FINAL ANNOUNCEMENT
AND
CALL FOR PAPERS

Abstract deadline: May 29th, 2017

Conference and exhibition will be held
at the Main Campus
of the Warsaw University of Technology
Plac Politechniki 1 - Warsaw, Poland

18 - 21 September 2017

E-MRS

2017 Fall Meeting

The conference will include:
23 parallel symposia, one plenary session, one exhibition and much more

www.european-mrs.com

E-MRS 2017 FALL MEETING

18th-21st September
Warsaw University of Technology - POLAND

Introduction

The European Materials Research Society (E-MRS) was established in 1983 through the initiative of individual European Materials scientists. A number of European materials scientists who attended the MRS meetings in the U.S.A. realised that such a society could be of benefit to Europe to enhance the links between materials science and industry and to provide a voice for the materials community. Most of the problems facing the world such as energy supply and health will be solved only by breakthroughs in materials science. It is vital that the outcomes of research are utilised through technological experience and innovation for the benefit of mankind. The Fall Meeting provides the opportunity to exchange ideas, expand one's knowledge and make new contacts. The conference will consist of 23 parallel symposia and a plenary session and provides an international forum to discuss recent advances in the field of materials science. The conference will be augmented by an exhibition of products and services of interest to the conference participants. The Conference will be held at the Central Campus of the Warsaw University of Technology, from 18th to 21st September 2017. It is the 16th E-MRS Fall Meeting following its launch in 2002 to run in parallel to the Spring Meeting in France.

Don't miss it! We look forward to welcoming you to Warsaw and your active contribution and participation in the conference.

The European Coordination Group

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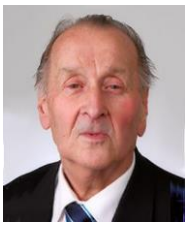

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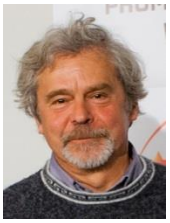

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The Conference Organizers:

European Materials Research Society

Warsaw University of Technology

Polish Materials Science Society

Institute of Physics PAN

Plenary Session (Wednesday morning, 20th September)

1. Presentation of the Jan Czochralski Award to Professor Elvira Fortunato, New University of Lisbon, Portugal
   Lecture by Professor Elvira Fortunato
2. Lecture by Professor Osvaldo Novais de Oliveira Junior, University of Sao Paulo, Brazil
   Shaping the future of materials research with machine learning and Big Data
3. Lecture by Professor Albert Fert, Unité Mixte CNRS Thales

Poster Sessions:

1. Monday, 18th September - 17:30 – 19:30
2. Tuesday, 19th September - 17:30 – 19:30

Scheduled Symposia (18th – 21st September):

ENERGY STORAGE

Symposium A : Materials for Energy Storage, Production & Harvesting Applications
Symposium B : Scanning Probe Microscopy for Energy Applications
Symposium C : Multifunctionality of metal hydrides for energy storage – developments and perspectives

SPECIAL MATERIALS

Symposium D : Advanced Composite Materials: New Production Technologies, Unique Properties, New Applications
Symposium E : Basic Research on Ionic-Covalent Materials for Nuclear Applications
Symposium F : Spintronics in Semiconductors, 2D Materials and Topological Insulators
Symposium G : Perovskite Solar Cells
Symposium H : Energy & Functional Materials: High Pressure, High Temperature Synthesis & Characterization
Symposium I : Solutions for Critical Raw Materials Under Extreme Conditions
Symposium J : Manipulation of Functional Properties of the Layered Materials and Their Characterization
Symposium K : Topological Materials and Disorder: Vital or Fatal?

MATERIALS AND DEVICES

Symposium L : Integration, metrology and Technology CAD co-development for sub-10nm technology nodes
Symposium M : Material and Device Integration on Silicon for Advanced Applications
Symposium N : Advanced Oxide Materials – Growth, Characterization and Applications
Symposium O : Diamond for Electronic Devices II
Symposium P : Group III-Nitrides: Fundamental Research, Optoelectronic Devices and Sensors
Symposium Q : Synchrotron Radiation and Atomic Layer Deposition for Advanced Materials

BIO- AND NANO MATERIALS

Symposium R : NIR Optoelectronics – Organic Semiconductors and Devices
Symposium S : Materials- nanoelectronics & -nanophotonics
Symposium T : Silicon, Germanium, Diamond and Carbon Nanostructures and Their Nanocomposites with Other Materials
Symposium U : Engineering Surfaces to Control and Elucidate Cellular Response
Symposium V : Nanocarbon Electrochemistry and Interfaces II
Symposium W : Stress, structure, and stoichiometry effects on the properties of nanomaterials IV

Introduction and scope:

Fifty years ago, it was forecast that our modern society would be supported and operated mainly by three elements of technology; i.e. materials, energy and information. Rapid rise in the research and development of new materials has not only largely improved our modern life but also controls further expansions of the other two technologies. The research of materials, such as more efficient batteries and light chemical energy conversion materials, is urgently required. Our symposium will be one such attempt in the field of energy research.

The growth of the human population coupled with the simultaneous improvement of living conditions is resulting in a rapidly rising global energy demand, and the negative effects on the environment in the form of pollution and global warming are becoming ever more apparent. Therefore, it is of utmost importance to take action now and concentrate on an active search for alternatives to our current fossil fuel based economy. The general consensus is that only renewable energies could provide a long-term sustainable source of energy. One needs, however, to consider that if fossil fuel is taken out of the picture, one requires an adequate substitute energy carrier for mobile applications (cars, planes, etc.). Our symposium will focus on novel materials that have attracted the focus of the scientific community in the vast field of energy materials. The applications of such materials will be having a broad view in the area of solar cell, photocatalytic water splitting, super capacitor, battery, thermoelectrics, hydrogen storage and fuel cells. Scientists doing their research in all the above area will be a getting a common platform to showcase their latest findings, which all will be attached through a common string named Energy. For example, for the super capacitors, the range of topics will include capacitor performances for power uses such as electric vehicles, energy back-up applications, and renewable energy storage systems. Materials (such as, including but not limited to carbonaceous materials, intercalation compounds, metal oxides, nitrides, molybdates, phosphates, polymers and other composites) for electrochemical double layer, hybrid, redox, symmetric and asymmetric capacitor systems will also be included. The symposium will be a mixture of theory and experiments with a strong view of bridging the gap between them. The choice of materials is having a wide range from oxide materials to recently synthesized transition metal di- chalcogenides and dimension-wise they can be in bulk, surface, monolayer phase or in form of hetero- structures and nano-composits.

