

# 2015 EMN SPAIN MEETING PROGRAM

September 1 – 4, 2015 NH COLLECTION ARANZAZU

Onsite Registration: 14:00 August 31 – 18:00 Sept 3

<b>Tuesday September 1 Room A (Zarautz)</b>		
9:00-9:10	Opening Ceremony	Zhiming Wang/Andres Cantarero
<b>Session F1</b>	<b>Novel Magnetic Materials and Phenomena (I)</b>	<b>Chair: Per Nordblad</b>
9:10-9:40	A01: Extraordinary enhancement of Spin Seebeck Effect in magnetic multilayers heterostructures	<b>Ricardo Ibarra</b> University of Zaragoza, Spain
9:40-10:05	A02: Magnetic structures in FeMnP <sub>0.75</sub> Si <sub>0.25</sub> magnetocaloric material	<b>Erna Delczeg</b> Uppsala University, Sweden
10:05-10:30	A03: The multicaloric effect in thin film composite multiferroics	<b>Melvin Vopson</b> University of Portsmouth, UK
10:30-10:45	A04: Investigation of the relation between hysteresis and ferromagnetism in Mn <sub>3</sub> GaC	<b>Oznur Cakir</b> Yildiz Technical University, Turkey
10:45-11:10	A05: Probing Ni <sub>2</sub> FeGa as a prospective Magnetic Shape Memory Alloy using first principles calculations	<b>Munima Sahariah</b> Institute of Advanced Study in Science and Technology, India
11:10-11:25	Session Break	
<b>Session F2</b>	<b>Novel Magnetic Materials and Phenomena (II)</b>	<b>Chair: Erna Delczeg</b>
11:25-11:50	A06: Understanding the interplay between the magnetic and crystal structure in Sr <sub>2</sub> YRuO <sub>6</sub>	<b>Brendan J. Kennedy</b> The University of Sydney, Australia
11:50-12:15	A07: Thermodynamics at the first order paramagnetic to ferromagnetic phase transition of single crystalline Fe <sub>2</sub> P	<b>Per Nordblad</b> Uppsala University, Sweden
12:15-12:40	A08: High temperature magnetic stabilization of cobalt nanoparticles by an antiferromagnetic proximity effect	<b>José A. De Toro</b> Universidad de Castilla-La Mancha, Spain
12:40-13:05	A09: First-principles and Monte Carlo simulations of magnetocaloric materials	<b>Peter Entel</b> Universität Duisburg-Essen, Germany
13:05-13:30	A10: Nature and origin of modulation in Ni <sub>2</sub> MnGa ferromagnetic shape memory alloy	<b>Sanjay Singh</b> Max-Planck Institute For Chemical Physics of Solids, Germany
13:30-15:30	Lunch Break	
<b>Session F3</b>	<b>Thin Films and Nanostructures (I)</b>	<b>Chair: Yong Tak Lee</b>
15:30-15:55	A11: Spin Hall effect in chemically-modified graphene	<b>Aires Ferreira</b> University of York, UK

## 2015 EMN SPAIN MEETING PROGRAM

15:55-16:20	A12: Quantum Anomalous Hall Effect in Magnetically Doped InAs/GaSb Quantum Wells	<b>Xin Liu</b> Huazhong University of Science and Technology, China
16:20-16:45	A13: Facile epitaxial growth and efficient strain relaxation of InGaN/GaN light emitting diodes using carbon nanotubes and graphene interlayers	<b>Eun Kyung Suh</b> Chonbuk National University, Korea
16:45-17:00	A14: Electrodeposited Rh-Fe films and nanoparticles for electrocatalytic hydrogen production	<b>Irati Golvano</b> Autonomous University of Barcelona, Spain
17:00-17:25	A15: Graphene systems in bottom-up tailored Coulomb potential distributions	<b>Adelina ILIE</b> University of Bath, UK
17:25-17:45	Session Break	
<b>Session F4</b>	<b>Thin Films and Nanostructures (II)</b>	<b>Chair: Eun Kyung Suh</b>
17:45-18:10	A16: Nanoporous Metals by Dealloying in Metallic Melt	<b>Hidemi Kato</b> Tohoku University, Japan
18:10-18:35	A17: Influence of topological surface states on the thermoelectric performance of Bi-Sb-Te-Se nanostructures	<b>Johannes Gooth</b> University of Hamburg, Germany
18:35-19:00	A18: Properties of thin and ultrathin films of sublimable spin crossover complexes	<b>Patrick Rosa</b> Institut de Chimie de la Matière Condensée de Bordeaux, UPR9048 CNRS, France
19:00-19:25	A19: Laser Processing of Thin Film Photovoltaic Materials	<b>Brian Simonds</b> National Institute of Standards and Technology, USA
19:25-19:50	A20: Organic light-emitting diodes based on CdSe/CdS nanomaterials	<b>Andrey Vashchenko</b> Russian Academy of Sciences, Russia
20:00	Dinner	

