

Participant List
Chemical Sciences and Society Summit (CS3)
“Chemistry for Next Generation Sustainable Electronics”
September 17-20, 2012, San Francisco, California

Country Delegations

CHINA			
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GERMANY			
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JAPAN			
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Participant Bios

CHINA



Xi Zhang (Chair)

Xi Zhang is a professor of chemistry and chair of the Department of Chemistry at Tsinghua University, Beijing, China. He received BS in Analytical Chemistry, and MS and PhD degrees in Polymer Chemistry and Physics at Jilin University under the supervision of Prof. Jiacong Shen. During his PhD study, he spent more than one year at the Institute of Organic Chemistry, University of Mainz, Germany, as a joint-training PhD student under the supervision of Prof. Helmut Ringsdorf. He joined the Department of Chemistry at Jilin University as a lecturer in 1992 and was then promoted to be a professor. He got Changjiang special professorship from Ministry of Education in 1999. He moved to Tsinghua University in late 2003. Currently, he serves as a senior editor of Langmuir, ACS journal, as well as members of editorial advisory board of several journals including Account of Chemical Research, Chemical Communications, Polymer Chemistry, Polymers. He was selected as a member of Chinese Academy of Sciences in 2007. He is vice president of Chinese Chemical Society since 2010. His main scientific interests include supra-amphiphiles, supramolecular polymers, Se-containing polymers, organized molecular films, and single molecule force spectroscopy.



Jian Pei

Prof. Jian Pei received his B.Sc. and Ph.D. degree in organic chemistry from Peking University, and then moved to Department of Chemistry, National University of Singapore, as a postdoctoral fellow in July, 1995. After two years, he joined in Institute of Materials Research and Engineering in Singapore as a Research Associate. In 1998, he joined the group of Professor A. J. Heeger to study organic semiconducting materials. Then he has stayed in Peking University since 2001. His research interests relate to organic synthesis, supramolecular chemistry, organic semiconductors, and the optoelectronic devices.



Jin Zhang

Professor Jin Zhang received his PhD from Peking University and Lanzhou University in 1997. After a two year postdoctoral fellowship at the University of Leeds, UK, he returned to Peking University where he was appointed Associate Professor (2000) and promoted to Full Professor in 2006. His research focuses on the controlled synthesis and spectroscopic characterization of carbon nano-materials, including: controlling the structure of single-walled carbon nanotubes by controlling the synthesis process; selective synthesis of metallic vs semiconducting single-walled carbon nanotubes; Raman spectroscopic characterization of single-walled carbon nanotubes and graphene; and the fabrication and applications of large arrays of carbon nanotubes. Dr. Zhang has received the National Science Foundation of China for Distinguished Young Scholars in 2007 and 2nd grade of the State Natural Science Award in 2008 (2nd contributor). Dr. Zhang has published over 130 peer-reviewed journal articles. And he now is editor of Carbon.



He Tian

Prof. He Tian received his Ph. D. degree in 1989 from East China University of Science & Technology, China. From 1991 to 1993, he stayed in Siegen University as a postdoc supported by Alexander von Humboldt Foundation. In 1999, he was appointed Cheung Kong Distinguished Professor by the Education Ministry of China. His current research interests include the syntheses of novel functional organic dyes and development of interdisciplinary materials science that determines the electronic and optical properties of materials. Prof. Tian has published 328 papers in international journals and been awarded 66 Chinese patents. Now Prof. Tian is Co-Editor of Dyes & Pigments and International Advisory Board Member for Polymer Chemistry and Chemical Science. In 2011, he was selected as a member of the Chinese Academy of Sciences.



Wenping Hu

Wenping Hu is a Professor at the Institute of Chemistry, Chinese Academy of Sciences (ICCAS). He received his Ph.D degree from ICCAS in 1999, then, he worked in Osaka University as a JSPS research fellow (1999-2001), in Stuttgart University as a research fellow of Alexander von Humboldt Foundation (2001-2003). In 2003, he joined in the Basic Research Laboratories, Nippon Telephone and Telegraph (NTTBRL, Japan) and then returned to ICCAS as a full professor. He is focusing on molecular electronics since 1996 and has published more than 240 refereed papers and 3 edited books. He has been awarded as Distinguished Researcher of NTTBRL (2005), the National Distinguished Young Scholar Fund (2007), Excellent Tutor of the Chinese Academy of Sciences (2007, 2008, 2009, 2011), Outstanding one-hundred PhD dissertation advisor (2009), Young Chemist Award of Chinese Chemical Society (CCS) and Royal Society of Chemistry (2010), and CCS-Evonik Chemical Innovation Award (2012) in recognition of his renowned research in the area of organic optoelectronic materials and devices.