Hot topics to be covered by the symposium:

- Capacitor Technology
- Novel materials for enhance battery performance
- Perovskite based materials for solar cell
- Two-dimensional materials for energy production and storage
- Application of Diamond in Energy Research
- Oxide materials and their application in energy research
- Photocatalytic materials for hydrogen production
- Materials for hydrogen storage
- Fuel Cells
- Thermoelectrics
- Heterostructured nano-materials and nanocomposits

Tentative list of invited speakers:

A. Experiments:

- Petra E. de Jongh (Utrecht University)
- Urszula Narkiewicz (West Pomeranian University of Technology)
- Peter H.L. Notten, (Eindhoven University of Technology)
- Stephane Neuville (Tetrahedral Carbon Engineering)
- Minoo Tasbihi (University of Nova Gorica)
- Tomasz Czujko (Military University of Technology)
- Yaroslav Romanyuk (Empa - Swiss Federal Laboratories for Materials Science and Technology)
- Katarzyna Wiesenhütte (Helmholtz-Zentrum Dresden-Rossendorf)
- Daniele Stephane (Lotus Synthesis/University of Lyon)
- Anja Bieberle-Hütter (FOM Institute Differ)
- Stuart Irvine (Centre for Solar Energy Research CSER/Glyndŵr University)
- W.G. Haije (Delft University of Technology - Energy Research Center of the Netherlands)
- Arij van Berkel (TNO - Netherlands Organisation for Applied Scientific Research) 14. Kevin Sivula (EPFL - Ecole polytechnique fédérale de Lausanne)

B. Theory and Computation:

- Stefano Leoni (Cardiff University)
- Maurizia Palummo (University Tor Vergata Rome)
- Filip Tuomisto (Aalto Helsinki)
- Peter Deak (University of Bremen)
- Michael Nolan (Tyndall Natl. Institute, Cork)
- Michael Lorke (University of Bremen)
- Hideyuki Kamisaka (University Tokyo)
- Prof. Puru Jena (Virginia Commonwealth University)

Tentative list of scientific committee members:

- Prof. T.K.Kang
- Prof. K.V.Rao
- Prof. B.Johansson
- Prof.C.G.Granqvist

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Scanning Probe Microscopy for Energy Applications

Introduction and scope:

Nanoscale phenomena at surfaces and interfaces play the essential role for energy conversion and energy storage. Therefore the plethora of modes of scanning probe microscopy is inevitable to characterize and understand the behavior of modern energy conversion and energy storage materials in operando.

Intensive research is performed to fulfil the future requirements for low-cost energy conversion and storage. Relevant fields which will be addressed in our symposium will be photovoltaics, batteries, fuel cells, super-capacitors and emerging energy harvesting devices based on piezoelectric and thermoelectric effects. The operation of energy materials includes electrochemical reactions and (opto-)electronic transport phenomena at interfaces at the nanometer scale. Furthermore, these phenomena are strongly coupled with materials properties such as roughness, grain size and mechanical properties which vary on a nanometer scale. In order to characterize and understand this complex interaction at the nanoscale, adapted characterization methods are mandatory. In this context Scanning Probe Microscopy (SPM) with its plethora of operation modes plays currently a major role. Hereby SPM methods can be often applied in- situ and under in-operando conditions. The latter means for example that charging and discharging of batteries can be characterized in electrolyte solution or that the charge generation and transport phenomena at specific interfaces of hybrid or organic solar cell can be probed. Our aim is to bring together the scientists who are working on Scanning Probe Microscopy (Kelvin Probe Force Microscopy, Scanning Conductive Microscopy, Piezo Force Microscopy, Scanning Microwave Microscopy, etc.) related to energy conversion and storage materials. The symposium should lead to an exchange of knowledge in surface properties of energy related materials. In particular, we want to stimulate the development and spreading of new SPM methods which would advance the understanding of energy related materials (such as newly developed time-resolved electrostatic modes of the SPM, or advanced modes combining nano-mechanical and potentiometric imaging capabilities). A deeper understanding of advanced SPM methods and its theory for energy applications is highly desirable. Finally, this symposium should be a platform to enable cooperation and future projects. In general, material scientists will benefit from the results of this symposium enabling them to tailor material properties for energy applications.

Topics to be covered by the symposium:

- Local performance of solar cells (organic, inorganic and hybrid materials)
- Time resolved EFM/KPFM imaging of the charge carrier dynamics of energy devices
- (Photo)degradation of energy materials and devices (solar cells, lithiation/delithiation processes, etc.)
- Novel materials for Li-ion batteries (electrodes, …)
- Advanced Scanning Probe Microscopy Methods
- Novel methods for electrochemical characterization of surfaces (for instance in batteries)
- PiezoForce Microscopy on piezoelectric materials for mechanical energy harvesting flexible devices

Tentative list of invited speakers:

- Jaime Colchero (Universidad de Murcia, Spain)
- David Ginger (University of Washington, Seattle, USA)
- Steven Jesse (ORNL, USA)
- Nikolaus Knorr (Sony GmbH, Stuttgart, Germany)
- Marina S. Leite (University of Maryland, USA)
- Sascha Sadewasser (International Iberian Nanotechnology Laboratory, Portugal)

Tentitive list of scientific committee members:

- Thilo Glatzel (Univ. of Basel, Switzerland)
- Panos Keivanidis (Cyprus University of Technology)
- Frider Muggele (Twente, Netherlands)
- Brian Rodriguez (UCS, Dublin, Ireland)
- Stefan Weber (University of Mainz, Germany)

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Introduction and scope:

Metal hydrides are of significant interest for both, hydrogen storage, and electrochemical energy storage as solid state ion conductors and anode conversion materials. They exhibit superior hydrogen and electrochemical energy storage capacities as well as high ionic conductivities at ambient temperatures.

