research fellow and a Camille Dreyfus teacher-scholar. He is the author of more than 90 refereed publications, three book chapters and a text book ("Green Organic Chemistry: Strategies, Tools and Laboratory Experiments").

David Santillo

Senior Scientist
Greenpeace Research Laboratories
School of Biosciences
University of Exeter
United Kingdom

Dr. David Santillo is a Senior Scientist with the Greenpeace Research Laboratories, based at the University of Exeter, UK. From a background in ocean ecology, David has developed expertise in environmental chemistry, chemical assessment and precautionary regulation during his 15 years with Greenpeace, work which has inevitably led to an active interest in nanotechnologies. In recent years, David has presented at numerous conferences and stakeholder events on the risks and benefits of nanotechnologies, including hearings before European Parliament representatives and the Royal Commission on Environmental Pollution in the UK, and continues to participate on the Responsible Nano Forum in the UK. He also maintains a keen research interest in sustainability across all aspects of human activities.

Péter Krüger

Head of Bayer Working Group Nanotechnology
Bayer MaterialScience AG
Germany

Since June 2006, **Dr. Péter Krüger** is heading the Bayer “Working Group Nanotechnology” with the responsibility for the global coordination of nanotechnology activities in all Bayer Subgroups and Service Companies with a reporting line to the “Coordination Board Technology, Innovation and Environment” of the Bayer Holding. In addition he is currently also the Head of the Physics Department within the Business Unit Coatings, Adhesives and Sealants of Bayer MaterialScience AG. Since the beginning of 2008 he furthermore took over the leadership of the project cluster “Innovation Alliance Carbon Nanotubes”, funded partly by the German government.

During his 16 years with Bayer he held several positions in R&D, starting as a research scientist for polymer physics of thermoplastics within the Physics Unit of the former Central Research. Later he took over the responsibility for the entire Polymer Physics Department within the Central Research and in Bayer Polymers as well.

Péter Krüger is an elected member of several advisory boards of scientific organizations and associations.

Péter Krüger was born in Budapest (Hungary), has studied physics at the Technical University of Braunschweig (Germany) and finalized it with Master Thesis in theoretical quantum mechanics. He obtained his PhD in Braunschweig for his research in experimental physics and material sciences on the field of relaxation and crystallization kinetics of amorphous and crystalline metallic materials.

Lynn L. Bergeson

Managing Director
BERGESON & CAMPBELL, P.C.
United States

Ms. Lynn L. Bergeson is Managing Director of Bergeson & Campbell, P.C. (B&C), a Washington, D.C. law firm concentrating on conventional and engineered nanoscale chemical, pesticide, and other specialty chemical product approval, regulation, litigation, and associated business issues. Ms. Bergeson is also President of The Acta Group, L.L.C. and The Acta Group EU, Ltd, B&C's consulting affiliates, with offices in Washington, D.C. and Manchester, U.K., respectively.

Ms. Bergeson counsels clients on a wide range of issues pertaining to chemical hazard, exposure and risk assessment, risk communication, and related legal and regulatory aspects of conventional and nanoscale chemical regulatory programs under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), the Toxic Substances Control Act (TSCA), the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) regulation, and on issues pertinent to nanotechnology and other emerging transformative technologies. Ms. Bergeson serves on the President's Council of Advisors on Science and Technology (PCAST) Nanotechnology Technical Advisory Group (PCAST nTAG), the U.S. Environmental Protection Agency's (EPA) Steering Committees for the Pollution Prevention through Nanotechnology Conference, and the Organization for Economic Cooperation and Development's (OECD) Working Party on Manufactured Nanomaterials and Working Party on Nanotechnology Conference on Potential Environmental Benefits of Nanotechnology: Fostering Green and Innovation-Lead Growth conferences. Ms. Bergeson served on the American National Standards Institute (ANSI) Nanotechnology Standards Panel (NSP) Steering Committee and is a member of the ISO Technical Committee 229 on Nanotechnologies. Ms. Bergeson also serves on the Board of Directors of Earth Day Network and is a member of its Executive Committee. She was Chair of the American Bar Association (ABA) Section of Environment, Energy, and Resources (SEER) (2005-2006), was the past Chair of the SEER Pesticides, Chemical Regulation, and Right-to-Know Committee (PCRRTKC) (2006-2008), and is now Vice Chair of the PCRRTKC, and serves in other ABA leadership positions. Ms. Bergeson is also a member of the ALI-ABA Environmental Law Advisory Panel.

Ms. Bergeson is listed in *The International Who's Who of Business Lawyers* (2006-2009), and *The Chambers USA: America's Leading Lawyers for Business* (2005-2009).

Ms. Bergeson is a graduate of Michigan State University (B.A., magna cum laude), and the Columbus School of Law, Catholic University of America, where she was a member of the Law Review. She is admitted to the bar of the District of Columbia and several federal circuit courts.

Vicki Colvin

Professor
Rice University
United States

Dr. Vicki Colvin received her Bachelor's degree in chemistry and physics from Stanford University in 1988, and in 1994 obtained her Ph.D. in chemistry from the University of California, Berkeley. During her time at the University of California, Berkeley, Colvin was awarded the American Chemical Society's Victor K. LaMer Award for her work in colloid and surface chemistry. Colvin completed her postdoctoral work at AT&T Bell Labs.

In 1996, Colvin was recruited by Rice University to expand its nanotechnology program. Currently she serves as Kenneth S. Pitzer-Schlumberger Professor of Chemistry and Professor of Chemical & Biomolecular Engineering. Dr. Colvin also serves as Co-Director of Richard E. Smalley Institute for Nanoscale Science and Technology and Director of the Center for Biological and Environmental Nanotechnology (CBEN). CBEN was one of the nation's first Nanoscience and Engineering Centers funded by the National Science Foundation. One of CBEN's primary areas of interest is the application of nanotechnology to the environment.

Colvin has received numerous accolades for her teaching abilities, including Phi Beta Kappa's Teaching Prize for 1998-1999 and the Camille Dreyfus Teacher Scholar Award in 2002. She was named one of Discover Magazine's "Top 20 Scientists to Watch" and received an Alfred P. Sloan Fellowship in 2002. Her research in low-field magnetic separation of nanocrystals was named Top Five (no. 2 of 5) Nanotech Breakthroughs of 2006 by Forbes/Wolfe Nanotech Report, and resulted in her being named 2007 Best & Brightest Honoree by Esquire Magazine; she was also named a Fellow in the Association for the Advancement of Science (AAAS), 2007-2008.

Dr. Colvin is also a frequent contributor to Science, Advanced Materials, Physical Review Letters and other peer-reviewed journals, having authored/co-authored over 75 articles, and holds patents to seven inventions.

Parallel Session One: Water treatment and purification

T. Pradeep

Professor

Department of Chemistry and Sophisticated Analytical Instrument Facility

Indian Institute of Technology Madras

India

Prof. T. Pradeep is a professor of Chemistry at the Indian Institute of Technology, Madras. He received his PhD from the Indian Institute of Science, Bangalore and had post doctoral training at the University of California, Berkeley and Purdue University, Indiana. He held visiting positions in Purdue University, USA; Leiden University, Netherlands; EPFL, Switzerland; Institute of Chemistry, Taiwan; Pohang Institute of Science and Technology, South Korea; Institute of Molecular Science, Okazaki, Japan and Hyogo University, Japan. He has 190 research papers and 12 patents to his credit. He is the author of 'Nano: The Essentials', McGraw-Hill and one of the authors of 'Nanofluids: Science and Technology', Wiley Interscience. He is an elected fellow of the Indian Academy of Sciences. One of the dreams of his research group is to develop an affordable all-inclusive drinking water purifier using nanotechnology. For more details please visit, <http://www.dstuns.iitm.ac.in/pradeep-research-group.php>.