Lixiang Wang

Prof. Lixiang Wang received his B.S. degree in Polymer Science at Department of Chemistry, Heilongjiang University in 1984 and his Ph.D. degree in Polymer Chemistry at Changchun Institute of Applied Chemistry, Chinese Academy of Sciences in 1989. In 1994 he started his postdoctoral research as Research Fellow of Alexander von Humboldt Foundation with Professor Klaus Muellen at Max-Planck Institute for Polymer Research, Mainz, Germany and then he moved in 1996 to Department of Polymer Science and Technology, University of Massachusetts at Amherst, U. S. A, as the Visiting Scientist in Professor Frank Karasz group. In 1997, he joint State Key Laboratory of Polymer Physics and Chemistry at Changchun Institute of Applied Chemistry, as full Professor. He is the receiver of Hundreds Talents Program in Chinese Academy of Sciences and author of more than 160 scientific publications, 2 US Patents and 15 Chinese Patents. He is the receiver of second class prize for the State Natural Science Award in China in 2009 and first class prize of science and technology award in Jilin province in 2007. He is vice president of the polymer and organic solid division of the Chinese Chemical Society.



Peter Bäuerle (Chair)

Peter Bäuerle received his Ph.D. in organic chemistry from the University of Stuttgart (Germany, 1985) working with Prof. F. Effenberger. After a post-doctoral year at MIT, Boston (USA, 1986), in the group of Prof. M.S. Wrighton, he completed his habilitation (1994) at the University of Stuttgart. After being Professor of Organic Chemistry at the University of Würzburg (Germany, 1994-95), he became Director of the Institute for Organic Chemistry II and Advanced Materials at the University of Ulm (Germany, since 1996). Current research interests of the group include development of novel organic semiconducting materials, in particular, conjugated poly- and oligothiophenes, structure-property relationships, self-assembling properties, and their applications in electronic devices, in particular organic solar cells. Results have been published in more than 260 peer-reviewed scientific papers, 8 book chapters and 12 patents. For his work in the field of plastic electronics he was awarded with the René Descartes Prize of the European Union (2000) and the Nozoe Memorial Lecture at ISNA-14 (USA, 2011). Guest Professorships at the University of Osaka (Japan, 2002), Université Rennes 1 (France, 2004), Melbourne (Australia, 2008), Shanghai (China, 2010), and Gainesville (USA, 2012) followed. He is co-founder of Heliatek GmbH, Dresden/Ulm, a spin-off company devoted for the production of organic solar cells (2006). Since October 2009 he serves as Vice President for research at the University of Ulm.



Andreas Hirsch

Andreas Hirsch received his Ph.D. in 1990 from the University of Tübingen. From 1990 to 1991 he was a postdoctoral fellow at the Institute for Polymers and Organic Solids in Santa Barbara, California in the group of Prof. Wudl. He subsequently returned to Tübingen as a research associate at the Institute for Organic Chemistry. Upon receiving his Dr. Habilitus in 1994, for which he was honored with a variety of prizes and awards including the Otto-Röhm Research Award (1994) and the ADUC Award für Habilitanden (1994) he joined the Chemistry Faculty at the University of Karlsruhe as a Professor of Organic Chemistry. Since October 1995, he has been chaired Full Professor of Organic Chemistry at the University of Erlangen-Nürnberg. In 2004 he became Adjunct Professor at Rice University in Houston and Senator at the University of Erlangen-Nürnberg. Between 2004 and 2008 he served as Fachkollegiat for Molecular Chemistry at the Deutsche Forschungsgemeinschaft DFG. In 2006 he received the Elhuyar-Goldschmidt-Prize of the Spanish and German Chemical Societies. In 2007 he was elected Professor of the Year (Unicum, Beruf, Germany). In 2010 he received an ERC Advanced Grant and in 2012 he received the Max Grundig Award. Hirsch's laboratory has been pioneering and is at the forefront of carbon allotrope chemistry and is well known for the investigations of basic principles for the functionalization of the 0-dimensional fullerenes, the 1-dimensional carbon nanotubes and the 2-dimensional graphene, which lead to synthesis of numerous examples of derivatives with tailor made structural-, electronic-, photophysical- and biomedical properties.