The urgent need for a transition towards sustainable, carbon-free and reliable energy technologies pushes towards the development of advanced and efficient energy storage systems. Hydrides based on metals and alloys have proven to play a central enabling role to this direction. Metal hydrides clearly offer a quite attractive and versatile platform of materials, which encompass a quite broad array of structures and combine interesting and tunable properties useful for a breadth of energy applications spanning from solid-state hydrogen storage, to ion conductors for batteries or thermal energy storage. Symposium C aspires to bring together ambitious young and established leading scientists from around the world not only to present the latest advances of the intense worldwide research in the field but also exchange ideas and identify major challenges and hot-topics for future developments towards efficient solutions for energy applications. The symposium will be supported by the Marie Curie Initial Training Network ECOSTORE (http://www.ecostore-itn.eu), fostering joint research and training on novel metal hydride materials and systems for both hydrogen and electrochemical energy storage..
Selected, peer reviewed papers from the symposium will be published in a special issue of the International Journal of Hydrogen Energy.

Hot topics to be covered by the symposium:

- Novel hydride based materials for hydrogen storage
- Novel hydride based materials for solid state ion conductors
- Novel metal hydride conversion materials for battery electrodes
- Novel metal hydrides for solar thermal heat storage
- Design of novel structures based on computational chemistry methods
- Design and application of hydrogen storage systems
- Design and application of battery systems, based on novel materials – systems performance
- Challenges for industrial implementation

Tentative list of invited speakers:

- Kondo Francois Aguey Zinsou, University of New South Wales [AUS]
- José Ramón Ares Fernández, Universidad Autonoma de Madrid [S]
- Darren Broom, Hiden Isochema Ltd. [UK]
- Fermin Cuevas, ICMPE CNRS [F]
- Yaroslav Filinchuk, Leuven University]BE]
- Sebastiano Garroni, University of Sassari [I]
- David Grant, Nottingham University [UK]
- Petra de Jongh, Utrecht University [NL]
- Roman Keder, Katchem [CR]
- Guanqiao Li, Tohoku University [J]
- Haiwen Li, Kyushu University [JP]
- Ian Morrison, Salford University [UK]
- Carlo Nervi, University of Turin [I]
- Mark Paskevicius, Curtin University [AUS]
- Luca Pasquini, University of Bologna [I]
- Marek Polanski, Warsaw Military University of Technology [PO]
- Julia Rinck, Karlsruhe Institute of Technology [D]
- Magnus Sørby, Institute for Energy Technology [NO]
- Drew Sheppard, Curtin University, Perth [AUS]
- Veronica Sofianos, Curtin University, Perth [AUS]
- Jim WEBB, Griffith University, Brisbane [AUS]
- Ulrich Wietelmann, Rockwood Lithium [D]

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- David Book [GB]
- Craig Buckley [AUS]
- Radovan Cerny [CH]
- Martin Dornheim [D]
- Asunción Fernandez Camacho [ES]
- Evan Gray [AUS]
- Bjorn Hauback [NO]
- Andreas Züttel [CH]
- Michel Latroche [F]
- Mykhaylo Lototskyy [SA]
- Chiara Milanese [I]
- Amelia Montone [I]
- Shin-ich Orimo [JP]
- Patricia de Rango [F]
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- Theodore Steriotis [GR]

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Introduction and scope:

It is hard to represent our life without composite materials which for today take one of the main place in such application areas as aviation, transport, space, construction and building field, ecology, sport, biomedicine, electronics, energy sector, including renewable energetic, and etc. Variation of the nature of components, using of nanocomponents and nanoadditives to the materials of matrix and to the reinforcement component, development of new production technologies and new kinds of reinforcements including textiles, fibers, meshes and etc. allow to create materials with given unique complex of service characteristics for different applications, including extreme performances. All these materials will be in the main focus of symposium activity in 2017 year.

For advanced composites materials based on metal, ceramic, polymer matrix and reinforced by various particles, fibers, textiles, meshes modified by nanocomponents of different nature which traditionally used in aeronautic, energy sector, automobile, space and transport industry, ecology, machine building, construction sector, biomedicine and electronics the task of creating of materials with given complex of service parameters ensuring their safety and reliability became more and more actual. Production of composite materials with given complex of service parameters together with decreasing of their sizes and costs of their production allow essentially widen their functionalities and find the new ways of their application. So the task of creation of composite materials and complex structures on the base of them using modern methods and materials for their joining will be the key topic of proposed symposium. Modern methods of modeling for advanced ceramics, composites and complex structures production, micro-and macrostructure and forecasting of the physical and chemical properties allow successfully decide such kind of tasks. The results of several FP7 projects concerning new methods of production, testing and applications of composite materials reinforced by carbon fibers and carbon structures and metal and ceramic composites for thermal protection system for space applications will be presented at proposed symposium. Special time will be devoted to innovative research, to the questions of technology transfer and international cooperation in the field of advanced ceramic and composite materials.

Hot topics to be covered by the symposium:

- Fundamental study, modelling of technology processes, structure and properties, including phase equilibrium diagrams for multicomponent systems
- Production technologies for advanced composites powders and their properties, including various kinds of nanoadditives and their influence upon service properties of final product
- Production technologies for composites coatings and their properties, including multilayer coatings and their new regulated functionalities
- Production technologies for bulk composites and their properties, including novel sintering technologies for complex compounds and structures
- Complex ceramic and composite structures for extreme performances with special attention for materials for aviation and space applications
- Nanoceramic and nanocomposites: peculiarities of their structure and properties
- Novel techniques for advanced ceramic and composite materials characterization
- Novel areas of application of advanced ceramic and composites, including space, transport, biomaterials, micro- and nanoelectronic, constructional ones
- Results and perspectives of international cooperation in the field of creation of advanced ceramic and composite materials

Tentative list of invited speakers:

- Kervalishvili Paata (Tbilisi,Georgia)
- Gogotsi Yurii (Drexel University, USA)
- Fragge Nahum (Bersheva, Israel)
- Inaki Fagoaga (San-Sebastian, Spain)
- Konstantinova Tatiana (Donetsk, Ukraine)
- Tedenac Jean-Claude (Montpelier, France)
- Sanin Anatolii (Dnipro,Ukraine)
- Shemet V (Jülich, Germany)
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Basic Research on Ionic-Covalent Materials for Nuclear Applications

Introduction and scope:

Ionic-covalent (non-metallic) solids play an important role in numerous industrial applications, due to their unique thermal, electrical, magnetic and optical properties. Refractory materials find applications at very high temperatures, where metallic materials already melt. Among the extreme environments where such materials are used is the nuclear industry, with impressive diversity of applications for ionic-covalent solids, ranging from nuclear fuel (UO_2) to inert matrix materials for actinide transmutation, to host materials for 2 nuclear waste disposal. Research is needed for future nuclear applications, especially high-temperature Gen IV fission reactors as well as fusion reactors, to develop new structural materials and nuclear fuels that can withstand extreme environment associated with these reactors. Given the different temperature and irradiation conditions in these various applications, it is imperative to better understand basic degradation processes and perform material tests employing a science-based approach. Improved knowledge on underlying principles of materials behaviour in extreme environments will help us to develop materials suitable for nuclear waste forms as well as for the next generation of nuclear power plants.