Ralf Dillert

Senior Research Associate

Institute of Technical Chemistry

Leibniz University Hannover

Germany

Dr. Ralf Dillert, Diplom-Chemiker, is working as a Senior Research Associate of Prof. Dr. Detlef Bahnemann at the Institute of Technical Chemistry of the Leibniz University Hannover since 2006. Professional activities at the Meisei University, Japan, at the Institute of Solar Energy Research Hameln-Enmerthal, Germany, and the University of Braunschweig, Germany, preceded. His research interests comprise photocatalytic water and waste water treatment, photocatalytic degradation of air pollutants, and self-cleaning surfaces.

Pilar Fernández Ibáñez

Plataforma Solar de Almería (CIEMAT)
Spain

Dr. Pilar Fernández Ibáñez holds a PhD in Applied Physics from the University of Granada (2004), a degree in Physics from the University of Granada (1994) and a Master Applied Physics and Environmental Sciences from the University of Almería (Almería, 1997). She has 12 years of experience having worked at different research sectors. She has participated in 10 European Union and 2 National R&D Projects related with disinfection and wastewater treatment with the help of solar technologies development. She is co-author 3 books and as well as 9 chapters in others. She has also co-authored 45 publications in indexed international journals and 75 contributions to different International Congress and Symposiums and 2 patents. She has tutored the scientific work of 8 students about solar disinfection and detoxification of wastewater. She also has been Invited Editor of special issues of the indexed journals *Catalysis Today* and *Solar Energy*.

Alexander Orlov

Assistant Professor
Materials Science & Engineering
Stony Brook University
United States

Dr. Alexander Orlov is an Assistant Professor of Materials Science and Engineering at State University of New York, Stony Brook, USA. He is also a faculty member of the Consortium for Interdisciplinary Environmental Research as well as affiliate faculty of Chemistry Department. Previously, he was a Research Fellow in Science and Engineering at the University of Cambridge/King's College, UK. Dr. Orlov has degrees from various European and the US institutions, including Doctoral and Master's degrees in Chemistry from the University of Cambridge (UK) and Master's degree in Environmental Engineering from the University of Michigan (USA). His major research and teaching activities are in development of novel materials for environmental protection, environmental chemistry and engineering, materials science, sustainable development, environmental aspects of energy production and environmental nanotechnology areas. He is appointed by the UK Secretary of State to advise the current Labour Government on such environmental issues as exposure to hazardous substances and environmental/health impacts of nanotechnology. Previously, he was a member of the UK Conservative Party Task Force charged with developing the science policy for the next Conservative Government. Dr. Orlov has served on science grant panels for the EU Commission, the UK Department of Environment, Food and Rural affairs, and other funding bodies. His research experience also served him in his position as consultant to several USA congressmen, members of the UK parliament and the Ukrainian Ministry of Ecology and Natural Resources. Alexander's opinions, interviews and comments appeared in *Nature*, *BBC*, *Daily Telegraph* and *Cambridge Evening News*. Dr. Orlov is a recipient of National Endowment for Science Technology and Arts CRUCIBLE award (UK), which focuses on developing skills in communicating science to general public and policymakers.

Patrick SM Dunlop

Research Fellow
Nanotechnology and Integrated BioEngineering Centre
University of Ulster at Jordanstown
Northern Ireland

Dr. Dunlop is a Research Fellow based at the Nanotechnology and Integrated Bioengineering Centre (NIBEC) on the University of Ulster's Jordanstown campus. His research focuses on materials science and the interaction of waterborne chemical and biological pollutants with nanostructured photocatalytic materials. Interests include water disinfection using solar energy (SODIS), development of visible active nanostructured photocatalysts, design and construction of nano-membranes and water purification devices.

He graduated with a 1st Class Hons degree in Applied Biochemical Sciences from UU in 1997 and was awarded a PhD in 2001. Since then he has worked within the School of Engineering on a number of collaborative EU funded projects investigating the efficiency of photocatalytic disinfection & the remediation of persistent organic pollutants in water. The goal of the research has been the development of pilot scale apparatus with recent attention paid to the utilisation of solar energy. He has also been involved in the commercialisation of research receiving a number of awards including the Investment Belfast 20K award in 2003 and the "Clean Tech" category of the Northern Ireland Science Parks 25K competition in 2008.

He has published 20 scientific papers, authored a chapter of book and presented research findings at more than 50 national and international conferences. He is a member of the Society of Chemical Industry and Institute of Biology, serving as Secretary to the Northern Ireland Branch since 2004.

Marc A. Anderson

Professor and Chair
Environmental Chemistry and Technology Program
University of Wisconsin – Madison
United States

Prof. Anderson received his BS in Chemistry from the University of Wisconsin - Whitewater and his MA and PhD from Johns Hopkins University in Chemistry and Environmental Engineering respectively. He is currently the Chair of the Environmental Chemistry and Technology Program at the University of Wisconsin Madison. He also holds a position as advisor and Principal Researcher at Imdea in Madrid Spain where he works in energy storage for renewable systems and new water treatment technologies. He has had two sabbatical leaves of absence at the Institute of Catalysis at Louvain La Neuve in Belgium, and the Institute of Ceramics in Arganda, Spain, He was also a Fulbright Fellow at CIEMAT in renewable energies in Madrid. His research efforts have focused on production of nanoparticulate oxides, and thin-nanoporous films that are then used in a variety of processes including adsorption, the destruction of toxic chemicals, energy storage and in water treatment. These novel materials have led to 30 patents and over 165 scientific papers. Dr. Anderson is considered one of the world-class experts in nanoporous thin films, ceramic membranes, photocatalysis, photoelectrocatalysis and ultracapacitors. His recent interest is in superior energy storage and capacitive deionization both using nanoporous electrodes.

Armand Masion

Research Scientist

European Center for Research and Education in Environmental Geosciences

Aix Marseille University and CNRS

France

Dr Masion is a research scientist at the European Center for Research and Education in Environmental Geosciences (CEREGE) which is operated jointly by the CNRS and Aix Marseille University. He is an environmental spectroscopist focusing on a multiscale characterization of environmental relevant systems. His research interests include water treatment, remediation strategies, speciation and migration of nutrients and toxicants in the environment, and environmental implications of nanotechnology.

He graduated in organic chemistry at the University of Nancy (France) in 1989 and obtained his PhD in Geosciences from the Institut National Polytechnique de Lorraine (Nancy, France) in 1993 under the supervision of Dr J.Y. Bottero. After a post-doctoral position at the Savannah River Ecology Laboratory (Aiken, SC, USA; Prof. P.M. Bertsch), he joined Dr. Bottero's group at the CEREGE as a junior CNRS research associate in late 1995. He has authored and co-authored about 40 peer reviewed papers in international journals, 8 book chapters and one patent; he has given more 130 presentations (16 invited talks) of his research at national and international conferences. He was advisor or co-advisor for 12 PhD candidates and ca. 15 graduate students.

