

## PROGRAM for ICSS & EMN Nanoparticles

May 9<sup>th</sup> to 13<sup>th</sup>, 2017 San Sebastian, Spain

May 9, Tuesday Hotel		
14:00-17:30	<b>Onsite Registration &amp; Sign up</b>	
May 10, Wednesday Room A		
8:50-9:00	OPENING	
9:00-9:30	A01: How to create and use spin current? <b>(Keynote)</b>	<b>Eiji Saitoh</b> Tohoku University, Japan
<b>Session: Nanoparticles General I    Chair: Nathalie Steunou</b>		
9:30-9:55	A02: Formation of Mn <sub>3</sub> O <sub>4</sub> /Fe <sub>3</sub> O <sub>4</sub> hollow oxide nanoparticles by galvanic replacement	<b>Josep Nogués</b> ICN2-CSIC / The Barcelona Institute of Science and Technology, Spain
9:55-10:20	A03: Surface modifications of nanodiamonds for bioapplications	<b>Jean-Charles Arnault</b> Diamond Sensors Laboratory,CEA LIST, France
10:20-10:45	A04: Nanosilica modified quaternary cement composites – enhancements and limitations	<b>Styliani Papatzani</b> Greek Ministry of Culture, Greece University of Bath, UK
10:45-11:10	A05: Modeling of bimetallic nanoparticles for heterogeneous catalysis: the effect of reactive gas	<b>Hazar Guesmi</b> Ecole Nationale Supérieure de Chimie de Montpellier, France
11:10-11:35	A06: Driving and characterizing nanoparticle assembly at liquid interfaces	<b>Giovanni Li Destri</b> University of Catania, Italy
11:35-11:55	Session Break	
<b>Session: Nanoparticles General II    Chair: Josep Nogués</b>		
11:55-12:20	A07: Metal Organic Frameworks nanoparticles for biomedical and biodetection applications	<b>Nathalie Steunou</b> Institut Lavoisier, UVSQ, France
12:20-12:45	A08: Synthesis of Iron Oxide Nanoparticles by the Polyol Route: Utmost Role played by added Water on the Nucleation-Growth Process	<b>Olivier Sandre</b> Univ. Bordeaux / CNRS / Bordeaux INP, France

12:45-13:10	A09: Multifunctional Nanoparticles Based on Deep Red Luminescent Metal Atom Clusters: Toward biotechnology and lighting Applications	<b>Stéphane Cordier</b> Institut des Sciences Chimiques de Rennes, France
13:10-13:35	A10: A novel route to obtain metal and oxide nanoparticles co-existing on a substrate	<b>Miguel Angel Garcia</b> Instituto de Ceramica y Vidrio (ICV-CSIC), Spain
13:35-15:35	Lunch Break	
<b>Session: Nanoelectronics    Chair: Wenxian Li</b>		
15:35-16:00	A11: Inhomogeneous States of Bose-Einstein Condensate of Dipolar Excitons (screening of an external potential, trapped excitons, acoustoexciton waves)	<b>Alexander V. Chaplik</b> Rzhanov Institute of Semiconductor Physics, RAS, Russia
16:00-16:25	A12: The characteristics of nanoantennas	<b>David Thiel</b> Griffith University, Australia
16:25-16:50	A13: Formation and Study of Nanotube Structure in Chalcogenide Glasses to Improve Speed, Reliability and Lifespan of Non-Volatile Memristive Memory	<b>Maria Mitkova</b> Boise State University, USA
16:50-17:15	A14: The role of magnetic anisotropy in the physics of complex oxide heterointerfaces	<b>Norbert M. Nemes</b> Universidad Complutense de Madrid, Spain
17:15-17:35	Session Break	
17:35-18:00	A15: Magnonic Holographic Memory for Data Storage and Information Processing	<b>Alex Khitun</b> University of California - Riverside, USA
18:00-18:25	A16: STM conductance measurements through single organic and life molecules	<b>Toyo Kazu Yamada</b> Chiba University, Japan
<b>Session: Spintronics    Chair: Alexander V. Chaplik</b>		
18:25-18:50	A17: Crystal facet engineering modification of the nanomagnetism of transition metal oxides	<b>Wenxian Li</b> Shanghai University, China
18:50-19:15	A18: Magnetic tunnel junctions using perpendicularly magnetized synthetic antiferromagnetic reference layer for wide-dynamic-range magnetic sensors	<b>Takafumi Nakano</b> Tohoku University, Japan
20:00	Dinner Social	

