

| Volume 1- Nanomaterials                                                                                | Authors                                                                                                                                          | Affiliations                                                                                                                                                                                            |
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| Electronic Structure of Organic Materials Investigated by Quantum Chemical Calculations                | B Engels, W Liu, J Pfister, V Settels, H-M Zhao, and R F Fink                                                                                    | University of Würzburg, Würzburg, Germany                                                                                                                                                               |
| Carbon Nanotubes: Electronic Structure and Spectroscopy                                                | G Lanzani<br>L Lüer                                                                                                                              | Italian Institute of Technology, Milano, Italy<br>CNR/INFM ULTRAS, Milano, Italy, Ciudad Universitaria de Cantoblanco, Madrid, Spain                                                                    |
| Laser Action in Organic Semiconductors                                                                 | R C Polson and Z V Vardeny                                                                                                                       | University of Utah, Salt Lake City, UT, USA                                                                                                                                                             |
| An Overview of Organic Light-Emitting Diodes and their Applications                                    | J Shinar<br>R Shinar                                                                                                                             | Ames Laboratory, Ames, IA, USA<br>Iowa State University, Ames, IA, USA                                                                                                                                  |
| Organic Spintronics                                                                                    | S Majumdar<br>H S Majumdar and R Österbacka                                                                                                      | Åbo Akademi University, Turku, Finland and University of Turku, Turku, Finland<br>Åbo Akademi University, Turku, Finland                                                                                |
| Structured Organic Non-Linear Optics                                                                   | S-H Jang and A K-Y Jen                                                                                                                           | University of Washington, Seattle, WA, USA                                                                                                                                                              |
| Quantum Dots: Theory                                                                                   | N Vukmirović and L-W Wang                                                                                                                        | Lawrence Berkeley National Laboratory, Berkeley, CA, USA                                                                                                                                                |
| Quantum Dots: Synthesis and Characterization                                                           | D Dorfs, R Krahn, A Falqui, and L Manna<br>C Giannini<br>D Zanchet                                                                               | Fondazione Istituto Italiano di Tecnologia, Genoa, Italy<br>CNR-Istituto di Cristallografia (IC), Bari, Italy<br>Laboratório Nacional de Luz Síncrotron, Campinas-SP, Brazil                            |
| Core-Shell Nanocrystals                                                                                | S Kuderla and L Maus<br><br>M Zanella and W J Parak                                                                                              | Max Planck Institute for Metals Research, Stuttgart, Germany and,<br>University of Heidelberg, Heidelberg, Germany<br>Philipps Universität Marburg, Marburg, Germany                                    |
| Inorganic Nanowires                                                                                    | C N R Rao, S R C Vivekchand, and A Govindaraj                                                                                                    | Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, India                                                                                                                              |
| Inorganic Nanotubes Beyond Cylindrical Matter                                                          | M Remskar                                                                                                                                        | Jozef Stefan Institute, Ljubljana, Slovenia                                                                                                                                                             |
| ZnO Nanorods and their Heterostructures for Electrical and Optical Nanodevice Applications             | G-C Yi<br>T Yatsui and M Ohtsu                                                                                                                   | Seoul National University, Seoul, Republic of Korea<br>The University of Tokyo, Tokyo, Japan                                                                                                            |
| Noble Metal Nanoparticles: Synthesis and Optical Properties                                            | F Hubenthal                                                                                                                                      | Universität Kassel, Kassel, Germany                                                                                                                                                                     |
| Magnetic Nanoparticles                                                                                 | S Mørup, M F Hansen, and C Frandsen                                                                                                              | Technical University of Denmark, Kongens Lyngby, Denmark                                                                                                                                                |
| Colloidal and Self-Assembled Quantum Dots for Optical Gain                                             | P Kambhampati, Z Mi, and R R Cooney                                                                                                              | McGill University, Montreal, QC, Canada                                                                                                                                                                 |