Parallel Session Two: Environmental sensing

Tae-Hyun Yoon

Assistant Professor
Laboratory of Nanoscale Characterization & Environmental Chemistry
Department of Chemistry, College of Natural Sciences
Hanyang University,
Korea

Prof. Tae-Hyun Yoon is an assistant professor in chemistry department at Hanyang University of South Korea and currently leading a research group - nanoscale characterization and environmental chemistry laboratory – with 8 MS/Ph.D graduate students. He joined current position in 2005 after his ph.D degree/ postdoctoral studies in environmental science at Stanford university (1999~2005) as well as B.S./M.S. degree at KAIST (Korea Advanced Institute of Science and Technology). His current research focuses on the 1) impacts of nanoparticles on biological & environmental systems and 2) application of microfluidic devices for environmental monitoring and toxicological assays.

Hans Jürgen Grimm

Managing Director
Grimm Aerosol Technik GmbH & Co. KG
Germany

Mr. Hans Jürgen Grimm has studied in München, Germany until 1963 in the Applied university for Aerodynamics and later Economy. After the examine he worked until 1973 in Switzerland, USA and finally in 2 years in Italy as Mgr for a US Scientific organisation. He than made his PhD in Environmental Science and his MoS in Management and meanwhile he has several awards in Excellence and Distinction in this field.

He returned to Germany, got married and opened a construction company, called “Weiss-Blau GmbH” in the recreation area of Berchtesgaden, where he has –and still is- building residential houses.

However in 1982 he turned himself back to the scientific industry and opened his company “GRIMM Labortechnik GmbH & Co KG”, but started in 1995 to focus more to the special field of „Aerosol“ technologies, so that the company changed his name to GRIMM AEROSOL Technik GmbH & Co KG” in 1998, see: www.grimm-aerosol.com

Meanwhile hais this scientific company grown to the largest European Aerosol Monitor manufacturer and continuously entering new business fields, such as biological aerosol identification and the associated NANO technologies.

Michael J. Sailor

Professor
University of California, San Diego
United States

Dr. Sailor received a B.S. degree in Chemistry from Harvey Mudd College (Claremont, CA, 1983), and M.S. and Ph.D. degrees in Chemistry from Northwestern University (Chicago, 1988). His Ph.D. thesis work involved the synthesis of organometallic metal clusters, in the laboratory of professor Duward F. Shriver. He performed post-doctoral studies under Nathan S. Lewis at Stanford and Caltech (1987-1990). He joined the faculty in the Department of Chemistry and Biochemistry at the University of California, San Diego in 1990, was promoted to Associate Professor in 1994, and to Full Professor in 1996.

Dr. Sailor's Research Interests involve the synthesis and study of nanophase materials with unusual optical, magnetic, or electronic properties, with emphasis on silicon-based systems. Current projects are directed at problems in nanoparticle-based diagnosis and treatment of disease, remote sensing of toxins and pollutants, high-throughput screening of biomarkers, point detectors for chemical or biological warfare agents, and microfluidic technologies. Dr. Sailor has supervised over 100 undergraduate, graduate, and post-doctoral students at UC San Diego; his group presently consists of 25 researchers. He is the author of over 150 research publications and he has 28 patents or patents pending, 21 of which have been licensed to established or startup-stage companies.

Omowunmi A. Sadik

Professor of Chemistry
Director, Center for Advanced Sensors & Environmental Systems (CASE)
Department of Chemistry, State University of New York
United States

Dr. Wunmi Sadik is Professor of Chemistry at State University of New York at Binghamton (SUNY-Binghamton) and the Director of the Center for Advanced Sensors & Environmental Monitoring at SUNY. She received her Ph.D. in Chemistry from the University of Wollongong in Australia and did her postdoctoral research at the US Environmental Protection Agency (US-EPA) in Las Vegas, Nevada. Dr. Sadik has held appointments at Harvard University, Cornell University and Naval Research Laboratories in Washington, DC. Sadik's research currently centers on the interfacial molecular recognition processes, sensors and biomaterials, and immunochemistry with tandem instrumental techniques. Her work utilizes electrochemical and spectroscopic techniques to study human exposure assessment, endocrine disrupters, and toxicity of synthetic and engineered nanomaterials. Sadik is the recipient of Harvard University's Distinguished Radcliffe Fellowship, National Science Foundation's Discovery Corps Senior Fellowship, SUNY Chancellor Award for Research, Australian Merit Award, Chancellor Award for Outstanding Inventor, and National Research Council COBASE fellowship.

Sadik has over 300 scientific publications in the areas of biosensors, bioelectrochemistry and materials chemistry. These include referred articles, invited reviews, book chapters, patents and conference abstracts. She serves on the editorial boards of many journals including Journal of Environmental Chemistry (RSC), Sensor Letters and Advances in Analytical Chemistry. She was the co-editor of American Chemical Society's Symposium Series on Environmental Chemical and Biological Sensors. She has organized symposia and/or served in the organizing committees of several national and international conferences. Sadik has also lectured extensively in the USA, many European Union countries such as UK, Germany, France, Turkey, and Romania; as well as in Africa, Japan, Australia, and New Zealand.

Sung Ik Yang

Professor
Kyung Hee University
Korea

Prof. Sung Ik Yang received his BS in Chemical Education and MS and PhD in chemistry from Seoul National University. After having spent several years at Washington University, Harvard University, and Brookhaven Nation Lab, he became a Professor of Applied Chemistry at Kyung Hee University in Korea.

His current research is focused on the applications and risk assessment of nanomaterials with an emphasis on the rational synthesis of new materials to develop high sensitive sensors and the investigation of fundamental mechanisms of nanotoxicity.

Alberto Vomiero

National Institute for the Physics of the Matter - National Council of Research (INFN-CNR)
Dipartimento di Chimica e Fisica per l'Ingegneria e per I Materiali
Universita' di Brescia
Italy

Dr. Alberto Vomiero received a B.S. degree in Physics from the University of Padova in 1999 and a Ph. D. degree in Electronic Engineering from the University of Trento in 2003. He spent two years as a postdoctoral fellow at the INFN Legnaro National Labs.

He has been researcher at the SENSOR Lab, National Institute for the Physics of the Matter - National Council of Research (INFN-CNR) in Brescia since 2005. His research interests include nanostructured materials, self-assembly, interaction of oxide surfaces with gases, electrical properties and charge photogeneration in nanostructures. He is coauthor of about 60 scientific papers published in peer reviewed international journals and two monograph chapters on nanostructured gas sensors.

Robert Muir

Managing Director
Naneum Ltd.
United Kingdom

Dr. Muir has a PhD in Physical Chemistry from Aberdeen University

Dr Muir spent many years in the Oil and Chemicals Industries in senior management positions in Shell Oil and Infineum- a Shell Exxon Mobil Joint Venture.
He has extensive experience in Speciality Chemicals, Agrochemicals Seeds, Lubricants and Fuels amongst others.

In 2005 he co-founded Naneum with Dr Boris Gorbunov. Naneum develops and markets novel instruments for the characterisation of airborne nano-objects.
Since 2005, Dr Muir has published a number of papers on the Health Risks associated with exposure to ultra-fine and nano sized particles.