Frank Würthner

Frank Würthner was born in 1964 in Villingen-Schwenningen/Germany. He studied chemistry at the University of Stuttgart where he received his PhD degree in 1993 working with Franz Effenberger on donor-acceptor substituted oligothiophenes and their use in molecular electronics. After a postdoctoral stay as a Feodor Lynen fellow (Alexander von Humboldt foundation) at the Massachusetts Institute of Technology in Cambridge/USA in the laboratory of Julius Rebek, Jr. he joined BASF Dye Stuff Research in Ludwigshafen/Germany in 1995 to work in the field of functional dyes. In 1997 he moved to University of Ulm where he finished his Habilitation in 2001. Since October 2002 he holds the Chair of Organic Chemistry II at the University of Würzburg. At the University of Würzburg he served as dean of the Faculty of Chemistry and Pharmacy (2007-2009), vice coordinator of the Wilhelm-Conrad-Röntgen Research Center of Complex Material Systems (2006-2012) and recently as founding director of the Center for Nanosystems Chemistry (since 2012). He is a member of several advisory editorial boards, national and international selection committees, and recipient of the Arnold-Sommerfeld award of the Bavarian Academy of Science and Humanities (2002). His research interests are in the fields of functional dyes, supramolecular chemistry, and organic materials for electronics and photonics.



Stefan Hecht

Stefan Hecht was born in 1974 and grew up in Berlin, Germany, where he studied chemistry at Humboldt-Universität from 1992-1997. In 1996 as a fellow of the Studienstiftung des Deutschen Volkes, he carried out his Diplom thesis research in the area of mechanistic organic photochemistry with the late Prof. William G. Dauben at the University of California, Berkeley. After receiving his diploma from Humboldt-Universität in 1997, he returned to Berkeley to pursue his Ph. D. degree in the field of organic polymer chemistry under the guidance of Prof. Jean M. J. Fréchet. Following graduation in 2001, he started his independent academic career as a young investigator (assistant professor) at Freie Universität Berlin (2001-2004) and continued as a group leader (associate professor) at the Max-Planck-Institut für Kohlenforschung in Mülheim an der Ruhr (2005/2006). Since 2006 he holds the Chair of Organic Chemistry and Functional Materials at his *alma mater*. He received the Sofja Kovalevskaja Award of the Alexander von Humboldt Foundation (2001), the MIT Technology Review Top 100 Young Innovator Award (2004), the ADUC Young Investigator Award of the German Chemical Society (2005) as well as the Klung-Wilhelmy-Weberbank Prize in Chemistry (2010). His research interests center on combining covalent and non-covalent syntheses to design functional (macro)molecules, typically equipped with photoresponsive gates, and to investigate their properties on both the single and ensemble level in solution and

at interfaces.



Klaus Meerholz

Prof. Dr. Klaus Meerholz studied Chemistry at the Universities of Bielefeld and Freiburg, where he received his Ph.D. summa cum laude in 1992. From 1993 to 1995 he was a postdoctoral fellow at State University of New York, Buffalo/USA and Research Assistant Scientist at the Optical Sciences Center at the University of Arizona. In 1995 he moved to the LMU Munich, where he finished his Habilitation in 1998 and received an Award for the best Habilitation from the University of Munich. Subsequently, he was Full Professor and Associate Professor of Physical Chemistry at the LMU Munich. Klaus Meerholz received among other prizes in 2004 the Innovation Award Cologne, in 2010 the Nordrhein-Westfalen Innovation Award and in 2011 the Albertus-Magnus Award from the University of Cologne in the category "Research". In 2011 Klaus Meerholz was nominated for the German Future Award. Since 2002 he holds the chair of the Physical Chemistry Department and since 2008 he is Director of the Chemistry Department at the University of Cologne. Currently, Klaus Meerholz is furthermore Director of the Center for Organic Production Technologies in North Rhine Westfalia and Managing Director of the Center for Organic Electronic Cologne. His research interests are organic light-emitting diodes for display applications, organic solar cells for photovoltaics, organic nonlinear optical materials, organic holographic storage media for optical data processing, smart sensors for high-throughput screening, and organic electrochemistry.