| Optical Properties of Nanostructured Silicon Solar Cells and Photocatalysts                            | Y Chao<br>Y Nosaka                                                                                                                               | University of East Anglia, Norwich, UK<br>Nagaoka University of Technology, Nagaoka, Japan                                                                                                              |
| Rare-Earth Doped Upconversion Nanophosphors                                                            | F Wang and X Liu                                                                                                                                 | National University of Singapore, Singapore                                                                                                                                                             |
| Volume 2- Biological Nanoscience                                                                       |                                                                                                                                                  |                                                                                                                                                                                                         |
| Nanoparticles for Photodynamic Therapy                                                                 | C Burda                                                                                                                                          | Case Western Reserve University, Cleveland, OH, USA                                                                                                                                                     |
| Energy Transfer in Photosynthetic Light-Harvesting Complexes: From Spectroscopy to Quantitative Models | R van Grondelle<br>Y I Novoderezhkin                                                                                                             | Vrije Universiteit, Amsterdam, The Netherlands<br>Moscow State University, Moscow, Russia                                                                                                               |
| Photonic Nanoparticles for Cellular and Tissue Labeling                                                | S IP, C M MacLaughlin, C T Nguyen, and G C Walker                                                                                                | University of Toronto, Toronto, ON, Canada                                                                                                                                                              |
| DNA-Conjugated Nanomaterials for Bioanalysis                                                           | Y Chen<br>L Wang<br>Lu Peng and W Tan                                                                                                            | University of Florida, Gainesville, FL, USA<br>Eli Lilly and Company, Indianapolis, IN, USA<br>University of Florida, Gainesville, FL, USA                                                              |
| Förster Resonance Energy Transfer                                                                      | E A Lemke<br>A A Deniz                                                                                                                           | European Molecular Biology Laboratory, Heidelberg, Germany<br>The Scripps Research Institute, La Jolla, CA, USA                                                                                         |
| Chemistry and Materials Development of Protein-Based Nanoparticles                                     | J Rong Jinan University, Guangzhou, People's Republic of China and University of South Carolina, Columbia, SC, USA<br>Z Niu, L A Lee, and Q Wang | Jinan University, Guangzhou, People's Republic of China and University of South Carolina, Columbia, SC, USA<br>University of South Carolina, Columbia, SC, USA                                          |
| Tissue Engineering                                                                                     | L L Y Chiu, Z Chu, and M Radisic                                                                                                                 | University of Toronto, Toronto, ON, Canada                                                                                                                                                              |
| Engineering Biomimetic Membranes with Hydrogels                                                        | T-J Jeon<br>J L Poulos and J J Schmidt                                                                                                           | Inha University, Incheon, South Korea<br>University of California, Los Angeles, Los Angeles, CA, USA                                                                                                    |
| Protein Nanomechanics                                                                                  | H Li                                                                                                                                             | The University of British Columbia, Vancouver, BC, Canada                                                                                                                                               |
| Biological Imaging Using Near-Field Scanning Microscopy                                                | L Stebounova<br>M Paulite and G Walker<br>Z Fakhrabi                                                                                             | University of Iowa, Iowa City, IA, USA<br>University of Toronto, Toronto, ON, Canada<br>University of Wisconsin, Madison, WI, USA                                                                       |
| Single-Molecule and Nanoscale Approaches to Biological Signaling                                       | W D Hoff                                                                                                                                         | Oklahoma State University, Stillwater, OK, USA                                                                                                                                                          |
| Solar Energy Conversion – Natural to Artificial                                                        | H Némec,<br>E Galoppini<br>H Imahori<br>V Sundström                                                                                              | Institute of Physics of the Academy of Sciences of the Czech Republic, Prague, Czech Republic<br>Rutgers University, Newark, NJ, USA<br>Kyoto University, Kyoto, Japan<br>Lund University, Lund, Sweden |
| Volume 3- Nanostructured Surfaces                                                                      |                                                                                                                                                  |                                                                                                                                                                                                         |