Ashwin A. Seshia

Nanoscience Centre
University of Cambridge
United Kingdom

Dr. Ashwin A. Seshia received the B.Tech. in Engineering Physics in 1996 from IIT Bombay, and M.S. and Ph.D degrees in Electrical Engineering and Computer Sciences from the University of California, Berkeley in 1999 and 2002 respectively and a MA from the University of Cambridge in 2008. During his time at the University of California, Berkeley he was affiliated with the Berkeley Sensor & Actuator Center. He joined the faculty of the Engineering Department at the University of Cambridge in October 2002 where he is presently a Lecturer in Micro-Electro-Mechanical Systems, a Fellow of Queens' College and affiliated with the Nanoscience Centre. His research interests include the design and fabrication of micro- and nano-scale sensory systems with applications to the monitoring and study of the natural and built environment. He is a member of the Institute of Electrical and Electronics Engineers (IEEE) and the American Society of Mechanical Engineers (ASME), and in 2008 was appointed as Fellow of the ERA Foundation.

Parallel Session Three: Clean car technology

Hideaki Hamada

Deputy Director
Research Centre for New Fuels and Vehicle Technology,
National Institute of Advanced Industrial Science and Technology
Japan

Prof. Hamada is the Deputy Director of the Research Centre for New Fuels and Vehicle Technology, National Institute of Advanced Industrial Science and Technology (AIST). I obtained my MS degree in chemistry from the University of Tokyo in 1974, and received my PhD degree in chemical engineering from the University of Tokyo in 1988.

Catalysis has been my special research field, and I have been engaged in catalyst development for various chemical syntheses and exhaust gas after-treatment especially for NO_x reduction recently. I was awarded the Notable Invention Award from the Science and Technology Agency of Japan in 1993, Minister's Award from the Science and Technology Agency of Japan in 1996, Award for Excellent Paper from the Japan Petroleum Institute in 1999, and Catalysis Society of Japan Award (Academic) in 2008.

Sergey Bredikhin

Deputy Director
Institute of Solid State Physics, Russian Academy of Science
Russia

Dr. Sergey BREDIKHIN was born in Sverdlovsk, Russia 13 of October, 1951.
1968-1974 –He was graduated at the Department of General and Applied Physics of Moscow Physical-Technical Institute (State University), Moscow, Russia.

Since 1974 to now he works in the Institute of Solid State Physics Russian Academy of Science. In 1979 he awarded the degree "Candidate of physical and mathematical sciences" (Ph.D). In 1996 he awarded the degree "Doctor of physical and mathematical sciences" (Doctor of Science). In 1996 he has got position of a Leading Research Scientist in the Institute of Solid State Physics Russian Academy of Science.

Since 2003- present Sergey Bredikhin is a Deputy Director of the Institute of Solid State Physics Russian Academy of Science.

Since 2008 – present Sergey Bredikhin is Head of the Regional Centre of Unique Scientific Equipment of the Scientific Centre of Russian Academy of Science in Chernogolovka

Masanobu Awano

Deputy Director of Advanced Manufacturing Research Institute
National Institute of Advanced Industrial Science and Technology (AIST)
& Visiting Professor of Gifu University
Japan

Prof. Masanobu Awano is a Deputy Director of Advanced Manufacturing Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), Japan in present.

He started his career as a scientist of National Industrial Research Institute of Nagoya, Ministry of International Trade and Industry, Japan in 1986 and followed by Senior Scientist from 1993 and a Research Group Leader from 2008.

He was a Group Leader of the Synergy Ceramics Project from 1999 to 2003, conducting a research of 'Interactive Materials', targeted on electrochemical reactors for car exhausts purification. He is the Project Leader of the 'Advanced Ceramic Reactor Project' of NEDO Japan for 2005-2010. In the project, development of novel micro Solid Oxide Fuel Cells are in progress to realize SOFC-APU module for vehicles.

He is an author of over 200 publications and patents, and he was awarded a prize of Ceramic Society of Japan in 2009.

Michael Stelter

Head of Department Modules
Fraunhofer-Institut für Keramische Technologien und Systeme IKTS
Germany

Dr. Stelter worked on the field of electrochemistry during his time at Chemnitz University. After receiving his Ph.D. on catalysts for fuel cells, he held several leading positions in the automotive industry. During this time, he worked mainly on both ceramic and polymer fuel cells and other clean car technologies, such as thermo-electric generators.

In 2005 Dr. Stelter joined Fraunhofer Society as head of the departments Modules / Systems and Environmental Technologies in the Dresden based Institute for Ceramic Technologies and Systems. His current research and development work covers a wide range of ceramic technologies. Among them are stationary, mobile and portable fuel cells, microsystems based on multilayer ceramics, micro-electrochemistry, advanced biogas generation, thermo-electric generators and lithium batteries. Many of these products are found in modern cars.

Patrick Achard

Directeur de Recherches
Responsable de l'équipe EM&P
Centre Energétique et Procédés
MINES ParisTech
France

Dr. Patrick ACHARD is an engineer of ENSAM (1977), (Ecole Nationale Supérieure des Arts et Métiers), doctor of EMP (1986) (Ecole Nationale Supérieure des Mines de Paris), and was entitled to direct research (HDR - Habilitation à Diriger des Recherches) in 1995.

He is in year 2009 a Research Director (Professor) in Energetics at Mines-ParisTech in charge of a research team called « Energetics, Materials and Processes » within Energetics and Processes Research Center of Mines-ParisTech at Sophia Antipolis (South of France), a team of fifteen people. Within this team, one of the main axis of research is dealing with new processes of energy storage and conversion including hydrogen and fuel cells, another one is dealing with new materials (nanomaterials) obtained thanks to sol-gel route and supercritical drying for energy efficiency.

He has been responsible of 40 research contracts, has participated in 10 European contracts, is an author of 20 publications, is cited as inventor in 8 patents and has directed 15 doctoral thesis.

Parallel Session Four: Cellulose nano fibres

Mohini Sain

Director
Centre for Biocomposites and Biomaterials Processing
University of Toronto
Canada

Prof. Mohini Sain is the Director of Centre for Biocomposites and Biomaterials Processing, University of Toronto, Toronto, Canada and holds adjunct professor at Luleå University of Science and Technology, Division of Wood and Bionanocomposites, Sweden.

He is the Founder-Director of Centre for Biocomposites and Biomaterials Processing, Faculty of Forestry, University of Toronto and Founder and Former President of Greencore Composites Inc., as well as acts as Chief Science Officer: Ontario BioAuto Council; trained more than 200 graduate students and researchers.

Prof. Sain networks in academia and industry leading to 27 technology transfers in last six years and has created two spin off companies (Green Core Composites Inc. and Poly Bio Inc.); He is an expert in bio-nanotechnology and recently co-edited two books in this area. Besides, he delivered numerous invited talks in five years Europe, Asia, USA, Canada. He also holds several patents in cellulose nanotechnology; Prof Sain is also a board and advisory member of ISO Nanocomposite Standardization 229 Technical Committee, Bioenterprise, Stemergy Inc., Greencore Inc. His publication credential: Peer revised publications: 230; Books or book chapters: 13; Conference paper contributions: 220; Other publications: 85 Technical Reports. He is a highly cited author in ISI citation index.