Horst Hahn

Prof. Dr. Horst Hahn studied Materials Science at the Universität des Saarlandes and received his Ph.D. in 1982 from the Technische Universität Berlin. He was a postdoctoral fellow at the the Universität des Saarlandes working in the area of interfaces and nanocrystalline metals. From 1985 to 1987 Dr. Hahn was a Research Associate in the Materials Science Division at Argonne National Laboratory in Illinois, where he established a research program on nanocrystalline ceramics. Subsequently, he was Research Assistant Professor in the Materials Research Laboratory at the University of Illinois at Urbana-Champaign for three years. In 1990 he became Associate Professor of Materials Science at Turgers – The State University of New Jersey. From 1992 to 2004 Horst Hahn was Full Professor in the Department of Materials Science and Head of the Thin Films Division at the Technische Universität Darmstadt. Since 2004 Professor Horst Hahn is Executive Director of the Institute for Nanotechnology at the Forschungszentrum Karlsruhe and Head of Joint Research Laboratory Nanomaterials located at the Technische Universität Darmstadt. Since 2011 he is Executive Founding Director of the Helmholtz Institute Ulm. Furthermore, Horst Hahn is Honorary Professor at the Department of Physics at the University of Hyderabad, India, Distinguished Professor of the IIT Madras, India and Guest Professor at Langzhou University, China and at the University of Vienna, Austria. He is a member of the DFG funded Centre for Functional Nanostructures and of the Landeskompetenznetzwerk "Funktionelle Nanostrukturen" at the University of Karlsruhe. His main research interests are in the areas of synthesis, characterization and functional (physical and chemical) properties of nanostructured materials in the form of thin films, nanoparticles and bulk materials.



Cherie Kagan (Chair)

Professor Cherie Kagan holds appointments in the departments of Electrical and Systems Engineering, Materials Science and Engineering, and Chemistry at the University of Pennsylvania. She served as the Director of the University's Nanofabrication facility from 2007-2009. In 2009, Cherie was named co-director of Pennergy: The Penn Center for Energy Innovation and she served from 2009-2011 as Penn's director to the Energy Commercialization Initiative, a multi-institutional partnership funded by the Commonwealth of Pennsylvania to accelerate commercialization of clean, alternative energy technologies. Cherie was selected by the American Chemical Society in 2002 as one of the top 12 Women at the Forefront of Chemistry, featured by the American Physical Society in Physics in Your Future, and in 2000 chosen by the MIT Technology Review TR10. In 2005, she received IBM's Outstanding Technical Achievement award and in April, 2009 gave Stanford University's Distinguished Women in Science Colloquium. She is on the editorial board of American Chemical Society's journal "Nano Letters" on the editorial board on "NanoToday," and served on the Materials Research Society's Board of Directors from 2007-2009 and the editorial board of the American Chemical Society's journal "Applied Materials and Interfaces" from 2008-2011. The Kagan group's research is focused on studying the chemical and physical properties of molecular and nanostructured assemblies and thin films and their integration in electronic, optoelectronic, and optical devices. The materials and devices impact low-cost and flexible macro- and nano-electronics and nano-photonics/plasmonics, solar photovoltaics, and chemical and biological sensors.

Cherie earned a B.S.E. in Materials Science and Engineering and a B.A. in Mathematics from the University of Pennsylvania in 1991. In 1996, she received her Ph.D. in Electronic Materials from MIT. In 1996, Cherie went to Bell Laboratories as a Postdoctoral Fellow. In 1998 she joined IBM's T. J. Watson Research Center where she most recently managed the "Molecular Assemblies and Devices Group." In January, 2007 Cherie joined the faculty of the University of Pennsylvania.



James Batteas

James Batteas is a Professor of Chemistry and Materials Science and Engineering at Texas A&M University. He earned a B.S. in Chemistry at the University of Texas at Austin in 1990 and a PhD in Chemistry from the University of California at Berkeley in 1995. He is an expert in materials chemistry of surfaces and interfaces with research activities covering a broad range of fundamental surface and interfacial phenomena. This includes investigations of charge transport in organic molecules on surfaces (measured by STM and modeled by density functional theory), nanoparticle catalysis, semiconducting nanomaterials, plasmonics, tribology of oxide surfaces, "smart" surfaces, and self-organizing nanoscale materials for device applications in optoelectronics and chemical sensing. His research in tribology also includes the use of large scale molecular dynamics simulations to explore the assemblies of molecules on nanoparticles and their interactions. At TAMU, Batteas co-directs an NSF funded REU site on *Biological, Environmental and Materials Chemistry* in the Department of Chemistry. He is a Fellow of the Royal Society of Chemistry and is an Associate Editor for *RSC Advances*, an interdisciplinary chemistry journal.