May 11, Thursday

Room B

**Session: ICSS General I Chair: Boris Svlicic**

9:30-9:55	B01: Red emitting nanoscale lasers at room temperature	<b>Ning Liu</b> University of Limerick, Ireland
9:55-10:20	B02: Light emitting diodes based on monolayers transition metal dichalcogenides	<b>Aleksey Kozikov</b> University of Manchester, UK
10:20-10:45	B03: Single Cell Analysis with Positional Information Using On-Chip Synthesized Address-Tag Oligonucleotide by Mild Reagents	<b>Rahul Bhardwaj</b> Japan Advanced Institute of Science and Technology, Japan
10:45-11:10	B04: An artificial photosynthesis anode electrode composed of nano particulate photocatalyst film	<b>Yoshihiko Imanaka</b> Fujitsu Laboratories Ltd., Japan
11:10-11:35	B05: Hybridized Plasmon modes and Electric Field Enhancement around Plasmonic Nanostructures /Nanoshells: A Systematic Investigation for SERS Sensing	<b>Rina Singh</b> CSIR-CRRI, India
11:35-11:55	Session Break	
<b>Session: Nanomaterials I Chair: Rafael Morales</b>		
11:55-12:20	B06: Hybrid nanocomposites and ultrastable metal nanoparticles studied for the development of applications in nanomedicine, water purification and energy harvesting	<b>Erwan Rauwel</b> Tallinn University of Technology, Estonia
12:20-12:45	B07: Duality of Metal Atom Clusters: a Tool to Describe Solid State Structures and Their Physical Properties & Molecular Building Blocks for the Design of Hybrids Nanomaterials	<b>Stephane Cordier</b> University of Rennes 1, France
12:45-13:10	B08: Transport and Magnetic Properties of Stoichiometric Ultrathin Epitaxial Fe <sub>3</sub> O <sub>4</sub> Films on MgO (001) Substrates	<b>Shoroog Alraddadi</b> University of Connecticut, USA
13:10-13:35	B09: Graphene based materials for biomedical applications	<b>Mariana Ionita</b> University Politehnica of Bucharest, Romania

13:35-15:35	Lunch Break	
<b>Session: Nanomaterials II    Chair: Erwan Rauwel</b>		
15:35-16:00	B10: Synthesis of nitrogen-doped single-walled carbon nanotubes by defluorination-assisted nanotube-substitution reaction with ammonia gas	<b>Yoshinori Sato</b> Tohoku University, Japan
16:00-16:25	B11: Engineering magnetic properties of nanostructured thin films	<b>Rafael Morales</b> Universidad del País Vasco UPV/EHU, Spain
16:25-16:50	B12: Magnetic ferrite nanopowders synthesized by a modified co-precipitation technique	<b>Cornelia Muntean</b> University Politehnica Timisoara, Romania
16:50-17:15	B13: Processing and mechanical properties of magnetite nanoparticles based hybrid materials	<b>Berta Domènech</b> Hamburg University of Technology, Germany
17:15-17:50	Poster & Session Break	
<b>Session: MEMS    Chair: David Thiel</b>		
17:50-18:15	B14: Electrothermal MEMS Resonators with Piezoelectric Sensing for Tunable Filtering Applications	<b>Boris Svilicic</b> University of Rijeka, Croatia
18:15-18:40	B15: High performance piezoelectric AlN MEMS resonators for precise sensing of liquid properties	<b>Michael Schneider</b> Vienna University of Technology, Austria
18:40-19:05	B16: Magneto-piezoresistive elastomers: preparation characterization and potential miniaturization	<b>Giovanni Ausanio</b> Federico II University of Naples, Italy
19:05-19:30	B17: Ultrasensitive, quantitative and real-time in-situ electrochemistry using MEMS fabricated sniffer	<b>Søren B. Scott</b> Technical University of Denmark, Denmark
20:00	Dinner Social	

