

Program for FFSCI-NanoScience/EMN Croatia Meeting		
May 3-7, 2017		
14:00-18:00	Wednesday Afternoon, 03rd May, Onsite Registration & Sign up	
Thursday Morning, 04th May		
Room A		
Session: NanoMaterials & Devices I		Chair: Vojislav Mitic
08:00-08:25	A01: Surface Modification Methods for Nano-tribological Applications	Dae-Eun Kim Yonsei University, Korea
08:25-08:50	A02: Silicon nanophotonics for Interconnects, Computing and Sensing Applications	Ray T. Chen The University of Texas, USA
08:50-09:15	A03: Electrowetting Vari-focal Lenticular Lens for 2D/3D Switchable Display	Yong Hyub Won Korea Advanced institute of Science and Technology, S. Korea
09:15-09:40	A04: Nano material for electrochemical sensing of Insulin	Izumi Kubo Soka University, Japan
09:40-10:05	A05: Application of a-IGZO thin film transistor for dynamic digital X-ray detector	Duck-kyun Choi Hanyang University, Korea
10:05-10:20	Session Break	
Session: NanoMaterials & Devices II		Chair: Ray T. Chen
10:20-10:45	A06: Sonochemical synthesis of doped-carbon nanotubes-composite polymeric membranes as membrane reactors	Stefan Ioan Voicu University Politehnica, Romania
10:45-11:10	A07: Dynamic Behavior of Gold-Based Nanoparticles on Reducible Oxide Supports	Mal-Soon Lee Pacific Northwest National Laboratory, USA
11:10-11:35	A08: Challenge of Photonics Polymer towards Ultra-High Speed and High Quality 8K Display System	Yasuhiro Koike Keio University, Japan
11:35-12:00	A09: Surface coupling of electric and entropic currents mediates current stability at the nanoscale	Alkiviadis-Constantinos Cefalas National Hellenic Research Foundation, Greece
12:05-13:10	Lunch Break	

<p>Thursday Afternoon, 04th May</p> <p>Room A</p>
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Session: Bioelectronics & Nanocarriers for Biomedical Applications I Chair: Stefan Voicu		
13:10-13:35	A10: Non-viral vectors for gene therapy	Mariana Pinteala “Petru Poni” Institute of Macromolecular Chemistry, Romania
13:35-14:00	A11: Multi-timescale dynamics of single enzyme molecules during catalysis	Hagen Hofmann Weizmann Institute of Science, Israel
14:00-14:25	A12: Three-dimensional plasmonic nanostructures for multifunctional nanotechnologies	Michele Dipalo Italian Institute of Technology, Italy
14:25-14:50	A13: Electron transfer and proton transfer in proteins	Hiroshi Ishikita University of Tokyo, Japan
14:50-15:05	Session Break	
Session: Nanowires Chair: Anders Gustafsson		
15:05-15:30	A14: Modeling the optical properties of nanowires: from single wire to disordered ensembles	Philippe Lalanne Centre national de la recherche scientifique, France
15:30-15:55	A15: Characterization of doping distribution in GaAs nanowires by off-axis electron holography	Elisabetta M. Fiordaliso Technical University of Denmark, Denmark
15:55-16:20	A16: Quantum Optics with Nanowires	Val Zwiller KTH, Sweden & TU Delft, The Netherlands
16:20-16:45	A17: A Electrochemical Preparation of Undoped and Doped ZnO Nanowires for Gas and UV-Light Sensing Applications	Thierry Pauporte PSL Research University, France
Session: Photocatalysis Chair: Jaroslaw Polanski		
16:45-17:10	A18: Mechanism of Particulate Photocatalysis: Novel Concepts beyond the Conventional Band-Structure Model	Bunsho Ohtani Hokkaido University, Japan
17:10-17:35	A19: Photocatalytic remedy of pollutants in aqueous environment	Xiaojing Wang Inner Mongolia University, China
17:35-18:00	A20: Using heterogeneous photocatalysis for cofactor regeneration of coupled enzymatic reactions	Jonathan Bloh DECHEMA-Forschungsinstitut Chemical Technology, Germany
18:00	Dinner Social	