The previous three symposia on "Basic Research on Ionic-Covalent Materials for Nuclear Applications" at the E-MRS in 2011, 2013 and 2015, successfully inspired a broad community of researchers about the need for addressing the basic mechanisms of radiation damage induced by energetic particles, such as point and extended defect formation, precipitation/dissolution, dislocation formation/dissolution etc., in different ionic- covalent solids, regardless of the particular applications (nuclear industry, microelectronics, materials science). Our program is clearly cross-disciplinary on a wide range of materials (from insulators to semiconductors and even some metal/insulator composite systems), and a broad range of irradiation conditions with charged particles (from keV to GeV), experimental techniques and theoretical computations. Evidence of the similarity of phenomena occurring in semiconductors and transition-metal or actinide oxides was highlighted in a number of invited and contributed presentations in previous symposia. However, many important questions were left open showing that this field still needs further detailed research The utmost importance of the electronic excitation effects in radiation damage was also recognized. In this respect, the knowledge of phenomena occurring under irradiation with laser beams is instrumental for advancing the understanding of electronic excitation effects induced by charged particles. In all these atomic-scale processes, charged point defects are known to be produced in ionic-covalent solids under these conditions of electronic excitations. The importance of charged point defects was once again highlighted in our symposium in 2015 for understanding the behavior of these materials under radiation fields. The complex behavior of UO2 as regards point-defect properties (e.g. charge states, electronic energy levels, positron lifetimes, formation and migration energies) as well as extended defects (such as dislocation core energies) was highlighted. Moreover, there is a need for improved understanding of the electronic excitation mechanism and the intermediate electronic/nuclear collision regime of radiation damage. It is necessary to obtain experimental data and develop models of the stability and migration of excited defects on the basis of time-resolved experiments and related computer simulations. Such phenomena are known to take place in particle or photon detectors (scintillators) used for medical applications, high-energy physics, and nuclear security, as well as in irradiated electronic systems used in space applications that have to be improved, to work in high radiation environment of space.

Hot topics to be covered by the symposium:

The symposium will address solid-state processes induced by irradiating particles (electrons, neutrons, or ions) over wide ranges of energy, fluence, flux, temperature, pressure, etc., including:

- Interaction processes of energetic particles in solids
- Amorphization and phase transformations under irradiation
- Role of electronic excitations: track effects, enhanced diffusion…
- Formation of point defects, extended defects, and defect clustering
- Mesoscale architectures for improved radiation resistance
- Dynamic defect recovery, flux effects and radiation-enhanced diffusion
- Recrystallization and nanophase formation
- Dissolution of clusters and precipitates, segregation
- Modifications of physical properties (thermal conductivity, mechanical properties etc.)
- Degradation mechanisms (creep, embrittlement, swelling, corrosion, etc.)
- Multiscale modeling and simulation of radiation effects

Tentative list of invited speakers:

- Kazuhiro YASUDA (Kyushu University, Japan): "STEM STUDIES OF IRRADIATED OXIDES"
- Karl WHITTLE (University of Liverpool, UK): "RADIATION DAMAGE IN OXIDE MATRICES"
- David ANDERSSON (LANL, USA):"DFT CALCULATIONS IN URANIUM OXIDES AND NUCLEAR FUELS"
- David SIMEONE (CEA-Saclay, France) : "PHASE FIELD MODELLING"

Tentative list of scientific committee members:

- CLAVERIE (CEMES, Toulouse, France)
- F. DJURABEKOVA (Helsinki University, Finland)
- P. GARCIA (CEA/Cadarache, France)
- S. ZINKLE (University of Tennessee, USA)
- R. EWING (Stanford University, USA)
- A. IWASE (Osaka Prefecture University, Japan)

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Introduction and scope:
The symposium offers a venue for the discussion of the latest developments and research efforts related to spin-dependent phenomena in semiconductor systems. The central goal is to showcase and cross-fertilize the many branches of spintronics, providing fundamental insights on newly emerging topics and materials.

The spin degree of freedom can be harnessed for radically new ways of information processing and communication within a robust and scalable solid-state framework. In particular, spintronic integrated circuits of ferromagnetic metals are now reaching the market. Semiconductors have also attracted a great deal of attention, because of prospects of implementing quantum spin manipulation with mature microelectronics technology. Devices that enable electrical control of the spin degree of freedom could seamlessly integrate logic and memory functions, thus mitigating power consumption and boosting performances. Control of single spins and of the interactions between them is one of the preferred routes towards the realization of a scalable quantum computer in a solid-state system. With this respect, a central goal of semiconductor spintronics is to understand and control the fundamental mechanisms governing coherent phenomena and spin transport. The optical accessibility of spins is a key advantage, which is expected to lead to novel concepts for devices and circuits. Presently, a next frontier of exploration in the spintronics landscape is offered by topologically protected surface and edge states in bulk and quantum wells of narrow-gap semiconductors and semimetals, respectively. Similarly, atomically-thin transitional metal dichalcogenides and related systems are coming under the spotlight because of novel and intriguing phenomena such as spin-momentum locking. The symposium will thus provide the opportunity to gather insights into theoretical and experimental advances in spin-dependent phenomena and will cover progress in the development of spintronic materials, with a special focus on semiconductors and topological materials. The aim is to foster a discussion about emerging systems and stimulate future research directions heading to the horizon of solutions and know- how having immediate repercussions on societal concerns ranging from security to energy efficiency.