Alexander Bismarck

Reader in Advanced Materials
Department of Chemical Engineering
Imperial College
United Kingdom

Dr. Alexander Bismarck is a Reader in Advanced Materials in the Department of Chemical Engineering at Imperial College London and head of the Polymer and Composite Engineering (PaCE) Group (www.ic.ac.uk/pace). Prior to 2002 he held a permanent position as R&D engineer and project leader at Sulzer Innotec/Sulzer Composites (later Gurit Suprem) Winterthur, Switzerland. His research is focusing on various aspects of polymer materials. AB's research interests are interface design and manufacturing aspects of advanced composites, renewable materials and porous polymers.

AB has authored and co-authored over 80 papers in peer-reviewed journals, one book, several book chapters, confidential industrial technical reports and 4 patents. His work has been recognized for excellence in polymer science with the Georg-Manecke Prize (2000), awarded by the Berlin-Brandenburg Association of Polymer Research. AB was part of a team that was awarded the inaugural Imperial Research Excellence Award, which allowed us to buy a AFM tip enhanced Raman microscope for the characterisation of hierarchical materials and structures. His research is supported by several EPSRC Grants, Industrial CASE awards, The Royal Society, the MoD, EU FP7 and by a number of multinational companies. In 2006 he was awarded one out of 6 prestigious £1m EPSRC Challenging Engineering Awards. These awards are intended to support future engineering research leaders.

Denilson Da Silva Perez

Research Engineer / Project leader at FCBA
New Materials Technological Division
France

Academic degrees: Chemical Engineer and M.Sc. degrees from University of Sao Paulo (Brazil) and Ph.D degree in Organic Chemistry from University of Bordeaux (France)

Research Projects:

His professional experience includes a research assistant position at University of Maine (USA), a post-doc position at Centre de Recherche sur les Macromolécules Végétales (CERMAV) France and 8+ years as Senior researcher - project leader at FCBA (formerly AFOCEL). Dr. Da Silva Perez is in charge of projects dealing with wood quality, chemical pulping, chemical analysis of biomass especially using non-destructive techniques and cellulose nano/microfibrils production, characterisation and applications. He has been involved in several collaborative projects at local, regional, national and international levels in several domains, including the coordination of a national project on cellulose micro/nanofibres and the participation in a European project on the scale-up of nanotechnologies for paper applications.

His technical/scientific production includes around 90 publications between peer-reviewed articles, communications in international and national conferences and book chapters. Moreover, he is currently co-supervising 4 Ph.D thesis and hosted several training students of different levels from different countries (France, Portugal, England, Brazil, Germany, etc).

Brian O'Connor

Program Manager-Environment
FPInnovations-Paprican Division
Pointe Claire
Canada

Dr. O'Connor graduated with his PhD in organic chemistry from McGill University, Canada in 1987 and started his career at the Pulp and Paper Research Institute of Canada (Paprican) in 1988. He is currently Program Manager in charge of the Environment Research Program which covers a variety of issues of concern to the pulp and paper industry such as environmental assessment of new products, environmental impact in receiving waters, effluent treatment, and energy and resource recovery from solid residues.

Orlando J. Rojas

Associate Professor
Department of Forest Biomaterials
North Carolina State University
United States

Dr. Rojas comes from the Royal Institute of Technology (KTH, Stockholm) where he worked as a Senior Scientist in the Department of Chemistry, Physical Chemistry after obtaining his Ph.D. in Chemical Engineering from Auburn University. Previous graduate work includes a Master degree in Chemical Engineering from Universidad de Los Andes (Venezuela) and a Diploma in Paper Engineering from ETSII-UPC (Spain). His research focuses on surface and colloid chemistry and the adsorption behaviors of surfactants and polymers at solid/liquid interfaces. He has studied the viscoelasticity of adsorbed monolayers by Surface Laser Light Scattering and Quartz Crystal Microbalance methods. He also uses state-of-the-art techniques such as the interferometric Surface Force Apparatus, the bimorph surface force apparatus and the Atomic Force Microscope (AFM) to unveil basic phenomena and interactions at the nanoscale. His group currently works on nanocellulose structures; the dynamics of lignocellulose degradation; biosensor development; and separation, derivatization and use of natural polymers and surfactants.

He has published more than 170 papers and articles in high-impact scientific journals, books and book chapters as well as conference presentations. He has been invited as speaker in more than 30 research centres worldwide and works closely with industry and universities worldwide. He is Associate Editor of the Journal of Surfactants and Detergents and member of the advisory committee of several other journals. Dr. Rojas is the 2009-2010 Chair of the Division of "Cellulose and Renewable Materials" of the American Chemical Society. He is the recipient of the 2009 American Chemical Society Divisional service Award. He was appointed 2009-2014 Finland Distinguish Professor by Tekes, the Finnish Funding Agency for Technology and Innovation and the Academy of Finland.

Parallel Session Five: Site remediation

Marti Otto

Senior Environmental Engineer
Technology Innovation and Field Services Division
Environmental Protection Agency
United States

Ms. Marti Otto is a senior environmental engineer in the U.S. Environmental Protection Agency's Technology Innovation and Field Services Division. Ms. Otto has over 24 years of experience in hazardous waste site evaluation and remediation and in environmental regulation and policy development. Her recent work focuses on the state of the practice of hazardous waste site treatment technologies and contaminant-specific treatment approaches. She has been following the development of environmental applications of nanotechnology for about five years. She earned a Bachelor of Science degree in Biology and a Master of Science degree in Environmental Science and Engineering from Virginia Tech.

Subhasis Ghoshal

Associate Professor
Department of Civil Engineering
McGill University
Canada

Prof. Subhasis Ghoshal is an Associate Professor in the Department of Civil Engineering. He joined McGill in 1997 after completing his Ph.D. at Carnegie Mellon University and a postdoctoral fellowship at the University of Michigan at Ann Arbor. His research is in the area of Environmental Engineering and currently focuses on remediation of polluted sites and groundwater.

Prof. Ghoshal has contributed substantially to the understanding of oil-water interfacial mass transport processes and its impacts on remediation performance and groundwater quality. He has worked extensively on coal tar and oil dissolution in groundwaters, and on bioremediation of oil-contaminated subsurface environments. He has supervised more than 25 graduate students. Prof. Ghoshal received the PetroCanada Young Innovator Award in 1998 and was awarded a William Dawson Scholar (Chair) at McGill in 2005.

Gregory V. Lowry

Professor of Civil & Environmental Engineering
Deputy Director-Center for Environmental Implications of NanoTechnology (CEINT)
Carnegie Mellon University
United States

Dr. Gregory V. Lowry is a Professor of Civil & Environmental Engineering at Carnegie Mellon University in Pittsburgh, PA. He is the Deputy Director of the NSF Center for Environmental Implications of NanoTechnology (CEINT). Professor Lowry received his PhD at Stanford University in 2000 in Civil and Environmental Engineering. He holds a B.S. degree in Chemical Engineering (University of California-Davis) and an M.S. degree in Civil & Environmental Engineering (University of Wisconsin-Madison).

Dr. Lowry develops and tests reactive nanomaterials for in situ groundwater remediation and contaminant source zone treatment. His work has improved understanding of environmental factors affecting the reactivity and effectiveness of Fe₀ nanoparticles for groundwater remediation. His work on nanoparticle surface coatings has improved Fe₀ emplacement techniques and has identified factors affecting the mobility of reactive nanomaterials in the environment. He continues research in the area of sustainable development of nanomaterials and nanotechnologies, including the fate, mobility, and toxicity of nanomaterials in the environment, remediation/treatment technologies employing nanomaterials, and nanoparticle-contaminant/biota interactions.