**Friday Morning, 05th May
Room A**

Session: Session: Nanoelectromagnetics & Nanomagnetism Chair: Tsitsilianis Constantinos

08:00-08:25	A21: Terahertz radiation influence in nanorings	Henrikh Baghramyan University of Tarapaca, Chile
08:25-08:50	Reprogrammable Dynamics of Interacting Spin Vortices	Novosad Valentine Argonne National Laboratory, USA
08:50-09:15	A22: Room Temperature Magnets and Advanced Sensors Derived from Functionalized Graphene	Radek Zboril Palacky University, Czech Republic
09:15-09:40	A23: Development of a new on-chip magnetic memory and its characterization	Atsufumi Hirohata University of York, UK
09:40-10:05	A24: About intrinsic or extrinsic origin of superparamagnetism in nanostructured doped zinc ferrites	Pietro Galinetto University of Pavia, Italy
10:05-10:20	Session Break	
Session: Membranes & Fluidics Chair: Baldycheva Anna		
10:20-10:45	A26: Nanoscale fluid flows in nanofluidic devices	Yutaka Kazoe University of Tokyo, Japan
10:45-11:10	A27: Flow-field measurements in electrokinetic micro-flows	Peter Ehrhard Biochemical & Chemical Engineering, TU Dortmund, Germany
11:10-11:35	A28: Microsystems for cell culture and nanoparticles analysis	Elzbieta Jastrzebska Warsaw University of Technology, Poland
11:35-12:00	A29: Novel Properties of Thin Poly(vinylalcohol)-Cellulose Nanocrystal membranes	Reza Shahbazian Yassar University of Illinois at Chicago, USA
12:00-13:30	Lunch Break	

Friday Afternoon, 05th May		
Room A		
Session: Bioelectronics & Nanocarriers for Biomedical Applications-II Chair: Novosad Valentine		
13:30-13:55	A30: Arrays and Nanocomposite Hydrogels of Bifunctional Nanomaterials for Biomedical Applications	Nermin Seda Kehr University of Münster, Germany
13:55-14:20	A31: Drug Delivery with Novel Bio-conjugated Nano-materials	Reuben Jih-Ru Hwu National Tsing Hua University, Taiwan
14:20-14:45	A32: Lower limb exoskeleton based on the detection of lower limb movement intention	Dowan Cha Korea Army Academy at Yeongcheon, Korea
14:45-15:05	A33: Functionalized Gold Nanoparticles in Polymersome Complex Nanocarriers for pH-Controlled Drug Delivery	Tsitsilianis Constantinos University of Patras, Greece

15:05-15:30	A34: Nanoparticle-Based Magnetic Resonance Imaging in Stem Cell Application	Xiaoming Yang University of Washington, USA
15:30-16:00	Session Break & Poster	
Poster	P01: Dynamics of 1-D (necklace-like) self-assembled nanostructures of core-shells	Evangelia Sarantopoulou National Hellenic Research Foundation, Greece
	P02: Non-functionalized rare-earth fluoride nanoparticles promote tumor growth in vitro	Evangelia Sarantopoulou National Hellenic Research Foundation, Greece
	P03: Entwinement of Single-Stranded DNA onto Nucleobase-Functionalized Carbon Nanotubes	Susan Shwu-Chen Tsay National Tsing Hua University, Taiwan
	P04: Electronic structures and plasmon modes in monolayer MoS ₂	Hai-Ming Dong China University of Ming and Technology, China
	P05: Structural and optical properties of fluorescent carbon quantum dots fabricated by the hydrothermal reaction of lemon juice	Hai-Ming Dong China University of Ming and Technology, China
	P06: Preparation of 1-D WO ₃ @BiVO ₄ Nanostructured Heterojunction Film for Photoelectrochemical Water Oxidation	Kyo-Seon Kim Kangwon National University, South Korea
	P07: Morphology control of 1-D nanostructured tungsten oxide thin films by AFD process	Kyo-Seon Kim Kangwon National University, South Korea
	P08: Grain stability in the structure of Nano- and Ultrafine grained Ni ₃ Al-based foils	Zbigniew Bojar Military University of Technology, Poland
	P09: Engineering materials and devices by nano-InAs/GaSb superlattices	Yan-li shi Yunnan University, China
	P10: Diffusion mechanism for GaAs nanowire growth	Min Sun Yeom Korea Institute of Science and Technology Information, Korea
	P11: Clausius-Mossotti Equation and Fractally corrected Heywang model	Vojislav V. Mitić University of Niš, Serbia
Session: Nanoenergy & Perovskite Chair: Peter Ehrhard		
16:00-16:25	A35: Enhanced Efficiency Solar Energy to Electrical Energy by Upconversion and DownConversion Phosphors: Application in Dye-Sensitized and Perovskite Solar Cells	Young Soo Kang Sogang University, Republic of Korea
16:25-16:50	A36: Oxide Layers for Organo-Lead and Lead-Free Perovskite Solar Cells	Thierry Pauporte PSL Research University, France

