

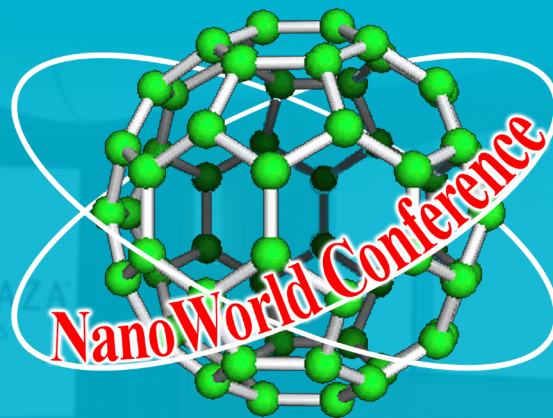
NWC-2016

NANOWORLD CONFERENCE

Useful Science and Technology for a Just World

April 4 - 6, 2016 | Crowne Plaza Boston-Newton, MA, USA

Conference Program



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April 4 2016

08:00-08:30	Registrations	
08:30-08:45	NanoWorld Conference Inauguration by Claudio Nicolini	CHARLES BALL ROOM
08:45-12:00	PLENARY KEYNOTE SESSION	
08:45-09:45	Claudio Nicolini, Member, Russian Academy of Sciences <i>From Nanotechnology and Biotechnology to Molecular Bioelectronics</i>	
09:45-10:45	Federico Capasso, Member, USA Academy of Sciences <i>Flat Optics Based on Metasurfaces</i>	
10:45-11:00	Break	
11:00-12:00	Arnold Caplan, Case Western Reserve University, USA <i>MSCs are not Stem Cells, they are Medicinal Signaling Cells</i>	
12:00-13:15	Lunch & Networking Session	UNIVERSITY AB ROOM
13:15-16:15	PLENARY SYMPOSIUM ON AN APPROACH TO CANCER FROM THE NANOSCALE TO PATIENT	
Chair	Stephen Sonis, Harvard University Medical School, USA	
		CHARLES BALL ROOM
13:15-13:45	Stephen Sonis, Harvard University Medical School, USA <i>Opportunities for Nanosystems to Minimize Regimen-related Toxicities in the Treatment of Cancer</i>	
13:45-14:15	Carlo Ventura, Bologna University, Italy <i>Voices and Vision from Stem Cells: Mutant Vibrations for Regenerative Medicine</i>	
14:15-14:45	Stephen D Miller, Northwestern University Medical School, USA <i>A Novel Nanoparticle Approach for Translation of Tolerogenic and Anti-inflammatory Therapies for Auto (Immune) Diseases</i>	
14:45-15:15	Tamara Minko, The State University of New Jersey, USA <i>Nanotechnology Approaches for Personalized and Targeted Treatment of Cancer</i>	
15:15-15:45	Ron Chong, New England BioLabs, USA <i>Cell-free Synthetic Biology for Medicine</i>	
15:45-16:15	Yechezkel (Chezy) Barenholz, The Hebrew University-Hadassah Medical School, Israel <i>Doxil® – The First FDA-approved Nano-Drug: Lessons Learned</i>	
16:15-16:25	Break	
	SPECIAL SEMINAR	
16:25-16:55	Bernard Kippelen, Georgia Institute of Technology, USA <i>Organic Photovoltaics: The Ultimate Green Energy Solution or a Distant Dream</i>	
16:55-18:55	PLENARY SYMPOSIUM ON PROTEIN STRUCTURE AT ATOMIC SCALE BY SYNCHROTRON, CRYOEM AND XFEL	
Chair	Christian Riekkel, European Synchrotron Radiation Facility, France	
		CHARLES BALL ROOM
16:55-17:25	Christian Riekkel, European Synchrotron Radiation Facility, France <i>Deterministic Delivery of Ultrasmall Volumes of Biological Materials</i>	
17:25-17:55	Eugenia Pechkova, Genova University, Italy <i>LB Nanotemplate as Optimal Nanotechnology for SR, EM and XFEL</i>	
17:55-18:25	Giuseppe Zanotti, Padova University, Italy <i>Do Protein Crystal Structures Always Reveal Function? The Case of Helicobacter pylori</i>	
18:25-18:55	Howard Seeherman, Bioventus Surgical, USA <i>Chimeric Proteins: Selective Evolution to Increase Pharmaceutical Potency</i>	