# 2015 EMN SPAIN MEETING PROGRAM

<b>Wednesday September 2</b>		
<b>Room B (Gros)</b>		
<b>Session SA1</b>	<b>Novel Magnetic Materials and Phenomena (III)</b>	<b>Chair: Hans Christian Schneider</b>
9:00-9:25	B01: Superconducting Spin Electronics	<b>Mark Blamire</b> University of Cambridge, UK
9:25-9:50	B02: Perfect spin-filtering by symmetry in molecular and atomic nanojunctions	<b>Alexander Smogunov</b> CEA, IRAMIS, SPEC, CNRS, France
9:50-10:15	B03: Fingerprints of spin and orbital physics in metals via resonant photoemission	<b>Fabiana Da Pieve</b> LSI, CNRS, Ecole Polytechnique, France
10:15-10:40	B04: Unsaturated ultra-high magnetoresistance in Weyl semimetal	<b>Chandra Shekhar</b> Max-Planck-Institute for Chemical Physics of Solids, Germany
10:40-11:05	B05: Magnetoresistance regimes in organic spintronic devices	<b>Alberto Riminucci</b> Consiglio Nazionale delle Ricerche, Italy
11:05-11:20	Session Break	
<b>Session SA2</b>	<b>Novel Magnetic Materials and Phenomena (IV)</b>	<b>Chair: Alexander Smogunov</b>
11:20-11:45	B06: Multifunctional magneto-plasmonic metamaterials	<b>Paolo Vavassori</b> CIC nanoGUNE Consolider, Spain
11:45-12:10	B07: Toward molecular magnetoplasmonics	<b>Francesco Pineider</b> Dipartimento di Chimica e UDR INSTM di Firenze, Italy
12:10-12:35	B08: All-Optical Switching and Demagnetization in Ferri- and Ferromagnets: Insights from electronic dynamics	<b>Hans Christian Schneider</b> University of Kaiserslautern, Germany
12:35-13:00	B09: Entropy changes and caloric effects in anisotropic materials	<b>Nilson Antunes de Oliveira</b> Instituto de Física Armando Dias Tavares – UERJ, Brasil
13:00-13:25	B10: On the magnetic coupling in organometallic macrocycles – tuning by ligands and substrates	<b>Heike Herper</b> Uppsala University, Sweden
13:30-15:30	Lunch Break	
<b>Session SA3</b>	<b>Novel Magnetic Materials and Phenomena (V)</b>	<b>Chair: Kaustubh R. S. Priolkar</b>
15:30-15:55	B11: Spectroscopic evidence of band Jahn-Teller distortion upon martensitic phase transition in Heusler-type ferromagnetic shape-memory alloys	<b>Kazuki Sumida</b> Hiroshima University, Japan
15:55-16:20	B12: Resource efficient novel magnet materials for	<b>Semih Ener</b>