Lynn Loo

A professor of Chemical and Biological Engineering at Princeton University, Yueh-Lin (Lynn) Loo's current research focuses on developing new materials and manipulating their structure to realize low-cost, lightweight, highly scalable plastic solar cells. For her research in organic and plastic electronics, Lynn has garnered numerous accolades, including a DuPont Young Professor Award, a Beckman Young Investigator Award, a Sloan Fellowship and her selection as one of the top 100 Young Innovators by MIT's *Technology Review*. She was the recipient of the 2006 Allan P. Colburn Award sponsored of the American Institute of Chemical Engineers and the 2010 John H. Dillon Medal recipient of the American Physical Society. In 2010, Lynn was selected as one of two scientists to represent the United States of America at the World Economic Forum's Summer Davos Meeting in Tianjin, China during which she introduced plastic electronics to government and business leaders, dignitaries, and entrepreneurs, and was most recently elected to the 2012 Young Global Leader cohort. As Deputy Director of the Andlinger Center for Energy and the Environment, Lynn is currently leading the Princeton Energy and Environment Corporate Affiliates Program to foster partnerships between Princeton faculty and the private and governmental sectors, and to effect the translation of research from academia to industry.

Lynn received BSE degrees in Chemical Engineering and Materials Science and Engineering from the University of Pennsylvania in 1996, and a PhD in Chemical Engineering from Princeton University in 2001. Lynn was a Post-doctoral Member of the Technical Staff at Bell Laboratories for a year before she started her independent research program as the General Dynamics Endowed Faculty Fellow in the Chemical Engineering Department at the University of Texas at Austin. In 2007, Lynn returned to the Chemical and Biological Engineering Department at Princeton.



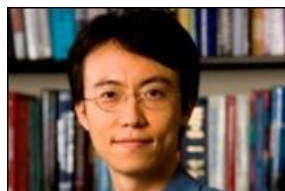
Colin Nuckolls

Colin Nuckolls was born at the Lakenheath RAF base in Great Britain in 1970. He carried out his undergraduate studies at the University of Texas at Austin, studying with Marye Anne Fox, and he received the Ph. D. in 1998 from Columbia University, where he studied with Thomas Katz. He was an NIH post-doctoral fellow with Julius Rebek, Jr., at the Scripps Research Institute. He joined the faculty at Columbia University in 2000, was promoted to the rank of Full Professor in 2006, and was the Chairman of the Department from 2008–2011. He is an associate editor for the Royal Society of Chemistry journal, *Chemical Science*. His research, at the intersection of organic chemistry, materials science, and nanoscience, is directed toward the synthesis of new types of electronic materials and uniquely functioning devices, goals he is working to achieve by combining the synthesis of new molecular species, state of the art lithography, unique reaction chemistry, and unusual modes of self-assembly. Nuckolls has authored 131 research publications. Recent awards he has received for his achievements include the following: Named “Honorable Professor” at Shanghai Normal University (2011-2013), Leo Hendrik Baekeland Award (2009), Columbia University’s Lenfest Distinguished Faculty Award (2008), and American Chemical Society Arthur C. Slope Award (2008).



Claudia Arias

Dr. Ana Claudia Arias is an Associate Professor at the Electrical Engineering and Computer Sciences Department at the University of California in Berkeley. Prior to joining the University of California she was the Manager of the Printed Electronic Devices Area and a Member of Research Staff at PARC, a Xerox Company, Palo Alto, CA. She went to PARC from Plastic Logic in Cambridge, UK where she led the semiconductor group. She did her PhD on semiconducting polymer blends for photovoltaic devices at the University of Cambridge, UK. Prior to that, she received her master and bachelor degrees in Physics from the Federal University of Paraná in Curitiba, Brazil. Her research focuses on devices based on solution processed materials and application development for flexible sensors and electronic systems. Ana Claudia is a director of the Materials Research Society (MRS), a member of the technical advisory board of Linde Nanomaterials and the chair of ThinFilm Electronics Technical Advisory Council.