April 5 2016

08:45-11:15 PLENARY SYMPOSIUM ON NANOMATERIALS, NANO DEVICES AND SYSTEMS

Chair Anilkumar P. Thakoor, Jet Propulsion Laboratory, NASA, USA

CHARLES BALL ROOM

08:45-09:15 **Anilkumar P. Thakoor, Jet Propulsion Laboratory, NASA, USA**

Introductory Lecture

09:15-09:45 **Davide Nicolini, European Space Agency, France**

Access to Space: Trends and Opportunities Deriving from Lower Cost Launch Systems

09:45-10:15 **Ahmed A. Busnaina, Northeastern University, USA**

Printing of Carbon Nanotube-based Sensor Platform for Physiological Monitoring and Pathogen Detection

10:15-10:45 **Joey Mead and Carol Barry, University of Massachusetts Lowell, USA**

Nanomanufacturing of Flexible Polymer Structures for Applications in Bio-devices, Sensors and Coatings

10:45-11:15 **Sameer Sonkusale, Tufts University, USA**

Nanoelectronic Sensor Arrays for Chemical Sensing

11:15-11:30 **Break**

11:30-17:00 NANOTECHNOLOGY AND NANOSCIENCE SESSION-I A

Chairs Yechezkel (Chezy) Barenholz, The Hebrew University-Hadassah Medical School, Israel

Eugenia Pechkova, Genova University, Italy

CHARLES BALL ROOM

11:30-12:00 **Xuanhe Zhao, Massachusetts Institute of Technology, USA**

Nanoengineering Stretchable Bio-gel Electronics and Devices

12:00-12:20 **Christian Marlière, Université Paris-Sud, France**

A Direct and at Nanometer Scale Study of Electrical Charge Distribution on Membranes of Alive Cells

12:20-12:40 **Jérémie Pourchez, Ecole Nationale Supérieure des Mines de Saint-Etienne, France**

In vitro Toxicity of Carbon Nanotubes, Nano-Graphite and Carbon Black: Similar Impacts of Acid Functionalization

12:40-13:00 **Xiaoying Wang, South China University of Technology, China**

One-pot Preparation of Graphene Nanomesh and Graphene Quantum Dots in Chitosan Solution with Ultrasonication

13:00-14:00 **Lunch**

UNIVERSITY AB ROOM

14:00-14:20 **Gang (Gary) Ren, Lawrence Berkeley National Laboratory, USA**

Investigation of the Three-Dimensional Structural Dynamics and Fluctuations of DNA-Nanogold Conjugates by Individual-Particle Electron Tomography

14:20-14:40 **Giovanni Maglia, University of Groningen, Netherlands**

Manipulation of Single Proteins with a Nanopore Electrophoretic Trap

14:40-15:00 **Thanh Nguyen, University of Connecticut, USA**

Three-Dimensional Microstructures of Biodegradable Polymers for Controlled Drug Delivery

15:00-15:20 **Roberto Molinaro, Houston Methodist Research Hospital, USA**

Biomimetic Nanomaterials for Drug Delivery and Tissue Engineering

15:20-15:40 **Nasim Annabi, Northeastern University, USA**

Microengineered Protein-based Hydrogels for Tissue Engineering and Surgical Applications

15:40-16:00 **Break**

16:00-16:20 **Eamonn Kennedy, University of Notre Dame, USA**

Single Molecule Protein Sequence Analysis using Sub-nm Pores

- 16:20-16:40 **Claudia Corbo, Houston Methodist Research Hospital, USA**
Biomimetic Vesicles Derived from Immune Cells: A Proteomic Standpoint
- 16:40-17:00 **Yangchuan Ke, China University of Petroleum, China**
Advanced Polymer Nanocomposite Effects for Oil and Gas Engineering

17:00-18:00 POSTER SESSION

BOSTON ROOM

- 11:30-17:00 NANOTECHNOLOGY AND NANOSCIENCE SESSION-II A**
Chairs Chuan-Jian Zhong, State University of New York at Binghamton, USA
Iwan Kityk, Czestochowa University Technology, Poland