Hot topics to be covered by the symposium:
Semiconductor-based architectures:
- Materials and methods for spin injection and detection
- Quantum computing with spins confined at donors and in quantum dots
- Spin-dependent transport in 2D electron and hole gases
- Spin helix states
- Hall and Rashba spin physics
- Spin-optoelectronics

Two dimensional materials:
- Growth of atomically thin semiconductors
- Ferromagnetic contact engineering
- Van der Waals heterojunctions
- Spin transport
- Spin dynamics and intervalley processes
- Valleytronics

Topological insulators:
- 3D and 2D topological insulators
- Surface state spectroscopy
- Quantum spin Hall effects and helical edge states
- Majorana fermions
- Spin-orbit coupling
- Topological quantum computing

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- T. Ihn, ETH Zurich (Switzerland)
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- P. Kossacki, University of Warsaw (Poland)
- S. Ryabchenko, Institute of Physics (Ukraine)
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Introduction and scope:

Our society is nowadays experiencing a great transformation, creating new paradigms. Among others, there is a strong feeling of urgency for changing to carbon free forms of energy and namely energy from renewable sources. The large-scale use of photovoltaic devices has shown its great potential appearing as a key player in the electricity generation revolution.

Photovoltaics has already become significantly cheaper than grid electricity in several industrialized countries. It is believed that solid-state perovskite solar cells (PSCs) will be the next generation of power source, contributing for fostering the use of photovoltaics in buildings' roofs and facades. PSCs have displayed the greatest energy conversion efficiency increase of all photovoltaic technologies, and promise to offer very high energy efficiencies along with low fabrication costs, use of abundant resources, and aesthetic look. However, to turn PSCs into a marketable product several efforts are still needed. It is the goal for the Symposium to provide an overview on the most advanced studies and recent trends in PSC science and technology in order to give relevant answers to those key challenges. In particular, the Symposium will focus on fundamentals of PSC operation including modeling of their function, search for very high efficiency devices, new materials for PSCs constructions and their new arrangements including tandem devices, PSCs stability, engineering challenges, and life cycle assessment. The event aims at stimulating contacts and creating an interdisciplinary forum for discussion to allow the germination of new ideas and concepts, based on the presence together of experts from different fields. It will bring together scientists from academic research, applied research and industry, with common and complementary R&D interests. The decision makers from governments and companies are also welcome. We will also particularly focus on encouraging young researchers to participate and to interact closely with senior scientists. As the idea of the Symposium originated from the common research concentrated around Horizon 2020 GOTSolar project, the objectives and results of the project will be also presented.

Hot topics to be covered by the symposium:

- New materials for the construction of perovskite solar cells;
- Characterization of perovskite solar cells;
- Stability studies of perovskite solar cells;
- Modeling of perovskite solar cells structure, properties and operation behaviour;
- Perovskite solar cells using combined absorbers;
- Phenomenological studies of perovskite solar cells;
- Perovskite solar cells devices;
- Up-scale works of perovskite solar cells and life cycle assessment;
- Large-area perovskite solar cells and modules
- Lead-free solar devices;
- Industrial and commercial opportunities of perovskite solar devices.

Tentative list of invited speakers:

- Michael Grätzel, École polytechnique fédérale de Lausanne
- Nripan Mathew, Nanyang Technological University, Singapore
- Mercouri G. Kanatzidis, Northwestern University, Evanston IL
- Hemamala Karunadasa, Stanford University
- Udo Bach, Monash University, Melbourne
- Simone Meloni, University of Rome
- Kai Zhu, National Renewable Energy Laboratory, Denver

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- Shaik Zakeeruddin, Ecole Polytechnique Federale de Lausanne
- Jacky Even, CNRS FOTON & INSA Rennes
- Claudine Katan, ISCR Rennes
- Anders Hagfeldt, Ecole Polytechnique Federale de Lausanne
- Aldo Di Carlo, Universita degli Studi di Roma Tor Vergata Rome
- Jinsong Huang, University of Nebraska, Lincoln
- Qingbo Meng, Institute of Physics Chinese Academy of Sciences, Beijing

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Introduction and scope:

The relation between electronic structure and the crystallographic atomic arrangement is one of the fundamental questions in condensed matter physics and inorganic chemistry. Since the discovery of the atomic nature of matter and its periodic structure, this has remained as one of the main questions regarding the very foundation of solid systems. Needless to say this has also bearings on physical and chemical properties of matter, where again the relation between structure and performance is of direct interest.

High-pressure science is a fast developing new field in condensed matter physics and may even be regarded as the exploration of an entirely new dimension. This is to a large portion of course due to the development of the diamond anvil cell (DAC) technique with which one can easily control the pressure for systems of interest in the range of several mega bars and due to increasingly sophisticated synchrotron facilities to observe some of the drastic changes effected in the physical properties. With pressure, we can tune electronic, magnetic, structural and vibrational properties of condensed matter for a wide range of applications. ``Inert gases" cease to be noble and inert, and can form stoichiometric compounds; likewise, normally unreactive transition metals can form alloys with alkali metals; silicate tetrahedral frameworks, the basis of rock-forming minerals, are destroyed and replaced by silicate octahedra; carbon rings, basic structural units of polymer and organic chemistry, become unstable and are replaced by diamond-like structures. High-pressure research has been predicted to ultimately even lead to the establishment of a new Periodic Table, one which has the same elements but completely redefined physical and chemical behaviors at megabar pressures. In this sense, the field of high pressure could indeed establish itself as a dimension in physical science on a par with temperature (low- and high-temperature physics) and composition (chemistry and materials science). First of all the exploration of the megabar pressure range is highly interesting by itself, where new physics and chemistry can be expected. Second, the general problem about the equation-of-state in this pressure range is highly significant for a vast number of materials. The underlying mechanisms determining the geometrical arrangement of atoms can be elucidated by the study of matter at extreme conditions, probing a new range of electron densities. One example where high pressure can play important role, for example for search of new high Tc superconductors or Hard materials. Materials under pressure change their forms and the superconducting state of a material is strongly linked to these structural phase transition. Pressure enhances electron-phonon interactions and the corresponding critical temperature (Tc). An important byproduct from this meeting at EMRS (September, 2017) could lead to an improved understanding and performance of materials at ambient and extreme conditions.