May 11, Thursday

Room C

**Session: Nanoparticles General III**      **Chair: Alexa Courty**

9:30-9:55	C01: Rod-like nanoaggregates as a CO <sub>2</sub> thickener for enhanced oil recovery	<b>Masanobu Sagisaka</b> Hirosaki University, Japan
9:55-10:20	C02: Towards rare-earth-free permanent magnets: strongly exchange coupled core shell nanoparticles	<b>Alberto López-Ortega</b> CIC nanoGUNE, Spain
10:20-10:45	C03: Interaction effects in assembly of magnetic nanoparticles	<b>Nikolai Usov</b> National University of Science and Technology MISiS, Russia
10:45-11:10	C04: Processing and properties of nanoparticle reinforced magnesium alloys	<b>Hajo Dieringa</b> MagIC – Magnesium Innovation Centre, Helmholtz-Zentrum Geesthacht, Germany
11:10-11:35	C05: Co Nanoparticles (CoNPs) with Surface Hydrides: a Promising Precursor for Magnetic Bi-metallic Cobalt-based Nanomaterials	<b>Bishoy Morcos</b> CEA–LETI–Minatec Campus, Grenoble, France
11:35-11:55	Session Break	
<b>Session: Colloidal Nanoparticles &amp; General</b> <b>Chair: Hajo Dieringa</b>		
11:55-12:20	C06: Synthesis and organization of metallic nanoparticles: toward new SERS platforms	<b>Alexa Courty</b> UPMC Univ Paris 06, France
12:20-12:45	C07: Plasmonic diffractive patterns in metallic thin films by laser interference	<b>Ramón J. Peláez</b> Instituto de Estructura de la Materia, CSIC, Spain
12:45-13:10	C08: Colloidal assembly of magnetic nanoparticles and polyelectrolytes by arrested electrostatic interaction	<b>Jeremie Courtois</b> Southwest University of Science and Technology, China
13:10-13:35	C09: Scalable cathodic corrosion for producing diverse nanoparticles and their applications	<b>Jicheng Feng</b> Leiden University, The Netherlands
13:35-15:35	Lunch Break	

<b>Session: Characterization of Nano structured materials Using Various Techniques I</b>		
<b>Chair: Yuichi Negishi</b>		
15:35-16:00	C10: A reduced graphene oxide-encapsulated phosphorus/carbon composite as a promising anode material for high-performance sodium-ion batteries	<b>Yong-Mook Kang</b> Dongguk University, Korea
16:00-16:25	C11: Formation and Stability of Crystalline and Amorphous Al <sub>2</sub> O <sub>3</sub> Layers Deposited on Ga <sub>2</sub> O <sub>3</sub> Nanowires by Atomic Layer Epitaxy	<b>Mark Twigg</b> Naval Research Laboratory, USA
16:25-16:50	C12: Effects of Au nanoparticles on physical properties of magnetic TbFeCo thin films	<b>Yukiko Yasukawa</b> Chiba Institute of Technology, Japan
16:50-17:15	C13: Catalyst nanoparticles prepared by lithography methods and their application in electrocatalysis	<b>Vladimir Komanicky</b> Safarik University, Slovakia
17:15-17:50	Poster & Session Break	
<b>Session: Characterization of Nano structured materials Using Various Techniques II</b>		
<b>Chair: Mark Twigg</b>		
17:50-18:15	C14: Precise Synthesis and Application of Thiolate-Protected Gold Clusters	<b>Yuichi Negishi</b> Tokyo University of Science, Japan
18:15-18:40	C15: Adsorption study of polyoxovanadate nanoclusters on Au(111) using Scanning Tunneling Microscopy	<b>Marco Moors</b> Forschungszentrum Juelich GmbH, Germany
18:40-19:05	C16: Nanosizing effects on the local structure of V <sub>2</sub> O <sub>5</sub> by x-ray absorption spectroscopy	<b>Laura Simonelli</b> ALBA SYNCHROTRON LIGHT SOURCE, Spain
19:05-19:30	C17: Understanding the reactivity and thermodynamics of supported gold-copper nanocatalysts using in situ aberration-corrected environmental TEM	<b>Jaysen Nelayah</b> Université Paris 7 Denis Diderot, France
20:00	Dinner Social	