| Catalysis by Supported Gold Nanoparticles                                                              | X Chen and H Zhu                                                                                                                                 | Queensland University of Technology Queensland, Brisbane, QLD, Australia                                                                                                                                |
| Directed Assembly of Nanostructures                                                                    | J M MacLeod<br>F Rosei                                                                                                                           | Università degli studi di Trieste, Trieste, Italy<br>Université du Québec, Varennes, QC, Canada                                                                                                         |

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| Bio-Mediated Assembly of Ordered Nanoparticle Superstructures                                                                                         | W L Cheng, S J Tan, M J Campolongo, M R Hartman, J S Kahn, and D Luo              | Cornell University, Ithaca, NY, USA                                                                                                                                                                                                 |
| Chiral Molecules on Surfaces                                                                                                                          | C J Baddeley<br>G Held                                                            | University of St. Andrews, St. Andrews, UK<br>University of Reading, Reading, UK                                                                                                                                                    |
| Optics of Metallic Nanostructures                                                                                                                     | G A Wurtz<br>R J Pollard and A V Zavats                                           | University of North Florida, Jacksonville, FL, USA<br>Queen's University Belfast, Belfast, Northern Ireland, UK                                                                                                                     |
| Surface Nanophotonics Theory                                                                                                                          | JM McMahon<br>S K Gray<br>G C Schatz                                              | Northwestern University, Evanston, IL, USA and Argonne National Laboratory, Argonne, IL, USA<br>Argonne National Laboratory, Argonne, IL, USA<br>Northwestern University, Evanston, IL, USA                                         |
| Constructing and Enhancing the Superior LED: Photonic Crystal and Photonic Band-Gap Structures for Light Extraction and Emission Control              | F Rahman, R M De La Rue, and S A De La Rue                                        | University of Glasgow, Glasgow, UK                                                                                                                                                                                                  |
| Liquid Crystalline Nano-Structured Optical Metamaterials                                                                                              | A Diaz and I C Khoo                                                               | The Pennsylvania State University, University Park, PA, USA                                                                                                                                                                         |
| Nanostructures and Surface-Enhanced Raman Spectroscopy                                                                                                | K M Kosuda, J M Bingham, K L Wustholz, and R P Van Duyne                          | Northwestern University, Evanston, IL, USA                                                                                                                                                                                          |
| Nanostructured Superconductors with Efficient Vortex Pinning                                                                                          | X Obradors, T Puig, A Palau, A Pomar, and F Sandiumenge<br>P Mele and K Matsumoto | Institut de Ciència de Materials de Barcelona, Bellaterra, Spain<br>Kyushu Institute of Technology, Kitakyushu, Japan                                                                                                               |
| Second Harmonic Generation in Nanostructures                                                                                                          | P-F Brevet                                                                        | Université Claude Bernard Lyon 1, Villeurbanne, France                                                                                                                                                                              |
| Tribology of Nanostructured Surfaces                                                                                                                  | Y-Z Hu and T-B Ma                                                                 | Tsinghua University, Beijing, People's Republic of China                                                                                                                                                                            |
| Nanotribology and Nanoscale Materials Coatings for Lubricants                                                                                         | N Ohmae                                                                           | Kobe University, Kobe, Japan                                                                                                                                                                                                        |
| Functionalization and Solubilization of Carbon and Inorganic Nanostructures                                                                           | C N R Rao and A Ghosh<br>A Gomathi                                                | Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, India and<br>Indian Institute of Science, Bangalore, India<br>Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, India                       |
| <b>Volume 4- Nanofabrication and Devices</b>                                                                                                          |                                                                                   |                                                                                                                                                                                                                                     |
| Scanning Probe-Based Lithography for Production of Biological and Organic Nanostructures on Surfaces                                                  | G Yang<br>J C Garno<br>G Y Liu                                                    | Caly Nanomoly Development Inc., Davis, CA, USA<br>Louisiana State University, Baton Rouge, LA, USA<br>University of California, Davis, CA, USA                                                                                      |