Hot topics to be covered by the symposium:

- Energy Materials,
- Topological Insulators
- Hard Materials (Carbon based materials)
- Hydrogen densed materials
- Functional Oxides
- Dilute magnetic semiconductors

Tentative list of invited speakers:

- Prof. Maurizio Mattesini, Madrid, Spain
- L.S.Dubrovinsky, Universita¨t Bayreuth, Germany
- S.C.Gupta (BARC, India)
- K. Aoki(IMR, Tohoku, Japan)
- T.Irifune(Ehime, Japan)
- Udomsilp Pinsook (Chulalongkorn University, Thailand)
- Y.J. Tian (Yanshan University, China)
- John Tse, (Univ. of University of Saskatchewan, Canada)
- Cheng-Chien Cheng (Stanford University, USA)
- Jiun-Haw Chu (University of Washington, USA)
- Van Veenendaal, Michel (Northern Illnois University, USA)
- Hasan Yavas, (Deutsches Elektronen-Sycnhrotron (DESY), Germany)
- Hans-Christian Wille, (Deutsches Elektronen-Sycnhrotron (DESY), Germany)
- Maria Baldini, (HPSyn@Advanced Photon Source, USA)
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- ChunLei Wang (Miami International Univeristy, USA)

Tentative list of scientific committee members:

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Introduction and scope:

Difficulties in the access to critical raw materials (CRMs) are expected to depress industries based in Europe. If direct substitution of CRMs represents one viable solution (not easy to achieve), a more realistic approach would be to realise innovative ways of synthesizing, rational use, and enhanced recycling of the CRMs

Global and local crises have clearly shown that life in a modern society ultimately depends on readily available, continuous and affordable material supply. The supply of critical raw materials (CRMs) like tungsten, chromium, cobalt, niobium and many others which is vital for EU industries is becoming hindered due to import restrictions posed by the foreign countries. This ties in with the fact that the CRMs are imported at extremely volatile prices due to geopolitical reasons. In this scenario, a clear goal is to reduce the dependence of industrial sectors on CRMs and it is crucial to work with a well-defined focus i.e. to find alternative solutions for the materials meant to be used under extreme conditions of temperature, wear, friction, loading, and corrosion, for a wide range of applications

This symposium aims to provide a unique platform to a wide range of researchers from across the globe who are engaged in performing cutting edge multidisciplinary research on strategic CRMs substitution, new materials design, Life Cycle Assessment (LCA), recycling, circular economy, either experimentally or by using simulations or any other techniques, that is expanding and consolidating around few initial catalytic nucleus of growth leading to innovations in the field of CRM. This symposium is organized jointly by complementary networks in the area of CRMs who are aiming to find sustainable solutions for materials in extreme conditions i.e.: the COST Action CRM-EXTREME (http://www.cost.eu/COST_Actions/ca/CA15102), the network EXTREME under the KIC EIT RawMaterials (http://www.network-extreme.eu/) and EIP Raw Materials commitment SUBST-EXTREME (https://ec.europa.eu/growth/tools-databases/eip-raw-materials/en/content/sustainable-substitution-extreme-conditions). With an aim of bringing together substantial expertise from a critical mass of researchers from within and outside EU, this symposium is aiming to benefit the interested stakeholders (universities, research institutions, industries and SMEs) and, at the same time is more appealing for the industrial engagement which might well result in improved financial support. The topics of the symposium are divided in two main sections, focusing on WHY and HOW, i.e.: why CRMs are important in some industrial applications, and how their use can be reduced or suppressed.

Hot topics to be covered by the symposium:

1. Understanding the role of CRMs: their importance in different applications
   - Co and W in WC/Co cemented carbide wear resistant tool materials
   - Cr and other CRMs in surface coatings and steel alloys
   - Nb in high-strength low-alloy (HSLA) steel
   - Co and other CRMs in high-temperature Ni-based superalloys
   - Precious metals (PGMs) in extreme applications
2. CRMs alternatives: design, recovery, recycling and innovative technologies for materials under extreme condition in industrial sectors (but not limited to) such as:
   - Machinery manufacturing
   - Transportation
   - Energy
   - Constructions

Tentative list of invited speakers:

- S. Norgren (Sandvik Group Expert) CRM in carbide and hard materials
- A. Siriwardana (Technalia) Ionometallurgy: Recycling of critical metals from primary and secondary wastes
- A. Bartl (Vienna University of Technology) Recovery and refining of CRM
- E. Cadoni (University of Applied Sciences of Southern Switzerland) Steels at High Strain Rate and High Temperature
- S. Cuesta-Lopez (ICCRAM - Int. Center for Critical Raw Materials and Advanced Industrial Technologies) Advanced Technologies to facilitate the replacement or efficiency/ optimization of CRMs in industrial processes.
- L. Jaworska (Institute of Advanced Manufacturing Technology) New materials through a variety of sintering methods
- J. Meneve (VITO NV) Processing industry value chains
- F. Montemor (INSTITUTO SUPERIOR TECNICO) New strategies for the protection
- P. Novák (University of Chemistry and Technology, Prague) Nb-alloyed tool steel
- A. Wittenberg (Federal Institute for Geosciences and Natural Resources BGR) Securing sustainable supply of raw materials

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Manipulation of Functional Properties of the Layered Materials and Their Characterization

Introduction and scope:

When atomic periodicity breaks down in electronic materials due to charge defects or some other polarizations, self organized textures forms with ranging scales in space and time, and physical properties of the material suffer large renormalization. The situation is known to occur in different functional materials and in particular in layered systems.

The layered structure topology of functional materials is important due to the fact that electronic degrees of freedom in the layered structures have strongly fluctuating character and the phases with charge (or magnetic order), coexisting with metallic (or superconducting) states can provide an effective mechanism for non-conventional phenomena. On the applied side, layered structures permit to have tuning of properties through external parameters as doping/intercalation, pressure, strain, electric and magnetic fields. This is of key interest for developing new materials through 'control and manipulation' for desired properties. Here, the focus is to discuss recent advances in the layered functional materials including emerging superconductors in which inhomogeneous ground state playing important role. In particular quantitative characterization of these materials is a challenging task requiring space and time resolved experimental tools applied under extreme conditions (e.g. pressure, electric and magnetic fields). The symposium welcomes contributions based on theoretical, experimental and applied aspects of the physics, chemistry, materials science on the hot topics given below.