16:50-17:15	A37: Impedance spectroscopic analysis of perovskite manganite films for resistance switching devices	Toshihiro Nakamura Osaka Electro-Communication University, Japan
17:15-17:40	A38: Solution-processed assembly of flexible electronic circuits	Takeo Minari National Institute for Materials Science, Japan
17:40-18:05	A39: Engineered synthetic scaffolds for precision geometric placement of nanoconstituents: Formation of durable polymer binary nanoparticle composites	Millicent A. Firestone Los Alamos National Laboratory, USA
18:05	Dinner Social	

Friday Morning, 05th May Room B		
Keynote Address Chair: Yuval Yaish		
08:05-08:50	B01: Fractals nature and nano-micro structure within the energy frontiers	Vojislav Mitic University of Nis, Serbia
Session: Nanowires II Chair: Yuval Yaish		
08:50-09:15	B02: Low-temperature cathodoluminescence investigations of III-V and III-nitride nanowires	Anders Gustafsson Lund University, Sweden
09:15-09:40	B03: Modeling of Nanoparticle Growth on and Evaporation off Nanotubes	Vladimir Privman Clarkson University, USA
09:40-10:05	B04: Thermodynamic Understanding of VLS Growth of Nanowires	Jonas Johansson Lund University, Sweden
10:05-10:20	Session Break	
Session: Nanowires III Chair: Vladimir Privman		
10:20-10:45	B05: Strain Engineering in Silicon Nanowires	Yuval Yaish Technion Israel Institute of Technology, Israel
10:45-11:10	B06: Recent advances in modeling length distributions of III-V nanowire ensembles and growth strategies for improving the length uniformity	Vladimir Dubrovskii Saint Petersburg Academic University, Russia
11:10-11:35	B07: Structured Semiconducting Nanowires for Thermoelectricity	Dhruv Singhal Institute of Physics, Polish Academy of Sciences, Warsaw, Poland
12:00-13:30	Lunch Break	

Friday Afternoon, 05th May Room B		
Session: General Chair: Sónia Carabineiro		
13:55-14:20	B08: EELS assessment of oxidation state in Bismuth Oxide	Pau Torruella Besa University of Barcelona, Spain
14:20-14:45	B09: Oxygen reduction reaction mechanism of carbon-related cathode catalysts for PEFC based on HAXPES, XAFS and RIXS results	Masaharu Oshima The University of Tokyo, Japan
14:45-15:05	B10: Application and Metal Synergies in New Nanobimetallic Unalloyed Materials with Silica	Jaroslav Polanski University of Silesia, Poland
15:05-15:30	B11: Ultrasonic Monitoring of Biocatalysis in Solutions and Complex Dispersions	Vitaly Buckin University College Dublin, Ireland
15:30-16:00	Session Break & Poster	
Session: General II Chair: Vitaly Buckin		
16:00-16:25	B12 Supported gold nanoparticles as reusable catalysts for oxidation reactions of industrial significance	Sónia Carabineiro University of Porto, Portugal
16:25-16:50	B13: CO ₂ reduction using Cu-based bimetallic electrode	Kazuhiro Takanabe King Abdullah University of Science and Technology, Saudi Arabia
16:50-17:15	B14: Catalysis of Steam Methane Reforming: From Electronic Properties to Thermodynamics	Ryan Lacdao Arevalo National Institute of Technology, Japan
Session: Photocatalysis Chair: Jonathan Bloh		
17:15-17:40	B15: Photocatalytic Water Oxidation with Molecular and Solid Cobalt-based Catalysts	Greta R. Patzke University of Zurich, Switzerland
17:15-17:40	B16: RGO/MWCNTs/Cu _x O-CeO ₂ catalysts for preferential CO oxidation in Hydrogen-rich streams	Shanghong Zeng Inner Mongolia University, China
18:05	Dinner Social	