Ji-Woong Park

Jiwoong Park is an Associate Professor of Chemistry and Chemical Biology at Cornell University and an executive member of the Kavli Institute at Cornell for Nanoscale Science. His current research interests are studying the physical and chemical properties of nanoscale materials, including carbon nanotubes and graphene. His research frequently appears on prestigious journals such as *Nature*, *Science* and *Nature Nanotechnology*. Professor Park is a recipient of the NSF CAREER award (2008), the Presidential Early Career Award for Scientists and Engineers (2009) and the Alfred P. Sloan Research Fellowship (2010).

Park received a B.S. degree in physics from Seoul National University (1996) and a Ph.D. in physics from the University of California, Berkeley (2003). During his graduate studies (advisor: Professor Paul McEuen), he investigated electron transport in single molecules and reported electrical devices based on single atoms for the first time. From 2003 until 2006, he was selected as one of the first Junior Rowland Fellows at the Rowland Institute at Harvard University. He then joined the Department of Chemistry and Chemical Biology at Cornell University as an Assistant Professor (2006).



Pete Skabara (Chair)

Peter Skabara was born in Edinburgh in 1968. After completing his doctoral studies under the supervision of Professor Martin Bryce at the University of Durham (1994), he went on to work in the group of Professor Klaus Müllen at the Max-Planck Institute for Polymer Research in Mainz. Between 1995 and 2005, he was a Lecturer at Sheffield Hallam University, then Lecturer/Senior Lecturer at the University of Manchester. In 2005 he joined the University of Strathclyde as the first WestCHEM Professor and is currently the 1870 Young Chair of Chemistry and Head of Department. His research activities involve the synthesis of electroactive molecules and macromolecules and their application in organic semiconductor devices.



Stephen Yeates

Professor Steve Yeates has an extremely strong track record of innovation and product development in the area of materials and polymer science. This was acknowledged by his early appointment to the ICI Scientific ladder in 1993. During his last 6 years in industry he took a strong leadership role in the development of Avecia's technical strategy in two key areas. Firstly in initiating and developing the Technical and Business strategy in Displays and subsequently Organic Semi-Conductors. In both these areas he has interacted strongly with colleagues within all parts of the organisation as well as with external agencies and OEM's (Europe, USA and Japan). This business was subsequently sold to Merck GmbH in early 2005. Secondly through the initiation and delivery of a number of patented technical programmes within the Ink Jet Printing Materials (IJPM) for SOHO and industrial applications.

In November 2004 he was appointed to the full time academic position as Professor of Polymer Chemistry and co-Director of the Organic Materials Innovation Centre (OMIC) at the University of Manchester, the UK's second largest chemistry department. His current areas of research activity, supported by EPSRC, DTI, Home Office, EU and Industrial grants cover: Electronic Materials; Direct Write Non-Impact printing; and Organic smart materials.

He has a strong patent (33) / publication (>70) list and has developed a strong reputation within UK academe in the area of polymer science and sits on several Industrial Advisory Boards. He was elected to the role of President of the Materials Chemistry Division of the RSC in July 2009.



Karl Coleman

Karl Coleman is a Reader in Chemistry at Durham University, UK working in the area of nanocarbons. Karl Coleman read chemistry at the University of Leicester, UK, and graduated with a 1st Class Honours degree in 1993. He remained in Leicester after his first degree and obtained a PhD in Chemistry in 1996. He received the Royal Society of Chemistry Laurie Vergnano Award in 1995.

Karl received a Marie Curie Research Fellowship in 1996 from the European Union and moved to France to carry out postdoctoral research at the Université de Strasbourg, Louis Pasteur, where he stayed until 1998. Following a successful stay in France Karl was awarded a Royal Society University Fellowship which he held at the University of Oxford from 1998 to 2004. Whilst at the University of Oxford he also held an EPA Cephalosporin Research Fellowship and Praelectorship in Chemical Sciences at Lincoln College. In 2004 he moved to Durham University where he is now a Reader in Nanomaterials heading a research group studying the chemistry of carbon nanotubes and graphene. He established Durham Graphene Science in 2010 to exploit his work on the synthesis and chemistry of graphene and was awarded the Royal Society of Chemistry Entrepreneur of the Year Award in 2011 for his work on the commercialisation of graphene. He is the co-founder, and currently Secretary, of the Royal Society of Chemistry Chemical Nanosciences and Nanotechnology Subject Group.