## 2015 EMN SPAIN MEETING PROGRAM

	energy technologies	Materials Science, Technische Universität Darmstadt, Germany
16:20-16:45	B13: Reentrant martensitic transformation and abnormal physical properties in $\text{Co}_2\text{Cr}(\text{Ga},\text{Si})$ Heusler alloys	<b>Xiao Xu</b> Tohoku University, Japan
16:45-17:10	B14: Modeling magnetic shape memory materials: functional properties and glassy behaviour	<b>Antoni Planes</b> Universitat de Barcelona, Spain
17:10-17:35	B15: Competing Spin Structures and Magnetic Frustration in Double Perovskites $\text{Sr}_2\text{MOsO}_6$	<b>Peter Adler</b> Max-Planck-Institut für Chemische Physik fester Stoffe, Germany
17:35-17:50	Session Break	
<b>Session SA4</b>	<b>Novel Magnetic Materials and Phenomena (VI)</b>	<b>Chair: Semih Ener</b>
17:50-18:15	B16: New insights into the caloric effect of ferroic materials via infrared thermometry with sub-mK resolution in thin films and low volume samples	<b>Daniel Hägele</b> Ruhr-Universität Bochum, Germany
18:15-18:40	B17: Importance of local structural distortions in magnetocaloric effect in Mn based Antiperovskites	<b>Kaustubh R. S. Priolkar</b> Goa University, India
18:40-19:05	B18: Giant inverse magnetocaloric effect of free-standing Ni-Co-Mn-Al films	<b>Niclas Teichert</b> Universität Bielefeld, Germany
19:05-19:30	B19: Magnetocaloric effect and magnetic field-induced martensitic transformation in NiMnIn-based metamagnetic shape memory alloys	<b>Pablo Álvarez Alonso</b> Facultad de Ciencia y Tecnología, UPV/EHU, Spain
19:30-19:55	B20: Molecular dynamics simulations of electrocaloric and elastocaloric effects in ferroelectrics	<b>Takeshi Nishimatsu</b> IMR, Tohoku University, Japan
20:00	Dinner	

# 2015 EMN SPAIN MEETING PROGRAM

<b>Wednesday September 2</b>		
<b>Room C (Ondarreta)</b>		
<b>Session SB1</b>	<b>Thin Films and Nanostructures (III)</b>	<b>Chair: Kristen Burson</b>
9:00-9:25	C01: Breakthroughs in Plasmonic Nanolasers	<b>Claire Deeb</b> LPN – CNRS, France
9:25-9:50	C02: Graphene plasmons for 2D nanooptics	<b>Pablo Alonso González</b> CIC nanoGUNE Consolider, Spain
9:50-10:15	C03: Spontaneous emission of circularly polarized light from quantum dots in three-dimensional chiral photonic crystals	<b>Shun Takahashi</b> University of Tokyo, Japan
10:15-10:40	C04: Organic light emitting diodes with multiperiodic photonic crystal outcoupling layers	<b>Martina Gerken</b> Christian-Albrechts-Universität zu Kiel, Germany
10:40-11:05	C05: High efficient three-dimensional nano-carbon structure for energy storage	<b>Seong Chan Jun</b> Yonsei University, Korea
11:05-11:20	Session Break	
<b>Session SB2</b>	<b>Thin Films and Nanostructures (IV)</b>	<b>Chair: Martina Gerken</b>
11:20-11:45	C06: Effects of external fields on electronic and magnetic properties of silicene	<b>Jun Ni</b> Tsinghua university, China
11:45-12:10	C07: Resolving 2D Amorphous Silica Films by Scanning Probe Microscopy	<b>Kristen Burson</b> Fritz-Haber-Institute of the Max-Planck-Society, Germany
12:10-12:35	C08: Metal oxide thin films and nanostructures as key materials for future ICTs	<b>Pedro Barquinha</b> New University of Lisbon, Portugal
12:35-13:00	C09: Prospects of silicene channel FETS: transport & substrate effects	<b>Bas van den Broek</b> University of Leuven, Belgium
13:00 – 13:25	C10: Nanocomposite alternatives to rare-earth permanent magnets	<b>Everett E. Carpenter</b> Virginia Commonwealth University, USA
13:30-15:30	Lunch Break	
<b>Session SB3</b>	<b>Thin Films and Nanostructures (V)</b>	<b>Chair: Matjaz Valant</b>
15:30-15:55	C11: Photoluminescence and Microstructure of Sm <sup>3+</sup> -doped TiO <sub>2</sub> Thin films and Their Applications to New LEDs	<b>Xinwei Zhao</b> Tokyo University of Science, Japan
15:55-16:20	C12: Three dimensional nanoarchitectures for energy conversion	<b>Silke Christiansen</b> Helmholtz-Center Berlin (HZB), Germany
16:20-16:45	C13: Preparation and Thermoelectric Properties of Zn <sub>4</sub> Sb <sub>3</sub> with ZnO Nanoinclusion	<b>Yi Yuan</b> Northeastern University, China