May 11, Thursday Room D		
<b>Session: Micro and Nano Engineering</b> <b>Chair: Patrick Kekicheff</b>		
9:30-9:55	D01: Design of core-shell magnetic catalysts for radiofrequency heating and magnetic actuation	<b>Evgeny Rebrov</b> University of Warwick, UK
9:55-10:20	D02: Continuous microfluidic assortment of interactive ligands (CMAIL)	<b>Chihchen Chen</b> National Tsing Hua University, Taiwan
10:20-10:45	D03: Micro fabrication and inspection of fine ceramics using ultra-short pulse laser	<b>Tomohiko Hayakawa</b> University of Tokyo, Japan
10:45-11:10	D04: Minimizing the Surface Work Function with a Partial Layer of Cs on a Metal Substrate to Enhance the Production of Negative Light Ions	<b>Martin P. Stockli</b> Oak Ridge National Laboratory, USA
11:10-11:35	D05: Graphene nanoplatelets reinforced composite materials for structural health monitoring: detection, location and semi-quantification	<b>Rocío Moriche</b> University Rey Juan Carlos, Spain
11:35-11:55	Session Break	
<b>Session: Biochemical Sensors and Detection Technologies</b> <b>Chair: Evgeny Rebrov</b>		
11:55-12:20	D06: Cyclodextrins as sliding grafts for tethered ligands	<b>Patrick Kekicheff</b> Université de Strasbourg, France
12:20-12:45	D07: Multi-functional particles for multiplex suspension immunoassays	<b>Christophe Silien</b> University of Limerick, Ireland
12:45-13:10	D08: Gold SERS substrates for analytical and biological applications	<b>Marianna Pannico</b> National Research Council, Italy
13:10-13:35	D09: 3D Confocal Raman mapping of field enhancement inside Supercluster metamaterials	<b>Alberto Lauri</b> Imperial College London, UK
13:35-15:35	Lunch Break	
<b>Session: Nanoparticles in Medicine &amp; General IV</b> <b>Chair: Sabrina Belbekhouche</b>		
15:35-16:00	D10: Bioactive proteins encapsulated in nanoparticulate chitosan from different sources	<b>Mihaela D. Leonida</b> School of Natural Sciences, Fairleigh Dickinson University, USA

16:00-16:25	D11: Nanoporous materials for controlled drug delivery	<b>Vladimir Zelenak</b> P.J. Šafárik University in Košice, Slovak Republic
16:25-16:50	D12: Ligand-based Modulation of Optical Properties of Subnanometer Gold Clusters	<b>Katsuaki Konishi</b> Hokkaido University, Japan
16:50-17:15	D13: Combined photo-thermal therapy and multimodal imaging with magneto-plasmonic nanodomains	<b>Zhi Li</b> ICN2-CSIC / The Barcelona Institute of Science and Technology, Spain
17:15-17:50	Poster & Session Break	
<b>Session: Nanoparticles General V      Chair: Mihaela D. Leonida</b>		
17:50-18:15	D14: Surface Modification of Latex Nanoparticles via the Layer-by-Layer Technique for Two Drugs Loading	<b>Sabrina Belbekhouche</b> East Paris Institute of chemistry and Materials Science, France
18:15-18:40	D15: Targeted high-Z Coulomb nanoradiator as site-specific therapeutic nanobeacon	<b>Jong-Ki Kim</b> Catholic University of Daegu, School of Medicine, Korea
18:40-19:05	D16: Crystallization phenomena of aqueous dispersed polyethylene nanoparticles	<b>Vincent Monteil</b> Université de Lyon, CNRS, France
19:05-19:30	D17: Selective localisation of nanoparticles for nanophotonics applications	<b>Aliaksandra Rakovich</b> Imperial College London, UK
19:30-19:55	D18: Functionalized carbon particles based on green phenolic resins: from synthesis to mechanism	<b>Camelia Ghimbeu</b> Institut de Science des Matériaux de Mulhouse, CNRS UMR 7361-UHA, France
20:00	Dinner Social	