Saturday Morning, 06th May Room A

Keynote Address Chair: Hagen Hofmann		
08:15-09:00	A40: Spontaneous Morphogenesis in Artificial Materials	Stoyan Smoukov University of Cambridge, UK
Session: NanoMaterials & Devices III Chair: Stefan Helfert		
09:00-09:25	A41: Sensitive terahertz-wave detection by novel hetero-barrier rectifier	Hiroshi Ito Kitasato University, Japan
09:25-09:50	A42: Micro-structural and Electrical Properties of Metal-to-insulator-transition VO ₂ /ZnO Nanostructures	Sang-Wook Han Jeonbuk National University, S. Korea
09:50-10:15	A43: Nanostructured Ni ₃ Al-based intermetallic foils – structure, properties and potential application	Pawel Jozwik Military University of Technology, Poland
10:15-10:25	Session Break	
Session: NanoMaterials & Devices IV Chair: Stoyan Smoukov		
10:25-10:50	A44: Nanobioceramics Production From Sea Shells and Their Outstanding Properties in Nanobiocomposite Applications	Yeşim Müge Şahin Istanbul Arel University, Turkey
10:50-11:15	A45: A facile and economical approach for synthesizing fluorescent carbon quantum dots from tofu wastewater	Wen Xu Institute of Solid State Physics, Chinese Academy of Sciences, China
11:15-11:40	A46: Carrier Type Control in Transition Metal Dichalcogenide Semiconductors toward CMOS Applications	Shu Nakaharai National Institute for Materials Science, Japan
11:40-12:05	A47: Highly flexible, erosion resistant and Nitrogen doped hollow SiC fibrous mats for high temperature thermal insulator	Hak Yong Kim Chonbuk National University, South Korea
12:05	Lunch Break	

Saturday Afternoon, 06th May Room A		
Session: NanoPhotonics & Computational Modelling Chair: David Field		

13:30-13:55	A48: Quantum effects on photoluminescence in 2D materials	Seong Chan Jun Yonsei University, Korea
13:55-14:20	A49: Study of the angular momentum of light from plasmonic crystals	Daniel H. C. ONG The Chinese University of Hong Kong
14:20-14:45	A50: Computational modelling of nanoscale interactions at the solid/liquid interface	David M. Smith Ruder Boskovic Institute, Croatia
14:45-15:05	A51: First Principle modelling of materials and processes in solar energy and solar fuels device	Mariachiara Pastore CNRS & University of Lorraine, France
15:05-15:30	A52: Polarization Conversion with Metallic Nanostructures: Simulations and Experiments	Stefan Helfert University of Hagen, Germany
15:30-15:40	Session Break	
Session: General I Chair: David M. Smith		
15:40-16:05	A53: Understanding Metallic Nanoparticles by Advanced Transmission Electron Microscopy	Paulo Ferreira The University of Texas, USA
16:05-16:30	A54: 2D Material Fluid Nanocomposites for Optoelectronics and Si Photonics	Baldycheva Anna University of Exeter, UK
16:30-16:55	A55: The spontaneously electrical form of matter: spontelectrics	David Field Aarhus University, Denmark
16:55-17:20	A56: Injectable nanoapatite-gelatin nanocomposite microparticles for tissue regeneration	Izabela-Cristina Stancu University Politehnica of Bucharest, Romania
17:20-17:45	A57: Application of carbon aerogel nanomaterials in removal of textile dyes staining to fabrics with ozone	Songmin Shang Hong Kong Polytechnic University, Hong Kong
17:45-18:10	A58: Effective description of dynamical properties of magnetic nanostructures	Roberto Zivieri University of Ferrara, Italy
18:10	Dinner Social	