## 2015 EMN SPAIN MEETING PROGRAM

16:45-17:10	C14: Novel exchange-correlation density functionals and their utility in nano-science	<b>Lucian Constantin</b> Italian Institute of Technology (IIT), Italy
17:10-17:35	C15: Hybrid perovskites from ab-initio molecular dynamics perspective: the positive role of structural disorder	<b>Claudio Quarti</b> University of Mons, Belgium
17:35-17:50	Session Break	
<b>Session SB4</b>	<b>Thin Films and Nanostructures (VI)</b>	<b>Chair: Lucian Constantin</b>
17:50-18:15	C16: Epitaxial silicene and germanene: compliant artificial novel 2D electronic materials beyond graphene	<b>Guy Le Lay</b> Aix-Marseille University, France
18:15-18:40	C17: Introducing in-plane anisotropy into nanoscale layered semiconductors: the rhenium dichalcogenides	<b>Daniel Wolverson</b> University of Bath, UK
18:40-19:05	C18: Microstructural evidences of extrinsic magnetization in Fe-doped 6H-BaTiO <sub>3</sub>	<b>Matjaz Valant</b> University of Nova Gorica, Slovenia
19:05-19:30	C19: Characterization of nanoscale interfaces of epitaxially grown anatase-typ TiO <sub>2</sub> on CeO <sub>2</sub> nanocubes self-assembled on the substrate	<b>Daisuke Hojo</b> Tohoku University, Japan
19:30-19:55	C20: Exploring 'Aggregation Induced Emission (AIE)' Activity in Cyclometalated Iridium(III) and Platinum(II) Complexes and Their Promising Applications	<b>Inamur Rahaman Laskar</b> Birla Institute of Technology and Science (BITS) Pilani, India
20:00	Dinner	

## 2015 EMN SPAIN MEETING PROGRAM

<b>Thursday September 3</b>		
<b>Room B (Gros)</b>		
<b>Session TA1</b>	<b>Thin Films and Nanostructures (VII)</b>	<b>Chair: Tetsuya Kawanishi</b>
9:00-9:25	B21: Antiferromagnetic coupling in ferrimagnetic hard-soft core/shell nanoparticles and possible biomedical applications	<b>Josep Nogués</b> ICREA and ICN2(Institut Catala de Nanociencia i Nanotecnologia, Spain
9:25-9:50	B22: Growing Carbon Nanotubes and Graphene by Oxidative Dehydrogenation for Energy and Sensing Applications	<b>Arnaud Magrez</b> Institut de Physique de la Matière Complexe (IPMC), Ecole Polytechnique Fédérale de Lausanne, Switzerland
9:50-10:15	B23: Emission and Detection of THz Radiation Using Graphene and III - V Semiconductor Heterostructures	<b>Stephane Boubanga Tombet</b> Tohoku University, Japan
10:15-10:40	B24: High optical and structural quality III-Nitrides grown new class of substrate for high efficiency LEDs	<b>Iman S Roqan</b> King Abdullah University of Science and Technology, Kingdom of Saudia Arabia
10:40-11:05	B25: Efficiency enhancement of solar cells using light management surface structures	<b>Yong Tak Lee</b> Gwangju Institute of Science and Technology, Korea
11:05-11:20	Session Break	
<b>Session TA2</b>	<b>General (II)</b>	<b>Chair: Iman S Roqan</b>
11:20-11:45	B26: Advanced electro optic devices for radio-over-fiber based imaging systems	<b>Tetsuya Kawanishi</b> Waseda University, Japan
11:45-12:10	B27: Bioinspired Magnetic Nanocomposite Sensors	<b>Jurgen Kosel</b> King Abdullah University of Science and Technology, Saudi Arabia
12:10-12:35	B28: Multidimensional EELS: from spectrum image to spectrum volume and beyond	<b>Pau Torruella</b> Universitat de Barcelona, Spain
12:35-13:00	B29: First k-microscope available at SOLEIL: an effective bandstructure probe chemical imaging in nanoscience	<b>Maria-Carmen Asensio</b> Universit é Paris –Saclay, France
13:00-13:25	B30: Hard X-ray RIXS-MCD, a magnetic spectroscopy for in situ characterization of nanoparticles and their internal structure	<b>Amelie Juhin</b> Universit é Paris VI, France
13:30-15:30	Lunch Break	
<b>Session TA3</b>	<b>Thin Films and Nanostructures (VIII)</b>	<b>Chair: Andrew Kunz</b>