Dr. Lowry was awarded the ASCE Walter L. Huber Research Prize in 2009 for his work developing novel nanomaterials for environmental remediation. He served as an external advisory board member for the Center for Biological and Environmental Nanotechnology (CBEN) and for Duke's Superfund Basic Research Program. He was a review panelist for EPA's Draft Nanomaterial Research Strategy (NRS), and a reviewer of the NAS report on "Federal Research Strategy for Nanomaterials EHS." Professor Lowry is currently editing a special issue of Journal of Environmental Quality dedicated to the effects of engineered nanomaterials on environmental processes. He has developed a new course entitled "Environmental Implications of Nanotechnology" for graduate and undergraduates students, and is developing a new graduate curriculum aimed at training Ph.D. students at the interface of nanotechnology, the environment, and public policy.

Jean Pierre Davit

Associate
Golder Associates Srl.
Italy

Jean Pierre Davit, P.Eng., is an environmental engineer with 10 years experience in remediation projects. Mr. Davit has coordinated and managed characterization and remediation works in Europe and North America and is the Remediation Technical Network Leader for Golder Italy.

In the last years, Mr. Davit has focused his attention on the fields of the contaminants hydrogeology (mainly light and dense non-aqueous phase liquids - LNAPL and DNAPLs) and remediation technology, coordinating the design, the installation, the management and the optimisation at various facilities, such as refineries, chemical and manufacturing plants.

Liz Shaw

Lecturer in Soil Biology
School of Human and Environmental Sciences
Department of Soil Science
The University of Reading
United Kingdom

Dr. Liz Shaw is Lecturer in Soil Biology at the University of Reading (UK) and has a twelve year post-doctoral track record in soil and rhizosphere biogeochemistry and molecular microbial ecology. Much of Liz's previous research has focused on the fate and impacts of organic xenobiotics in the soil and rhizosphere and plant-microbe interactions with an emphasis on the impact of rhizodeposition on the fate of xenobiotics and ecology of biodegradation. She has expertise in the analysis of soil microbial communities using molecular techniques and analysis of microbial functions, particularly in the use of both radioactive and stable isotopes to trace nutrient element transformations in soils. Since she joined the University of Reading in 2006, Liz has equipped and populated a research group through funding from the UK's Royal Society (RG2), BBSRC (BB/F000251/1) and NERC (NE/F011946/1) to address questions concerning microbial ecology and plant-microbe interactions. The last project constitutes part of the first phase of a wider Environmental Nanoscience Initiative¹ and specifically examines the impacts of nanoparticles on microbial communities in the soil environment. In addition to her research activities, Liz teaches soil microbiology and biotechnology at undergraduate and postgraduate level and is Director for the MSc Programme in Environmental Management at Reading. Liz is currently subject editor for the journal *Soil Biology & Biochemistry* and section editor for the journal *Plant & Soil*.

¹ <http://www.nerc.ac.uk/research/programmes/nanoscience/>

Young Haeng LEE

Senior Research Scientist
Center for Environmental Technology Research
Korea Institute of Science and Technology
Korea

Dr. Young H. Lee is a senior research scientist in the Centre for Environment Technology Research at Korea Institute of Science and Technology, Seoul, South Korea. Dr. Lee is also an assistant professor in the Department of Water Resources and Environmental Engineering at University of Science and Technology, Daejeon, South Korea. Previously, he was a post-doctoral research fellow in the Department of Civil and Environmental Engineering at Stanford University, CA, USA. Dr. Lee received his Doctoral degree in the School of Civil and Environmental Engineering at Georgia Institute of Science and Technology, GA, USA in 2003.

His major research focuses on the application of membrane separation processes, environmental bio- and nano-technology to the water and wastewater treatment. His current projects include wastewater treatment and reuse using membrane-coupled bioreactor system, water purification using membrane separation process, elucidation and minimization of membrane organic fouling, decolorization and subsequent reuse of spent reactive dye baths, and bioenergy production from various organic wastes.

Parallel Session Six: Better Batteries Enabled by Nanoscale Innovation

Brian J. Landi

Assistant Professor
Golisano Institute for Sustainability
Rochester Institute of Technology
United States

Dr. Brian J. Landi is an assistant professor of chemical engineering and sustainability at the Rochester Institute of Technology (RIT). His research is conducted in the NanoPower Research Laboratories (NPRL) as part of RIT's Golisano Institute for Sustainability. He has worked as a researcher at the Schering Plough Research Institute, Mayo Clinic, and NASA Glenn Research Centre. He received a NASA Graduate Student Research Fellowship as well as R.I.T.'s Intellectual Property Productivity Award during his graduate studies. Dr. Landi has recently been involved with establishing standardized metrics for carbon nanotube purity assessment as well as engaging in the synthesis and application of nanomaterials for power generation and storage devices like lithium ion batteries. He has co-authored over 50 publications and has four patents pending. He earned a B.S. and M.S. in Chemistry and a Ph.D. in Microsystems Engineering from R.I.T.

Thomas P. Seager

Associate Professor
Golisano Institute for Sustainability
Rochester Institute of Technology
United States

Dr. Thomas P. Seager is an Associate Professor in the Golisano Institute for Sustainability at Rochester Institute of Technology (Rochester, New York). He is the author of over 50 research papers and book chapters related to sustainability, environmental assessment and industrial ecology, and has conducted research funded by the National Science Foundation, the National Oceanic & Atmospheric Administration, the Environmental Protection Agency and others. Dr. Seager is a founding member of the Institute's novel Ph.D. program in Sustainability and an expert in graduate education for sustainability. He currently leads multi disciplinary research teams investigating the environmental implications of alternative transportation energy technologies, including biofuels and (in cooperation with the NanoPower Research Lab at RIT) advanced lithium-ion batteries. Prior to joining RIT, Dr. Seager was an Assistant Professor of Civil Engineering at Purdue University in West Lafayette, Indiana. He earned his Ph.D. in a unique, integrative research and education program at Clarkson University (Potsdam, New York) called Environmental Manufacturing Management.

Kathy Hart

Office of Pollution Prevention and Toxics
Environmental Protection Agency
United States

Ms. Kathy Hart is with the Design for the Environment (DfE) Program in the U.S. Environmental Protection Agency's Office of Pollution Prevention and Toxics, and has over 28 years of experience in the field of environmental protection. She currently leads the joint Office of Pollution Prevention and Toxics/Office of Research and Development Nanotechnology in Lithium-ion Batteries Life-Cycle Assessment Partnership, and has directed three other major life-cycle assessment studies and partnerships for the DfE Program: Desktop Computer Displays, Lead-Free Solder in Electronics, and Wire & Cable: Insulation and Jacketing. She has also directed two Cleaner Technologies Substitutes Assessments of circuit board manufacturing technologies for the DfE Printed Wiring Board Partnership.

Prior to joining the DfE Program, Ms. Hart was a Senior Project Manager at Jellinek, Schwartz & Connolly, Inc., an environmental policy consulting firm. She also served as an Environmental Scientist with EPA's Office of Toxic Substances and the Food and Drug Administration's Center for Food Safety and Applied Nutrition. Ms. Hart earned a B.S. degree in Microbiology at the University of Michigan and holds a Masters degree in Zoology/Aquatic Ecology from Virginia Tech.