| Electron Beam Lithography of Nanostructures                                                                                                           | D M Tennant and A R Bleier                                                        | Cornell University, Ithaca, NY, USA                                                                                                                                                                                                 |
| Sub-Micrometer Patterning Using Soft Lithography                                                                                                      | M Geissler                                                                        | National Research Council of Canada, Boucherville, QC, Canada                                                                                                                                                                       |
| Status of UV Imprint Lithography for Nanoscale Manufacturing                                                                                          | Choi, P Schumaker, and F Xu<br>S V Sreenivasan                                    | Molecular Imprints, Inc., Austin, TX, USA<br>University of Texas at Austin, Austin, TX, USA and Molecular Imprints, Inc., Austin, TX, USA                                                                                           |
| PicoLitter Printing                                                                                                                                   | E Gili, M Caironi, and H Sirringhaus                                              | University of Cambridge, Cambridge, UK                                                                                                                                                                                              |
| Molecular Printboards: From Supramolecular Chemistry to Nanofabrication                                                                               | R Salvio, J Huskens, and D N Reinhoudt                                            | University of Twente, Enschede, The Netherlands                                                                                                                                                                                     |
| Colloidal Semiconductor Nanocrystal Enabled Organic/Inorganic Hybrid Light Emitting Devices                                                           | K R Choudhury and F So<br>Z Kafafi                                                | University of Florida, Gainesville, FL, USA<br>National Science Foundation, Arlington, VA, USA                                                                                                                                      |
| The Use of Aluminum Nanostructures in Plasmon-Controlled Fluorescence Applications in the Ultraviolet Toward the Label Free Detection of Biomolecules | M H Chowdhury, K Ray, and J R Lakowicz                                            | University of Maryland School of Medicine, Baltimore, MD, USA                                                                                                                                                                       |
| Quantum Dot Solar Cells                                                                                                                               | K Tvrdy and P V Kamat                                                             | University of Notre Dame, Notre Dame, IN, USA                                                                                                                                                                                       |
| Femtosecond-Laser-Induced Periodic Self-Organized Nanostructures                                                                                      | T-H Her                                                                           | The University of North Carolina at Charlotte, Charlotte, NC, USA                                                                                                                                                                   |
| Nanofluidics                                                                                                                                          | H Daiguji                                                                         | The University of Tokyo, Kashiwa, Japan                                                                                                                                                                                             |
| Molecular Machines and Motors                                                                                                                         | A Credi                                                                           | Università di Bologna, Bologna, Italy                                                                                                                                                                                               |
| Superhydrophobicity at Micron and Submicron Scale                                                                                                     | S Manakasettharn, J A Taylor, and T Krupenkin                                     | University of Wisconsin – Madison, Madison, WI, USA                                                                                                                                                                                 |
| Organic Electronic Devices with Water-Dispersible Conducting Polymers                                                                                 | J Tarver<br>J E Yoo<br>Y-L Loo                                                    | Princeton University, Princeton, NJ, USA<br>University of Texas at Austin, Austin, TX, USA<br>Princeton University, Princeton, NJ, USA                                                                                              |
| III-V and Group-IV Based Ferromagnetic Semiconductors for Spintronics                                                                                 | M Tanaka, S Ohya, and S Yada<br>Y Shuto and S Sugahara                            | The University of Tokyo, Tokyo, Japan<br>Tokyo Institute of Technology, Yokohama, Japan                                                                                                                                             |
| Electronic Properties of Alkanethiol Molecular Junctions: Conduction Mechanisms, Metal-Molecule Contacts, and Inelastic Transport                     | G Wang, T-W Kim, and T Lee<br>W Wang<br>M A Reed                                  | Gwangju Institute of Science and Technology, Gwangju, Korea<br>University of Wyoming, Laramie, WY, USA<br>Yale University, New Haven, CT, USA                                                                                       |