## 2015 EMN SPAIN MEETING PROGRAM

15:30-15:55	B31: Influence of grain refinement and nanosized precipitates on avalanche-like deformation processes in Al-Mg alloys	<b>Mikhail Lebyodkin</b> Université de Lorraine, France
15:55-16:20	B32: Magnetic patterning strategies based on order-disorder transitions and nanocrystallization of metallic glasses	<b>Jordi Sort</b> Universitat Autònoma de Barcelona, Spain
16:20-16:45	B33: Topological effects in magnetic platinum nano-particles	<b>Francesca Baletto</b> King's College London, UK
16:45-17:10	B34: Ab initio prediction of martensitic and intermartensitic phase boundaries in Ni-Mn-Ga	<b>Tilmann Hickel</b> Max-Planck-Institut für Eisenforschung GmbH, Germany
17:10-17:35	B35: Screening Strain Fields in Manganites	<b>Gian G. Guzmán-Verri</b> Argonne National Laboratory & University of Costa Rica, USA
17:35-17:50	Session Break	
<b>Session TA4</b>	<b>General (III)</b>	<b>Chair: Jordi Sort</b>
17:50-18:15	B36: Magneto-electric effect in ceramics based on bismuth ferrite	<b>Elżbieta Jartych</b> Lublin University of Technology, Poland
18:15-18:40	B37: Dense ceramics by advanced sintering techniques assisted by High Pressure	<b>Alain Large teau</b> Institut de Chimie de la Matière Condensée de Bordeaux (ICMCB)-CNRS, France
18:40-19:05	B38: Grain size effects of TiO <sub>2</sub> ceramics influencing electrical properties	<b>Mythili Prakasam</b> Institut de Chimie de la Matière Condensée de Bordeaux, Centre national de la recherche scientifique, France
19:05-19:30	B39: Reliable selection and control of an individual domain wall in multiwire arrays	<b>Andrew Kunz</b> Marquette University, USA
19:30-19:55	B40: Exotic Facets of Magnetism in BiFeO <sub>3</sub> Based Multiferroics.	<b>Dhananjai Pandey</b> Banaras Hindu University, India
20:00		Dinner



## 2015 EMN SPAIN MEETING PROGRAM

<b>Thursday September 3</b> <b>Room C (Ondarreta)</b>		
<b>Session TB1</b>	<b>General (I)</b>	<b>Chair: Elżbieta Jartych</b>
9:00-9:25	C21: Future of power saving for electron devices	<b>Hiroshi Iwai</b> Tokyo Institute of Technology, Japan
9:25-9:50	C22: Ordered Phases in Conducting Polymers: Description Procedure and Deduced Results	<b>Zsolt Gulacsi</b> University of Debrecen, Hungary
9:50-10:15	C23: Structure, Magnetic and Mechanical Properties of Fe-based Nanocrystalline Alloys and Fe-based Bulk Metallic Glasses	<b>Baolong Shen</b> Southeast University, China
10:15-10:40	C24: Change in local structure and mechanical properties by rejuvenation in metallic glasses	<b>Junji Saida</b> Tohoku University, Japan
10:40-11:05	C25: Additive Manufacturing of Metallic Glasses	<b>Prashanth Konda Gokuldoss</b> R&D Engineer, Additive Manufacturing, Sandvik AB, Sweden
11:05-11:20	Session Break	

<b>Friday September 4</b>
<b>Social Activities</b>