Hot topics to be covered by the symposium:

- Physics and defect chemistry of layered pnictides and chalcogenides
- Intrinsic structure of layered and inhomogeneous functional materials
- Molecular intercalation and functional properties of layered systems
- Pressure induced phases in layered materials
- Layered BiS2-based superconductors and thermoelectrics
- Control and manipulation of different phases and functions in layered systems
- Layered excitonic insulators

Tentative list of invited speakers:

- Tadashi Adachi, SophiaU, Tokyo
- Yuji Aoki, TMU Tokyo
- Alexei Barinov, Trieste
- Sergei Borisenko,Dresden
- Massimo Capone, Trieste
- Woo Seok Choi, Suwon
- Daniel Dessau, Colorado
- Leonardo De Giorgi, Geneve
- Hong Ding, Beijing
- Hiroshi Eisaki, Tsukuba
- Donglai Feng, Shanghai
- Jun Sung Kim, Pohang
- Keun soo Kim, Pohang
- Yoji Koike, Sendai
- Kazuhiko Kuroki, Osaka
- Feodor Kusmartsev, Loughborough
- George Martins, Oakland
- Kazuyuki Matsubayashi, UEC Tokyo
- Yoshikazu Mizuguchi, TMU Tokyo
- Claude Monney, Zurich
- Minoru Nohara, Okayama
- Tsutomu Nojima, Sendai
- Migaku Oda, Sapporo
- Kenya Ohgushi, Sendai
- Yukinori Ohta, Chiba
- Kozo Okazaki, ISSP Tokyo
- Dragan Mihailovic, Lubiana
- Christos Panagopoulos, Singapore
- Sidhartha Saxena, Cambridge
- Shik Shin, ISSP Tokyo
- Ming Shi, Zurich
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Topological Materials and Disorder: Vital or Fatal?

Introduction and scope:

Disorder plays a fundamental role in low-dimensional electronic systems. It is essential to the physics of integer quantum Hall effect, and the robustness against backscattering is a defining property of topological materials (TMs). Disorder that breaks time reversal symmetry in TMs can induce quantized Hall effects and novel tunable spin textures.

This symposium will provide a broad overview of most recent exciting and surprising results on the effects of disorder in topological materials, both from experimental and theoretical perspective. It is a continuation of the event held during E-MRS 2014 Fall Meeting and is meant to provide a regular European forum for scientific exchange in the world-wide very actively studied field of quantum physics, materials science and solid-state technology of topological materials. Analogous to the quantum Hall states, topological insulators have unusual robust 2D surface states that are protected (by time reversal symmetry) against backscattering by disorder. These surface states are chiral, spin polarized, and dissipationless, holding great promise for spintronics applications. They have electronic Dirac dispersion that sets a platform for high energy phenomena and particles, such as axions or magnetic monopoles. Furthermore, the interface of a topological insulator with a superconductor is expected to host Majorana fermions – new particles that could be key to topological fault-tolerant quantum computing. In all these exotic phenomena (and potential applications), understanding the role of disorder on the topological Dirac quantum channels is critical and yet to be fully explored. The symposium will cover the issues related to disorder thresholds limiting the dissipationless charge/spin transport, disorder driven topological transitions, and a possible disorder induced reentrant topological states (such as Anderson topological insulator with quantized conductance). The scientific program will also cover phase portraits in quasitopological 3D Dirac and Weyl semimetals where quenched disorder can move and gap the relativistic nodes. One of the symposium topics will address all aspects of magnetic doping which can gap the Dirac states and lead to chiral edges and various Hall states, including quantized anomalous Hall. Certain kinds of disorder are clearly undesirable as they prevent access to the 2D topological states. The symposium will explore various techniques of compensating/reducing bulk disorder, including particle irradiation and chemical doping/alloying.

Hot topics to be covered by the symposium:

- Novel topological phases induced by disorder: theory & experiment
- Disorder-driven topological/trivial transitions and phase boundaries in topological materials
- Phase diagrams of disordered Dirac/Weyl semimetals
- Weak disorder and quantum transport in topological insulators: spin-orbit coupling and quantum interference effects
- Strong disorder and quantum transport in topological insulators: Anderson localization
- Magnetically doped topological materials: anomalous Hall effects, nonlocal transport
- Techniques to tune chemical potential into topological bands
- Disorder and 2DEG states at topological interfaces in hybrid structures and devices

Confirmed invited speakers:

- S. Oh, Rutgers University, (USA), "Surface versus bulk disorder in MBE grown topological thin films"
- Ph. Hofmann, Aarhus (Denmark), "Charge transfer disorder and 2DEG quantum well states in topological insulators"
- A. Akrap, Geneva (Switzerland), "Infrared and Raman spectroscopy of intrinsically doped giant Rashba system BiTeI"

Tentative list of invited speakers:

- M. Vojta, TU Dresden (Germany), "Fate of topological-insulator surface states under strong disorder"
- T.r L. Hughes, Urbana-Champaign, (USA), "Phase diagrams of disordered Weyl semimetals"
- P. J. W. Moll, MPI, Dresden (Germany), "Magnetic torque anomaly in the quantum limit of Weyl semimetals"
- J. G. Checkelsky, MIT, Boston (USA), "Anomalous Hall effects and quantization in half- Heusler antiferromagnets and ferromagnetic insulators"
- Qi-Kun Xue, Beijing (China), "Quantized Anomalous Hall effect in magnetically doped topological insulators"
- Z.Chen, Columbia University, MRSEC, (USA), "Tuning Anomalous Hall effect by swift particle irradiation" or "Disorder driven 3D-2D transition from trivial to topological state"
- J. H. Bardarson, MPI, Dresden (Germany), ""Conductance fluctuations and disorder induced quantum Hall plateau in topological insulator nanowires"
- L. A. Wray, NY University (USA), "Topological surface under strong Coulomb, magnetic and disorder perturbations"
- W. Witczak-Krempa, Waterloo, (Canada), "Correlated quantum phenomena in the strong spin-orbit regime"
- E. Papalazarou, Orsay (France), "ARPES studies of subsurface trap states in bulk insulating ternary TIs with superlong optical lifetimes"
- G. Refael, CALTECH (USA) "Topological Anderson insulator in three dimensions".
- M. S. Rudner, Copenhagen (Denmark), "Chiral plasmons without magnetic field"
- V. Oganesyan, CSI-CUNY (USA), "Disorder spectroscopy of Dirac spins"