Martin Heeney

Dr Martin Heeney is a Reader in the Chemistry Department at Imperial College London, and has extensive expertise in the design and synthesis of conjugated semiconducting small molecules and polymers and their application in solar cells, light emitting diodes and field effect transistors. He also has over 7 years' industrial experience in the area of organic electronics, having worked as project leader for this area at Merck Chemicals. His current research receives financial support from the EPSRC, the Dutch Polymer Institute and the European Commission. He is co-founder and director of Flexink Ltd., a start-up company commercialising organic semiconductor materials. He has co-authored over 130 research papers, 4 book chapters and 40 patent families.



Andrew Monkman

Professor Andrew Monkman obtained his degree and PhD at the University of London with Professor David Bloor. He joined Durham University in 1988 and was appointed to a personal Chair in 2002. Professor Monkman runs the OEM research group focusing on the study of the optical properties of organic semiconductors and devices, with especially on organic solid state lighting. The research group has a sophisticated array of spectroscopic techniques ranging from 15 fsec resolution time resolved laser measurements to the ability to study the weakest phosphorescent processes. Many dedicated spectroscopic techniques have been developed for the study of triplet exciton dynamics in organic materials. The group has developed these optical measurements to enable the studies of OLED devices as well as materials. The group also has excellent clean room facilities to fabricate both polymer and small molecule encapsulated devices.

Professor Monkman is the Director of the Durham Photonic Materials Center, is a Fellow of the Institute of Physics and has held Leverhulme and STINT Fellowships. He works closely with Industry and currently holds major research awards with Cambridge Display Technology, Novaled, Thorn Lighting, Zumtoble and Ledon OLED.

**Takuzo Aida (Chair)**

Takuzo Aida was born in 1956. He received his B.S. degree in Physical Chemistry from Yokohama National University in 1979 and Ph.D. in Polymer Chemistry from the University of Tokyo in 1984. He then began his academic career at the same university and developed precision polymer synthesis with metalloporphyrin complexes. In 1996, he was promoted to Full Professor of the Department of Chemistry and Biotechnology, School of Engineering, The University of Tokyo. His research interests include (1) electronic and optoelectronic soft materials, (2) bioinspired dendritic macromolecules, (3) molecular and biomolecular machines, and (4) biorelated molecular recognition and catalysis. He is now director for Riken Advanced Science Institute. He has received many awards including, as recent examples, American Chemical Society Award in Polymer Chemistry in 2009, Royal Medal with Purple Ribbon in 2010, and Fujihara Award in 2011.

**Yoshiharu Sato**

Dr. Yoshiharu Sato has been engaged in organic device research since 1988. Especially, he has a deep and wide experience on organic light-emitting diode (OLED) research. He has contributed to device stability of OLED, which is a key issue for practical application. He also worked for phosphorescent OLED by introducing a concept of hole-blocking layer and carbazole-based host material. He is also specialized in the interface design of both hole and electron injection. He has applied more than hundred patents, many of them have been registered. He also has contributed to scientific aspect of OLED by presenting at international conference and publishing papers. After joining the ERATO project, he developed a new device system based on benzoporphyrin. Utilizing the soluble precursor of benzoporphyrin, he invented the p-i-n organic solar cell that is solution-process. This new type of solution-processed organic solar cell based on small molecules is found to be highly efficient. This new organic device can be a paradigm shift, which shifts the research from amorphous to crystal.

**Mitsuo Sawamoto**

Mitsuo Sawamoto was born in 1951 in Kyoto, Japan. He received B.S. (1974), M.S. (1976), and Ph.D. degrees (1979) in polymer chemistry from Kyoto University. After a postdoctoral research at the Institute of Polymer Science, The University of Akron, Akron, OH, U.S.A. (1980–81), he joined the faculty of Department of Polymer Chemistry, Kyoto University in 1981 as an assistant professor and, since 1994, he is Professor of Department of Polymer Chemistry, Graduate School of Engineering, Kyoto University. His societal and public service covers: an executive member of the Science Council of Japan (2005–); a titular/associate member of IUPAC Polymer Division (2007–); one of the Editors of the *Journal of Polymer Science, Part A, Polymer Chemistry* (1995–); and a past President of the Society of Polymer Science, Japan (2008–2010). His research interest encompasses: (a) novel precision polymerizations and catalysis; (b) precision synthesis of designed functional polymers; (c) chemistry of polymerization intermediates; and (d) sequence regulation and single-chain functional macromolecules. With >350 original papers and >12,000 total citations, Dr. Sawamoto has received: the Award of the Society of Polymer Science, Japan (1992); the Divisional Research Award of the Chemical Society of Japan (1999); the Arthur K. Doolittle Award of PMSE Division, the American Chemical Society (2002); and the Macro Group UK Medal for Outstanding Achievement in Polymer Science, the Royal Society of Chemistry (2012).