UNIVERSITY C ROOM

- 11:30-11:50 **Chuan-Jian Zhong, State University of New York at Binghamton, USA**
Nanomaterials and Functional Devices for Clean Energy and Smart Sensors
- 11:50-12:10 **Iwan Kityk, Czestochowa University of Technology, Poland**
Laser Induced Improvement of Photovoltaic Efficiency for Ternary and Quarterly Chalcogenide Nanocrystallites
- 12:10-12:30 **Thomas J. Meyer, University of North Carolina, USA**
Photoelectrochemical Water Splitting and CO₂ Reduction in Chemically Derivatized Oxide Nanoparticle Films
- 12:30-12:50 **Alexander V. Kildishev, Purdue University, USA**
Graphene Photonics: Multiphysics Modeling in Time-Domain
- 12:50-13:10 **Igor Linkov, US Army Engineer Research and Development Center, USA**
Nanotechnology: Risks, Benefits and Governance

13:10-14:00 Lunch

UNIVERSITY AB ROOM

- 14:00-14:20 **Hai-Feng (Frank) Ji, Drexel University, USA**
Novel Large 2D Black Phosphorus Film
- 14:20-14:40 **Xiao-Yu Yang, Wuhan University of Technology, China**
Hierarchical Self-Assembly of Nanomaterials for High Activity and High Stability
- 14:40-15:00 **Sivakumar Manickam, University of Nottingham Malaysia Campus, Malaysia**
A Greener and Cleaner Cavitation Technique for the Functionalisation and Generation of Nanomaterials for Diverse Technological Applications
- 15:00-15:20 **S.R.S. Prabakaran, VIT University Chennai Campus, India**
Nano-advantage for Designing Advanced Bipolar Rechargeable Power Sources for Internet of Things (IOT) Augmented Devices
- 15:20-15:40 **Bing Wang, Shenzhen University, China**
Field Emission Properties of ZnO Nanostructures
- 15:40-16:00 Break**
- 16:00-16:20 **Mehdi Tajvidi, The University of Maine, USA**
Cellulose Nanomaterials: Production, Properties, Applications and Future Prospects
- 16:20-16:40 **Stoyan Sarg Sargoytchev, World Institute for Scientific Exploration, Canada**
A New Theoretical Approach to LENR using the BSM-SG Atomic Models
- 16:40-17:00 **Raed Hashaikeh, Masdar Institute, United Arab Emirates**
Fabrication of Alumina and Silica Zeolite Nanofibers using Electrospinning Technique

17:00-18:00 POSTER SESSION

BOSTON ROOM

April 6 2016

09:30-12:10 NANOTECHNOLOGY AND NANOSCIENCE SESSION-I B

Chairs

Carmen Gonzalez, Universidad Autonoma de San Luis Potosi, Mexico
Jin Ouyang, Beijing Normal University, China

UNIVERSITY C ROOM

- 09:30-09:50 **Carmen Gonzalez, Universidad Autonoma de San Luis Potosi, Mexico**
Biological Systems as Targets for Study of New Properties Induced by Nanomaterials: The Case of Silver Nanoparticles
- 09:50-10:10 **Jin Ouyang, Beijing Normal University, China**
Novel Core-shell Fluorescent Nano-materials for Biochemical Applications
- 10:10-10:30 **Break**
- 10:30-10:50 **Xuelin Lou, University of Wisconsin-Madison, USA**
Illuminating the Molecule Pattern of Phosphoinositides in the Plasma Membrane using Single Molecular Localization Microscopy
- 10:50-11:10 **Giora Enden, Ben-Gurion University of the Negev, Israel**
Nanoparticle-based System for Harvesting Low Molecular Weight Biomarkers
- 11:10-11:30 **Byoung-Suhk Kim, Chonbuk National University, South Korea**
Template-free Synthesis of Flower-like CuS Nanoarchitectures by Solvothermal Method for Energy Storage and Electro-Catalyst Applications
- 11:30-11:50 **Khaleel Abushgair, Albalqa Applied University, Jordan**
Anodizing of Aluminum for Solar Cell Application
- 11:50-12:10 **Gangaraju Gedda, National Taiwan University of Science and Technology, Taiwan**
Fabrication of Multifunctional Fluorescent Magnetic Carbon Dot for Enhanced MRI, Fluorescent Cell Imaging and Chemotherapy