Chiaki Sotowa

Manager
R&D section of Fine Carbon Division
Showa Denko K.K
Japan

Mr. Chiaki Sotowa is a Manager of R&D section of Fine Carbon Division, Inorganics Sector, Showa Denko K.K. He has bachelor degree of science of Hiroshima University, and master degree of engineering of Kyushu University. He studied carbon material science at graduated school of Kyushu University.

He has been involved in research and development on carbon materials since 1997, especially anode active materials and conductive additives (VGCFTM; Vapour Grown Carbon Fiver) for Lithium-Ion battery. He presented his study on the materials at international conferences (such as Electrochemical Society Meeting 2006 in Cancun, Battery Symposium in Japan 2007, Advanced Automotive Battery & EC Capacitor Conference 2008) . The materials he is presenting are employed by battery makers around the world now.

Gitanjali DasGupta

Manager
Electric Vehicle Division
Electrovaya
Canada

Ms. Gitanjali DasGupta manages the Clean Transportation Division at Electrovaya where she has grown the division to include collaborations with Tata Motors, ExxonMobil and Chana International (China's 4th largest automaker). She received her M.Phil in Economics from Oxford University and her undergraduate in science from the University of Toronto. Gitanjali is Vice-Chair of Electric Mobility Canada, a steering committee chair for a Canadian Govt. Roadmap of Electric Vehicles and a co-founder of the Plug-in Hybrid Development Consortium.

Shane Thompson

Vice President
Kinsbursky Brothers and Toxco
United States

Mr. Shane Thompson is the Vice President of Kinsbursky Brothers and Toxco (a subsidiary company). KBI and Toxco make up one of the leading battery recycling companies in North America. Mr. Thompson's primary focus is business development and strategic planning for the group of companies. Prior to joining KBI-Toxco, Shane worked for the Rechargeable Battery Recycling Corporation, (RBRC) the non-profit organization, funded by the rechargeable battery industry, to raise awareness about the need to recycle rechargeable batteries and facilitate the collection and take back of rechargeable batteries at EOL. Prior to RBRC, Shane got his start in the metals recovery industry working for Inco at their subsidiary company Inmetco.

Shane is an attended Belmont Technical College and the University of Pittsburgh and holds certifications from the Colorado School of Mines and Harvard Law School.

Parallel Session Seven: Agricultural nanotechnology

Guigen Zhang

Professor of Bioengineering
Clemson University
United States

Dr. Guigen Zhang is Professor in the Department of Bioengineering, Department of Electrical and Computer Engineering at Clemson University, South Carolina. His research interests include micro/nano structures for electron-transfer devices. He received his Postdoctorate in Biological Materials, Northwestern University, Chicago Illinois and Ph.D. in Bioengineering, Clemson University, Clemson, South Carolina.

Kalpana Sastry

Principal Scientist
National Academy of Agricultural Research Management
Indian Council of Agricultural Research
India

Dr. Kalpana Sastry is working as a Principal Scientist at National Academy of Agricultural Research Management (NAARM) at Hyderabad, India. She received her undergraduate degree from the University of Delhi in Botany and her Masters from Indian Agricultural Research Institute, New Delhi in the area of Mycology and Plant Pathology. She completed her PhD in the same subject and joined the Agricultural Research Service, ICAR, New Delhi in 1984.

She focuses at present on agricultural innovations, intellectual property management systems and in research centering policy issues in this area for the national agricultural system in India. In addition, she is a part of team for facilitating IP portfolios for stakeholders like farmers, traders' organizations and scientists. Patent facilitation services through her team have been rendered to several scientists and farmers in National Agricultural Research System of India. She is a recognized faculty on IP and WTO issues in Agriculture at national and international fora and is a PG Diploma holder in Patent Laws from National Academy of Legal Studies and Research (NALSAR), India.

As a Fulbright Senior Research Scholar at Cornell University during 2008-09, she worked on "Policy and strategy options for nanotechnology in agricultural and food systems" against the background of environmental, social and intellectual property implications. This study aimed to facilitate internalization of such technologies in agricultural research and innovation systems. The research work now forms a part of an ongoing project on "Assessing Interrelationships between Developments in Nanotechnology and Agricultural Research" National Agricultural Innovation Project currently funded by World Bank and Government of India.

Pat Roy Mooney

Executive Director
ETC Group
Canada

For more than thirty years, **Mr. Pat Mooney** has worked with civil society organisations (CSOs) on international trade and development issues related to agriculture and biodiversity. Mooney has lived most of his life on the Canadian prairies. The author or co-author of several books on the politics of biotechnology and biodiversity, Pat Mooney received The Right Livelihood Award (the "Alternative Nobel Prize") in the Swedish Parliament in 1985. In 1998 Mooney received the Pearson Peace Prize from Canada's Governor General. He also received the American "Giraffe Award" given to people "who stick their necks out". Pat Mooney has no university training, but is widely regarded as an authority on agricultural biodiversity and new technology issues.

Together with Cary Fowler and Hope Shand, Pat Mooney began working on the "seeds" issue in 1977. In 1984, the three co-founded RAFI (Rural Advancement Foundation International), whose name was changed to ETC group (pronounced "etcetera" group) in 2001. ETC Group is a small international CSO addressing the impact of new technologies on rural communities. ETC has offices in Canada, the United States, and Mexico; and works closely with CSO partners around the world.

Ashok Mulchandani

Professor
Editor-in-Chief Applied Biochemistry and Biotechnology
University of California
United States

Prof. Ashok Mulchandani is Professor of Chemical and Environmental Engineering at the University of California, Riverside and Editor-in-Chief of the Applied Biochemistry and Biotechnology. He is elected Fellow of the American Association for the Advancement of Science and the American Institute of Medical and Biological Engineering. He has received several honors and awards including the National Science Foundation Research Initiation Award and the Department of Energy Faculty Participation Award. He has delivered several Plenary and Keynote lectures at international and national conferences.

Prof. Mulchandani obtained his Ph.D. from McGill University, Canada and then worked at the Biotechnology Research Institute, National Research Council of Canada. In 1991 he moved to the University of California, Riverside as the founding faculty of Chemical Engineering.

Prof. Mulchandani's research interest is in the area of nanobiotechnology with focus on development of biosensors, bioremediation and biomaterials. He is internationally recognized as a leader in the development of biosensors for applications in detection of biowarfare and chemical warfare agents, disease biomarkers for health care, biological pathogens and toxic industrial chemicals in water, food and environment and developing environmental friendly green technologies for heavy metal removal and degradation of pesticides and recalcitrant chemicals.

Prof. Mulchandani has published more than 180 peer-reviewed journal publications in premier journals, edited four books that include popular Enzyme and Microbial Biosensors: Protocols and Techniques and Affinity Biosensors: Protocols and Techniques, 11 book chapters, 12 conference proceedings and more than 175 conference abstracts. He has trained over a dozen Ph.D. and M.S. students and 30 Postdoctoral Fellows.