**Takao Someya**

Takao Someya received the Ph.D. degree in electrical engineering from the University of Tokyo in 1997. Since 2009, he has been a professor of Department of Electrical and Electronic Engineering, The University of Tokyo. From 2001 to 2003, he worked at the Nanocenter (NSEC) of Columbia University and Bell Labs, Lucent Technologies, as a visiting scholar. His current research interests include organic transistors, flexible electronics, plastic integrated circuits, large-area sensors, and plastic actuators. Prof. Someya has received a number of awards, a Japan Society for the Promotion of Science (JSPS) Prize, the 1st Prize of the newly established German Innovation Award, 2004 IEEE/ISSCC Sugano Award, and 2009 IEEE Paul Rappaport Award. He was a global scholar of Princeton University (2009–2012), a board of directors of the U.S. Materials Research Society (2009–2011), and an IEEE/EDS Distinguished Lecturer since 2005. Prof. Someya's "large-area sensor array" electronic thin film was featured in Time Magazine as one of its "Best Inventions of 2005" in its November 21st issue.

**Kazuo Takimiya**

Kazuo Takimiya received his Ph. D. in 1994 from Hiroshima University under the supervision of Professor Fumio Ogura. Thereafter, he joined Professor Tetsuo Otsubo's research group at Hiroshima University where he carried out research on organic conductors/superconductors. After returning from his stay with Professor Jan Becher's group in Odense University, Denmark (1997–1998), he was promoted to associate professor in 2003. In 2007, he became full professor at Hiroshima University. His current interests are the syntheses, characterization, and application of organic semiconductors.



Masahiro Yamashita

Masahiro Yamashita was born in 1954 in Saga, Japan. He received his B. Sc. degree in 1977, M. Sc. in 1979, and D. Sc. in 1982 from Kyushu University, working under the supervision of Prof. S. Kida. After his graduation, he joined the Institute for Molecular Science (IMS). In 1985, he was appointed as Assistant Professor at Kyushu University. In 1989, he was appointed as Associate Professor at Nagoya University, and he was promoted to full Professor at the same university in 1998. He was a full Professor at Tokyo Metropolitan University from 2000 to 2004. He is now a full Professor at the Department of Chemistry in Tohoku University. He was working on the Core Research for Evolutional Science and Technology (CREST) project at the Japan Science and Technology Corporation (JST) from 2002 to 2008. He was also working as the project leader of a Grant-in-Aid for Creative Scientific Research from the Ministry of Education, Culture, Sports, Science and Technology from 2003 to 2008. His current interests include the multi-functional nano-sciences of advanced metal complexes as well as quantum molecular spintronics based on Single-Molecule Quantum Magnets and Single-Chain Quantum Magnets. He has been honored with the Inoue Scientific Award (2002), and The Chemical Society of Japan Award for Creative Work (2005).



Mitsushiko Shionoya

Mitsushiko Shionoya is a Professor of the Department of Chemistry, Graduate School of Science, University of Tokyo. In April 2012, he was appointed a Principal Researcher of Research Center for Science Systems, JSPS, and a board member of the Chemistry Society of Japan (CSJ). He is an Editor-in-Chief-to-be of Chemistry Letters, CSJ, from January 2013. His research interests involve bio-inspired supramolecular array, space and motion (e.g. metallo-DNA, molecular machines, supramolecular capsules and cages, porous crystals and functional aggregates). His recent awards include the CSJ Award for Creation Work (2007), Inoue Prize for Science (2007), University of Louis Pasteur Medal (2008), and Guest Professorships at University of Louis Pasteur (2003) and LMU Munich (2007).

Mitsushiko Shionoya was born in 1958. He received his B.S. (1982) and M.S. (1984) from the University of Tokyo, and Ph.D. from Hiroshima University (1990). In 1986 he accepted a position as Assistant Professor at Hiroshima University, and promoted to Lecturer (1991) and Associate Professor (1994). In 1995, he was appointed a Professor at the Institute for Molecular Science in Okazaki, and In 1999, a Professor of the University of Tokyo.