08:30-12:20 NANOTECHNOLOGY AND NANOSCIENCE SESSION-II B

Chairs

Khashayar Ghandi, Mount Allison University, Canada
Alexander Weber-Bargioni, Lawrence Berkeley National Laboratory, USA

CHARLES BALL ROOM

- 08:30-08:50 **Hongli (Julie) Zhu, Northeastern University, USA**
Natural Cellulose Nanofibers as Sustainable Enhancers in Construction Cement
- 08:50-09:10 **Vincent Pichot, Nanomaterials for Systems Under Extreme Solicitations, France**
Synthesis and Applications of Detonation Nanodiamonds
- 09:10-09:30 **Alexander Weber-Bargioni, Lawrence Berkeley National Laboratory, USA**
Facet-dependent Photovoltaic Efficiency Variations in Single Perovskite Grains and Spatially and Temporally Varying Nano PL Heterogeneity in Single Perovskite Crystals
- 09:30-09:50 **Sasan Nouranian, University of Mississippi, USA**
Molecular Dynamics Simulation of Carbon Nanotube Stabilization in an Epoxy Resin using a Cationic Surfactant
- 09:50-10:10 **Khashayar Ghandi, Mount Allison University, Canada**
Nanomaterial and Infrequent Fields from Particle Physics to Health and Energy
- 10:10-10:30 **Break**
- 10:30-10:50 **Kholmurad Khasanov, Lomonosov Moscow State University, Russian Federation**
Synthesis of Nanoparticles of the Molecular World in the High Density Energy Super-compressed Space

- 10:50-11:10 **Eugene B. Gordon, Institute of Problems of Chemical Physics, Russian Federation**
The Universal Technique for Thin Nanowires Production in Superfluid Helium
- 11:10-11:30 **Kathyayini Nagaraju, Jain University, India**
Transition Metal Oxide - Multiwalled Carbon Nanotubes Nanocomposites for High Energy Density Supercapacitors
- 11:30-11:50 **Behnam Golestani, Professional Service Industries Inc. (PSI), USA**
A Novel Implementation of Nano-Technology on Modified Asphalt Binder and Mixture
- 11:50-12:10 **Francisco Schunk, Brown University, USA**
X-Ray Spatial Frequency Heterodyne Imaging of Aqueous Phase Transitions Inside Multi-walled Carbon Nanotubes
- 12:10-12:20 **Ulviya Bunyatova, Baskent University, Turkey**
Novel Multifunctional Colloidal Biopolymer Nanofiber Composites from Water Dispersion Blends of PVP/ODA-MMT, Dextran/ODA-MMT and their Folic Acid Complexes by Green Electrospinning
- 12:20-13:20 **PLENARY SYMPOSIUM ON USEFUL SCIENCE AND TECHNOLOGY FOR A JUST PEACEFUL WORLD**
Introduced and Chaired by Conference President
with Selected Speakers and NanoWorld Journal (NWJ) Editorial Board

CHARLES BALL ROOM

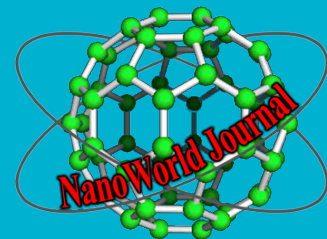
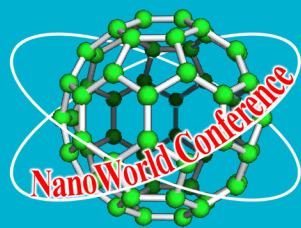
13:20-14:20 Lunch