| Nanoscale Transistors                                                                                                                                 | Y Li and C-H Hwang                                                                | National Chiao Tung University, Hsinchu 300, Taiwan                                                                                                                                                                                 |
| Spin-Based Data Storage                                                                                                                               | O Ozatay<br>P G Mather<br>J-U Thiele<br>T Hauet and P M Braganca                  | San Jose Research Center, San Jose, CA, USA<br>Everspin Technologies, Chandler, AZ, USA<br>Seagate Recording Media Operations, Fremont, CA, USA<br>Hitachi Global Storage Technologies, San Jose Research Center, San Jose, CA, USA |
| Optical Holographic Data Storage                                                                                                                      | K Curtis, L Dhar, and W L Wilson                                                  | InPhase Technologies, Longmont, CO, USA                                                                                                                                                                                             |
| <b>Volume 5- Self Assembly and Nanochemistry</b>                                                                                                      |                                                                                   |                                                                                                                                                                                                                                     |
| Porous Metal-Organic Frameworks                                                                                                                       | Q Fang, J Sculley, and H-C J Zhou<br>G Zhu, Jilin University                      | Texas A&M University, College Station, TX, USA<br>Changchun, P.R. China                                                                                                                                                             |
| Ligands for Nanoparticles                                                                                                                             | Z Hens, I Moreels, B Fritzing, and J C Martins                                    | Ghent University, Gent, Belgium                                                                                                                                                                                                     |

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| Assembly of Nanoparticles                                      | S Srivastava and N A Kotov                                         | University of Michigan, Ann Arbor, MI, USA                                                                                                                                                                      |
| Periodic Mesoporous Materials: Holes Filled with Opportunities | L D Bonifacio<br>B V Lotsch<br>G A Ozin                            | University of Toronto, Toronto, ON, Canada<br>Ludwig-Maximilians-Universität München, München, Germany<br>University of Toronto, Toronto, ON, Canada                                                            |
| Self-Assembled Monolayers                                      | F Tao,<br>S L Bernasek                                             | Princeton University, Princeton, NJ, USA and University of California, Berkeley, CA, USA<br>Princeton University, Princeton, NJ, USA                                                                            |
| Nanocrystal Synthesis                                          | H Zhong, T Mirkovic, and G D Scholes                               | University of Toronto, Toronto, ON, Canada                                                                                                                                                                      |
| Self-Assembly of Nanoparticle Building Blocks                  | S Leekumjorn and M S Wong                                          | Rice University, Houston, TX, USA                                                                                                                                                                               |
| Chemical Processing of Assembled Block Copolymers              | G Liu                                                              | Queen's University, Kingston, ON, Canada                                                                                                                                                                        |
| Biotemplated Semiconductor Nanocrystals                        | S O Kelley                                                         | University of Toronto, Toronto, ON, Canada                                                                                                                                                                      |
| Polymer-Layered Silicate Nanocomposites                        | D A Shipp                                                          | Clarkson University, Potsdam, NY, USA                                                                                                                                                                           |
| Mesogens and Mesophases                                        | M Lehmann and M Jahr                                               | Chemnitz University of Technology, Chemnitz, Germany                                                                                                                                                            |
| Layer-by-Layer Assembled Capsules for Biomedical Applications  | G K Such, A P R Johnston, and F Caruso                             | The University of Melbourne, Parkville, VIC, Australia                                                                                                                                                          |
| Functionalized Fullerenes: Synthesis and Functions             | D M Guldi<br>N Martin                                              | Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, Germany<br>Universidad Complutense de Madrid, Madrid, Spain                                                                                        |
| Microemulsion Preparative Methods (Overview)                   | T Tan<br>Y Zhang<br>M-Y Han and S T Selvan                         | Nanyang Technological University, Singapore<br>National University of Singapore, Singapore<br>Institute of Materials Research and Engineering, Singapore                                                        |
| Nanotechnology, Society and Environment                        | P Murphy<br>D Munshi and P A Kurian<br>A Lakhtakia<br>R V Bartlett | Dublin City University, Dublin, Republic of Ireland<br>The University of Waikato Hamilton, New Zealand<br>Pennsylvania State University, University Park, PA, USA<br>University of Vermont, Burlington, VT, USA |