Saturday Morning, 06th May Room B

Session: Bioelectronics & Nanocarriers for Biomedical Applications III Chair: Mariachiara Pastore		
08:05-08:30	B17: Fluorescent performance of carbon quantum dots synthesized by pyrolysis of citric acid	Jin Zhang Yunnan University, China
08:30-08:55	B18: Biomineralization of 3D Bioprintable Biomimetic Orthopedic Nanotubes	Tolou Shokuhfar University of Illinois at Chicago, USA
08:55-9:20	B19: Synthesis of gelatin stabilised high aspect ratio gold nanorods with enhanced biological stability as effective photothermal agent for cancer therapy	Oluwatobi Oluwafemi University of Johannesburg, South Africa
09:20-09:45	B20: Graphene and graphene derivatives for anti-bacterial applications	Venkata Ragh Mokkaapati Chalmers University of Technology, Sweden
09:45-10:15	B21: Cancer/Diabetes therapeutics and wound healing	Rohini Kitture Defence Institute of Advanced Technology, India
10:15-10:25	Session Break	
Session: Organometallic catalysis Chair: Rosario Fernández		
10:25-10:50	B22: Toward a useful catalytic transformation of N ₂ O using group 9 organometallic complexes	Thomas L. Gianetti ETH Zürich, Switzerland
10:50-11:15	B23: Dual Metal Catalysts vs the Traditional Monometal catalysis	Albert Poater Universitat de Girona, Spain
11:15-11:40	B24: Exploring Catalysis in the Search of Biologically Intriguing Small Molecules	Kamal Kumar Max Planck Institute of Molecular Physiology, Germany
11:40-12:05	B25: An unexpected reaction mechanism in N-heterocyclic carbene organocatalysis	Oldamur Holloczki University of Bonn, Germany
12:05	Lunch Break	

Saturday Afternoon, 06th May Room B		
Session: Organometallic catalysis II Chair: Albert Poater		
13:30-13:55	B26: Hydrazone-based reagents and ligands: A Structural Game in Asymmetric Catalysis	Rosario Fernández University of Seville, Spain

13:55-14:20	B27: Atroposelective Synthesis of Axially Chiral Heterobidentate N/X (X = P, N, olefin) Ligands	José M. Lassaletta Instituto de Investigaciones Químicas, Spain
Session: Nanowires IV Chair: Dipti Rani		
14:20-14:45	B28: Germanium nanowires in an amorphous alumina matrix	Maja Buljan Ruđer Bošković Institute, Croatia
14:45-15:05	B29: Charge carrier recombination dynamics in III-V nanowires	Arkady Yartsev Lund University, Sweden
15:05-15:30	B30: Correlation of Morphology, Cathodoluminescence and EBIC Contrast in (Al,Ga)N/GaN Light emitting Diodes	Anna Reszka Institute of Physics, Polish Academy of Sciences, Warsaw, Poland
15:30-15:40	Session Break	
Session: Nanowires V Chair: Arkady Yartsev		
15:40-16:05	B31: Label-free detection of biomolecules using highly reproducible silicon nanowire transistor arrays	Dipti Rani University of Applied Sciences, Germany
16:05-16:30	B32: Resonant-Like Cathodoluminescence From ZnO Microrods Grown by Ultra-Fast Hydrothermal Method – Experiment and FDTD Simulation	Bogdan Kowalski Institute of Physics, Polish Academy of Sciences, Warsaw, Poland
16:30-16:45	B33: Novel group III-V compound nanowire structures for optoelectronic applications	Jan Eric Stehr Linköping University, Sweden
16:45-17:10	B34: In-depth and in-plane profiling of light emission properties from axial ZnO/ZnMgO quantum wells on vertical ZnO microrods	Agnieszka Pieniazek
17:10-17:35	B35: Single nanowire photodetector based on radial p-n junction	Khayrudinov Vladislav Aalto University, Finland
17:35-18:00	B36: Thermal conductivity reduction in Si membrane with alloying and surface engineering	Shiyun Xiong Soochow University, China
18:10	Dinner Social	

May 07, 2017

One day Academic exchange & Excursion