BOSTON ROOM

POSTERS

- Poster: 1 **Igor Filikhin, North Carolina Central University, USA**
New Features for Nanosensors Backed by the Uncertainty Principle
- Poster: 2 **Tae Hwan Oh, Yeungnam University, South Korea**
Effect of Ionic Liquid on Electrical Conductivity of PEDOT : PSS Composite Nanofibers
- Poster: 3 **Attieh Ali Alghamdi, King Abdulaziz University, Saudi Arabia**
Facile Less Corrosive Electrochemical Methodology for Highly Ordered Few Layered Graphene Nanosheets with High Electrochemical Performance
- Poster: 4 **Stuart Licht, George Washington University, USA**
The Use of Sunlight to Remove Carbon Dioxide from the Atmosphere: Efficient STEP Solar Electrolysis of CO₂ to a High Yield Carbon Nanofiber Product
- Poster: 5 **Saleh Abdel-Mgeed Ahmed, Umm Al-Qura University, Saudi Arabia**
Dye Sensitized Solar Cell Based on Carbonate Doped-TiO₂ Microspheres
- Poster: 6 **Hong Gao, Harbin Normal University, China**
Ternary Nickel-Cobalt Sulfides Nanotube Arrays Electrode for High-Capacity Supercapacitors
- Poster: 7 **Dongfeng Diao, Shenzhen University, China**
Nanosized Graphene Crystallite Induced Strong Photoelectric Behavior in Pure Carbon Film on p-Silicon Substrate
- Poster: 8 **Daniel Matatagui, CCADET, Mexico**
Magnetic Nanoparticles for Gas Detecting Applications
- Poster: 9 **Daniel Matatagui, CCADET, Mexico**
Elastic Properties of ITO Nanoparticles Layer to Detect Gases

- Poster: 10 **Alexey Krasnoslobodtsev, University of Nebraska at Omaha, USA**
Improved SERS-based Nano-immunoassay for Detection of Cancer Biomarkers
- Poster: 11 **Laroche Fabrice Jean-Francois, Boston University, USA**
Hijacking Natural Nanovesicles for Targeted Drug Delivery in Breast Cancer Treatment
- Poster: 12 **Saqib Peerzade, Tufts University, USA**
Novel Ultrabright NIR Fluorescent Mesoporous Silica Nanoparticles for In-vivo Applications
- Poster: 13 **Yu-Ren Li, National Chiao Tung University, Taiwan**
Enhanced Field Emission Performance of the Hybrid Structure of the Hydrothermally-Grown ZnO Nanowires on the Transparent Graphene
- Poster: 14 **Ongard Thiabgoh, University of South Florida, USA**
Melt-extracted Soft Ferromagnetic Microwires for Advanced Sensing Technology
- Poster: 15 **Burcu Karakuzu, Yildiz Technical University, Turkey**
Nanoporous Metal Doped Silica Aerogel Synthesis and Characterization
- Poster: 16 **Shiyao Shan, Binghamton University, USA**
Multifunctional Nanoprobe for Detection and Targeting of Biological Species
- Poster: 17 **Sergey Zholudev, Technological Institute for Superhard and Novel Carbon Materials, Russian Federation**
2D Misfit Layer Structure of Heavily Boron-Doped Diamond
- Poster: 18 **Tae-Hoon Ko, Chonbuk National University, South Korea**
Facile Synthesis of Core/Shell-like NiCo₂O₄-Decorated MWCNTs and its Electro-catalyst and Supercapacitor Applications
- Poster: 19 **Mi Suk Noh, Korea Testing Certification, South Korea**
Targeted and Accumulated Au/Ag Hollow Nanoshells on Lung Cancer Cell Membranes for Effective Near-IR Induced Drug Release and Photothermal Therapeutic Strategy
- Poster: 20 **Kuang-Yu Wang, National Chiao Tung University, Taiwan**
Flexible Supercapacitors using Horizontally Aligned Carbon Nanotube Thin Film with Oxygen Plasma Treatment as Electrodes
- Poster: 21 **Ecem Tiryaki, Yildiz Technical University, Turkey**
Effect of Nanoporous Silica Aerogel Structure for Vitamin C Release
- Poster: 22 **Deniz ISMIK, Yildiz Technical University, Turkey**
Evaluation of Nanoporous Silica Aerogel for Dye Industry
- Poster: 23 **Tülay Merve Temel, Yildiz Technical University, Turkey**
Effect of Production Parameters on Nanopore Biogenic Silica Aerogel
- Poster: 24 **Shiu-Ting Yang, National Chiao Tung University, Taiwan**
Significant Enhancement on Power Conversion Efficiency of Perovskite Solar Cells Based on Hydrothermally-Grown ZnO Nanowires
- Poster: 25 **Yaunyan Lv, Northwest University, China**
Uniform ZnO Nanowire Arrays: Hydrothermal Synthesis, Formation Mechanism and Field Emission Performance
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We wish to meet you again
at
NWC - 2017

Conference Secretariat

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