May 12, Friday

Room B

**Session: Energy Materials I    Chair: George Alexandru Nemnes**

9:30-9:55	B18: Advances in electrode materials for low cost Na-ion batteries	<b>Teófilo Rojo</b> Universidad del País Vasco UPV/EHU, Spain
9:55-10:20	B19: Flexible inorganic-organic lithium ion conducting composite membranes for battery applications	<b>Robert Miller</b> IBM Almaden Research Center, USA
10:20-10:45	B20: 3D printing of micro and nano energy materials	<b>Jin Xuan</b> Heriot-Watt University, UK
10:45-11:10	B21: Nanofluids with enhanced thermal properties for being used as heat transfer fluid in Concentrating Solar Power: a theoretical and experimental perspective	<b>Francisco Javier Navas</b> Universidad de Cádiz, Spain
11:10-11:35	B22: First determination of the valence band dispersion of $\text{CH}_3\text{NH}_3\text{PbI}_3$ hybrid organic-inorganic perovskite	<b>Antonio Tejada</b> Université Paris Sud, France
11:35-11:55	Session Break	
<b>Session: Energy Materials II    Chair: Teófilo Rojo</b>		
11:55-12:20	B23: Normal and inverted hysteresis in perovskite solar cells	<b>George Alexandru Nemnes</b> Horia Hulubei National Institute for Physics and Nuclear Engineering / University of Bucharest, Romania
12:20-12:45	B24: Carbon-Support-Free Nano-Titanium Oxynitride Catalyst for Polymer Electrolyte Fuel Cell Cathodes	<b>Mitsuharu Chisaka</b> Hirosaki University, Japan
12:45-13:10	B25: Solution-based photoelectrodes for photoelectrochemical energy conversion: Towards an scalable tandem cell technology for solar water splitting	<b>Nestor Guijarro</b> Ecole Polytechnique Federale de Lausanne, Switzerland
13:10-13:35	B26: Significant improvement in the heat to electricity energy conversion using nanostructured mesoporous thermoelectric materials permeated by a liquid electrolyte	<b>Jorge García-Cañadas</b> Universitat Jaume I, Spain
13:35-15:35	Lunch Break	

<b>Session: ICSS General II    Chair: Hock Chun Ong</b>		
15:35-16:00	B27: Bottom-up approach(es) to biocompatible, non-toxic and ultrabright molecular-based nanoparticles for bioimaging	<b>Jonathan Daniel</b> Université de Bordeaux, France
16:00-16:25	B28: Au cylindrical nanocups as optical tunable nanoresonators	<b>Ana Conde</b> Universitat de Barcelona, Spain
16:25-16:50	B29: New developments on magnetic devices for terrestrial and planetary magnetic surveys	<b>Jose Luis Mesa Uña</b> Instituto Nacional de Técnica Aeroespacial, Spain
16:50-17:15	B30: Controlled synthesis of Fe <sub>3</sub> O <sub>4</sub> nanorods using a solvothermal approach	<b>Javier Muro-Cruces</b> ICN2-CSIC, Spain
17:15-17:35	Session Break	
<b>Session: Nanostructured Metamaterials    Chair: Robert Miller</b>		
17:35-18:00	B31: Study of the angular momentum of light from plasmonic crystals	<b>Hock Chun Ong</b> The Chinese University of Hong Kong, Hong Kong
18:00-18:25	B32: Light control metasurfaces using silver nanodiscs dispersed structure	<b>Masayuki Naya</b> FUJIFILM Corporation, Japan
18:25-18:50	B33: The usage of Nanostructured surfaces for nuclear astrophysics experiments conducted through the laser-matter Interaction	<b>Gaetano Lanzalone</b> Università degli Studi di Enna "Kore", Italy
20:00	Dinner Social	