Steve Froggett

Scientific Advisor
Office of Scientific and Technical Affairs of the Foreign Agricultural Service
Foreign Agricultural Service
Department of Agriculture
United States

Dr. Steve Froggett currently serves as a scientific advisor to the Office of Scientific and Technical Affairs of the Foreign Agricultural Service at the U.S. Department of Agriculture. Dr. Froggett received his doctorate in Neuroscience and Behavior from the University of Massachusetts. Prior to coming to USDA, Dr. Froggett held positions at Kathmandu University Medical School, the Fred Hutchinson Cancer Research Center, University of Washington Medical School and the University of Nairobi. At USDA, Dr. Froggett serves as chair of a Department wide nanotechnology coordinating group and lead's FAS efforts on agricultural trade issues related to nanotechnologies. In addition, Dr. Froggett serves as a delegate for the U.S. Technical Advisor Group to the International Standards Organization's Technical Committee for Nanotechnologies.

Victor Bertucci Neto

Embrapa Instrumentação Agropecuária
Brazil

Dr. Victor Bertucci Neto received the B.S., M.S., and PhD degrees in Electrical Engineering from University of São Paulo, Brazil. Since 1990 he has been with the Embrapa at the Agricultural Instrumentation Center, in São Carlos, São Paulo State, Brazil. His research interests and activities include electronic circuits, instrumentation, control systems, and modeling, applied to bioenergy and environment areas.

Parallel Session Eight: Greener nanoproducts

Seth Coe-Sullivan

Chief Technology Officer
Member of the Board of Directors
QD Vision, Inc.
United States

Dr. Seth Coe-Sullivan is co-founder and Chief Technology Officer of QD Vision. He received his Ph.D. in Electrical Engineering from the Massachusetts Institute of Technology in May 2005, and his thesis work on incorporating quantum dots into hybrid organic/inorganic LED structures is the technology basis of QD Vision. His work spans quantum dot materials, new fabrication techniques including thin film deposition equipment design, and device architectures for efficient QD-LED light emission. Seth has over 20 papers and patents pending in the fields of organic light emitting devices, quantum dot LEDs and nanotechnology fabrication. He was awarded Technology Review Magazine's TR35 Award in 2006, naming him one of the top 35 innovators under the age of 35. In 2007, BusinessWeek named him one of the top young entrepreneurs under the age of 30.

Seth graduated in the class of 1999 from Brown University with an Sc.B. in electrical engineering. He then spent a year as a Staff Engineer at the Boston based research company Foster-Miller, Inc., in the Emerging Technology division of the Materials Technology Group, before departing for MIT. Seth is honored to sit on Brown University's Engineering Advisory Council.

Wendel Wohlleben

Innovation Manager
Nanotechnology Innovation Team
BASF
Germany

Dr. Wendel Wohlleben studied physics at the Ruprecht-Karls-University Heidelberg, and graduated with a diploma thesis that was performed at the Ecole Normale Supérieure in Paris. He earned his PhD in 2003 from the Ludwigs-Maximilians-University Munich with a thesis on energy harvesting in photosynthesis, performed at the Laser Chemistry department of the Max-Planck-Institute for Quantum Optics.

Afterwards, he developed chemically selective microscopy at the Physical Chemistry department of the University Marburg and has in total published more than 55 research papers. At BASF he heads a laboratory for nanoparticulate suspensions and safety of nanomaterials in Polymer Physics Research. He is innovation manager for the growth cluster nanotechnology of BASF with responsibilities in strategy and representation, including coordination in the European Technology Platform for Sustainable Chemistry (ETP SusChem). BASF invested EUR 180 mn. in the nanotechnology growth cluster in 2006 – 2008, focusing on nanocomposite materials and devices for the sectors mobility, construction, medical devices and electronics.

Joe Pimenoff

Senior Scientist
Beneq
Finland

Mr. Joe Pimenoff has studied material science at Helsinki University of Technology in Finland. He earned his Master's degree in 2002 studying how to achieve and utilise superplastic behaviour in sheet metal, and the industrial potential of superplastic forming in general. He subsequently held the position of Chief Technical Officer (CTO) at ABR Innova, a privately held Finnish company involved in nanoparticle generation, thereto related applications and nanomaterial coatings. After the acquisition of ABR Innova by the privately held Finnish company Beneq, Mr Pimenoff has held the position of Senior Scientist, with responsibility of R&D activities within the company's aerosol coatings department, as well as being Occupational Safety Manager for Beneq.

André J. Lecloux

HSE Adviser
Nanocyl
Belgium

Prof. A.J. Lecloux studied physic engineering at Liège University (Belgium) and developed a double career as researcher both in chemical industry and at university where he initiated several projects on material chemistry including catalysis and controlled synthesis of nanoparticles. In his career is participated in the development of specialty polymers and in the scaling up of a reactor for carbon nanotubes synthesis. He is now HSE adviser for Nanocyl and member of the CEFIC management team on nanomaterials representing the Producer Association of Carbon Nanotubes in Europe (PACTE)

Michael Overs

Head of Product Management Building and Interior
Nanogate AG
Germany

Dr. rer. nat. Michael Overs was born in 1971. He studied chemistry at the Westfälische Wilhelms-Universität in Münster and graduated in 2001 in the field of organic chemistry. In May 2001 he joined Nanogate Technologies GmbH in Saarbrücken where he started his work as a technical product manager.

Today, Dr. Overs is head of product management in the business unit building & interior of Nanogate AG in Göttelborn. Since June 2008 he is also Chairman of the project group NANOTECHNOLOGY IN CONSTRUCTION CHEMISTRY of the Deutsche Bauchemie e.V.

Ian Illuminato

Health and Environment Campaigner
Friends of the Earth U.S.
United States

Mr. Ian Illuminato is the Health and Environment Campaigner at Friends of the Earth. His work focuses on protecting people and the environment from threats posed by nanotechnology. He has worked for Greenpeace Italy, Greenpeace International, and the United Nations Environmental Program in Italy and has extensive experience monitoring the impact of technological change on the environment. At Greenpeace he helped lead an international movement against genetically engineered crops in Europe and the Middle East. He persuaded Europe's largest rice company to stop importing American rice to keep its stock GM-free. He also works closely with the [Campaign for Safe Cosmetics](#) to remove toxins from beauty products. He has authored and edited reports and published essays including, "Nanotechnology and Sunscreens: A Consumer Guide for Avoiding Nano-sunscreens" and "Nanotechnology in Food and Agriculture: Out of the Laboratory and On To Our Plates." His writing has appeared in publications including the Journal of Nanoparticle Research and the European Journal of Oncology. He has also appeared in numerous media outlets: The New York Times, Scientific American, Business Week and Reuters. Ian has a Bachelor of Arts degree in Human Ecology from the [College of the Atlantic](#) in Bar Harbor, Maine.

Armin Reller

Professor, Chairman
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Prof. Armin Reller was born 1952 in Winterthur, Switzerland. Studies and PhD in solid state chemistry. From 1992 to 1998 professor for applied chemistry at the University of Hamburg, Germany. Since 1999 professor at the Chair of Solid State Chemistry, chairman of the Environmental Science Center, and since 2009, holder of the newly established Chair for Resource Strategy, all at the University of Augsburg, Germany. From 1988 to 2006 coordinator of the programme Solar Chemistry/Hydrogen/Regenerative Energy Carriers funded by the Swiss Federal Office of Energy, Bern, Switzerland. Editor-in-Chief of Progress in Solid State Chemistry. Member of GAIA's Editorial Board.

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