May 12, Friday

Room C

**Session: Nanoparticles General VI    Chair: Prof. Robert Young**

9:30-9:55	C18: Silica particles with controlled roughness – synthesis, characterization, and use of building blocks for non-close packed arrays	<b>Christina Graf</b> University of Applied Sciences, Germany
9:55-10:20	C19: Charge-independent mass spectrometry of nanoparticles using nanomechanical resonators	<b>Sébastien Hentz</b> CEA-Leti Minatec, France
10:20-10:45	C20: Modelling for simultaneous growth and transport of nanoparticles around a thermal plasma flow	<b>Masaya Shigeta</b> Osaka University, Japan
10:45-11:10	C21: Fluorescent nanodiamonds – emerging probes for bio-imaging	<b>Olga Shimoni</b> University of Technology, Sydney (UTS), Australia
11:10-11:35	C22: Towards nano-sensing using the acoustic vibrations of nano-objects	<b>Jérémie Margueritat</b> Universite de Lyon, Institut Lumière Matière, France
11:35-11:55	Session Break	
<b>Session: Nanoparticles General VII    Chair: Jie Liu</b>		
11:55-12:20	C23: Near-IR fluorescent nanomaterials for bioimaging and sensing applications	<b>Philipp Reineck</b> RMIT University, Australia
12:20-12:45	C24: Taking advantage of the biological windows: Multifunctional hybrid nanostructures for imaging, sensing and therapy	<b>Dirk Ortgies</b> Universidad Autónoma de Madrid, Spain
12:45-13:10	C25: Photocatalytic activities of TiO <sub>2</sub> nanoparticles treated by in-liquid plasma processing	<b>Chiaki Terashima</b> Tokyo University of Science, Japan
13:10-13:35	C26: Generating high purity transitional metal nanoparticles via thermal plasma	<b>Samuel Yick</b> Manufacturing, CSIRO, Australia
13:35-15:35	Lunch Break	
<b>Session: Nanoparticles General VIII    Chair: Christina Graf</b>		

15:35-16:00	C27: Hybrid 2D Membrane-Nanoparticle Heterostructures via Langmuir-Blodgett Deposition	<b>Ramon Bernardo Gavito</b> Lancaster University, UK
16:00-16:25	C28: Catalytic metal nanoparticles in polymeric gel based membrane reactor: a highly intensified process for fine chemistry	<b>Jean-François Lahitte</b> Universite Paul Sabatier, France
16:25-16:50	C29: Evolution of Nano Particles within Metal Matrix	<b>Jinsung Jang</b> Korea Atomic Energy Research Insitute, Korea
16:50-17:15	C30: Electro-mechanical and Morphological Elucidation of Copper Nanocomposites with PVA	<b>Gulfam Nasar</b> Balochistan University of Information Technology, Engineering and Management Sciences, Quetta Pakistan
17:15-17:35	Session Break	
<b>Session: Nanoparticles General IX Chair: Philipp Reineck</b>		
17:35-18:00	C31: Plasmonic Enhanced Catalysis Based on Rh Nanostructures for Carbon Dioxide Hydrogenation	<b>Jie Liu</b> Duke University, USA
18:00-18:25	C32: Dynamic self-assembly of nanoparticles	<b>Wiktor Lewandowski</b> University of Warsaw, Poland
18:25-18:50	C33: Properties of ConOm particles and their application. Ab initio study.	<b>Jelena Tamuliene</b> Vilnius University, Lithuania
20:00	Dinner Social	

May 11, Thursday  
17:15-17:50

**Poster Session**

P01: Nanopore-based DNA sequencing device using graphene - hexagonal boron nitride hybrid materials	<b>George Alexandru Nemnes</b> Horia Hulubei National Institute for Physics and Nuclear Engineering / University of Bucharest, Romania
P02: Is the graphene distribution in a Poly (lactic acid) matrix homogeneous? And, how graphene affects water sorption? Raman Imaging and FTIR spectroscopy investigations	<b>Pietro La Manna</b> National Research Council, Italy
P03: Electrochemical properties of Prussian White as cathode material for sodium batteries using a Taylor-Couette reactor	<b>Hyun-Soo Kim</b> Korea Electrotechnology Research Institute, Korea
P04: Wireless energy transfer for implantable medical electronic devices	<b>Xiuhan Li</b> Beijing Jiaotong University, China
P05: Silver nanospheres reduce viability and immune activities of gilthead seabream ( <i>Sparus aurata</i> L.) head-kidney leucocytes	<b>Francisco A. Guardiola</b> University of Murcia, Spain
P06: In vitro effects of polyethylene (PE) microparticles on teleost fish leucocytes	<b>Francisco A. Guardiola</b> University of Murcia, Spain