Tentative list of scientific committee members:

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- M. Feigel'man, Landau Institute for Theoretical Physics, Moscow (Russia)
- D. van der Marel, University of Geneva (Switzerland)
- M. Marsi, Université Paris-Sud (France)
- M. Kaminska, University of Warsaw (Poland).
- T. Story, Institute of Physics, Polish Academy of Sciences, Warsaw (Poland)

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Introduction and scope:

As scaling is progressing towards future technology nodes, the microelectronics world is experiencing a revolution with the introduction of new materials and architectures to tackle miniaturization, power consumption and processing speed challenges. Key element towards successful integration of these new devices is the availability of properly calibrated TCAD tools.

Scaling towards sub-10nm technology nodes (N7, N5,...) is involving intensive research on the introduction of new materials (Ge, III-V, graphene,...) and device architectures (FinFETs, GAA-FETs, thin-film FETs,…). The more complex underlying physics and the exponential increase of technological options is leading to growing integration challenges, and hence to growing need for TCAD (Technology Computer Aided Design) simulations. In order to model properly the complex mechanisms involved and to allow a prospective work, TCAD simulations (and in particular process simulations) have to be properly calibrated. Hence the development of TCAD tools is intimately linked with the development of advanced metrology solutions to calibrate them . In particular, there is a need for 2D/3D dopant and/or carrier profiling technique with nanometer resolution. Several techniques are now emerging (Electrical AFM, Atom Probe or Electron Holography, TOFSIMS, s- SNOM, TEM,...) which hold the promise to provide (some) information for these materials and structures with the required depth and/or 2D and 3D resolution. The aim of this symposium is double. Firstly it envisions to gather scientists and engineers (in academic and industrial environments) working on the integration challenges for new devices, as for instance the introduction of new high mobility channel materials (III-V and Ge), thin-body (ultra-thin SOI, double or tri-gate multi-gates, nanowires) and vertical gate-all-around device architectures, novel contact and doping techniques for low access resistance, etc. Secondly it aims to bring together scientists working on the various aspects of metrology and TCAD to discuss recent progresses in advanced metrology, innovative solutions on the utilization of physical simulations (ab-initio, molecular dynamics, lattice/on-lattice kinetic Monte Carlo as well as partial differential equations) to replace experiments and facilitate the rapid development of new devices, etc. This symposium therefore represents the ideal place to discuss the most recent integration, metrology and TCAD developments, as well as the fundamental understandings that can be gained thanks to characterization and modeling of these structures and materials.

Hot topics to be covered by the symposium:

- Integration challenges towards N7 and N5 (epitaxial growth, impact of defects, high mobility materials, scaling limits, novel contact and doping techniques)
- Recent developments in electrical and chemical mapping of materials at nanoscale (KPFM, SCM, C-AFM, SSRM, APT, TOFSIMS, SIMS) as well as optical measurements (µRaman, s-SNOM) and TEM related methods (HRTEM, EFTEM, CBED, EELS, E-holo, E-tomo)
- Characterization of inorganic semiconductors materials (III-V, Ge, wide bandgap materials) and advanced devices (FinFET, T-FET, GAA-FETs, thin-film FETs)
- TCAD simulations on devices presenting new architectures and new materials
- Calibration of TCAD simulators based on metrology results

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Introduction and scope:

The symposium aims to gather scientists working on monolithic and heterogeneous integration to expand silicon technology. It is an evolution of a symposia series that attracted a large number of attendees over the years. This research field paves the way towards highly functionalized Si-based technologies that can address challenges in our societies.

Silicon remains the material of choice for manufacturing integrated circuit (IC. Fundamental physical limits of Si present major obstacles for miniaturization ("More Moore") and functionalization ("More than Moore") of Si-based ICs. In parallel, new markets driven by societal needs – mobile & low power technologies, ultra-fast data communication, cognitive systems, application in life-sciences, new computing paradigms – will stem from technologies where the integration of alternative semiconductors and oxides on the mature Si technology platform can be successfully accomplished. The symposium will be devoted to highlighting novel breakthrough approaches that impact integration on Si baseline technology, either for CMOS applications (e.g. steep slope switches) or integrated photonics (e.g. monolithic lasers and silicon–organic hybrid modulators on a Si platform). The scope includes fundamental materials understanding, using novel integration schemes and/or state-of-the art modeling, or targeting new fields of application. The focus will be on the fabrication, characterization, and simulation (semi-empirical or ab-initio) of materials considered as non-standard for Si technology, such as strained SiGe, (Si)GeSn(C) etc.; compound semiconductors (III-V, II-VI); oxides, nitrides; and two-dimensional materials. Contributions related to innovative hetero-integration techniques (advanced heteroepitaxy, wafer bonding, microstructure printing, self-assembly etc.) will be encouraged. Finally, a particular attention will be given to devices and applications demanding an interdisciplinary approach. The productive interaction across disciplines will help materials scientists to drive the transition towards higher-value, highly functionalized Si-based microelectronics, supporting technology that can address today's and tomorrow's societal needs.

Hot topics to be covered by the symposium:

Materials science, characterization and simulation:

- *Group IV and compound semiconductors*: SiGe, Ge, and (Si)GeSn(C) 3D, 2D, 1D, and 0D heterostructures, semiconductors on insulators (SOI, GOI, SSOI, etc.), arsenides, phosphides, nitrides and antimonides, II-VI compounds
- *Oxides and nitrides*: Functional perovskites, ZnO, GaN and heterostructures, oxides with resistive/metal insulator transition, piezoelectric materials
- *2 dimensional materials*: Graphene and carbon nanotubes, Calchogenides, Boron Nitride
- *Structural and electronic modelling*: Atomistic/continuum simulations of strain release processes, growth simulations; multiscale approaches, ab initio/tight binding modelling of electronic and optical properties of films and nanostructures

Integration Techniques:

- *Advanced heteroepitaxy*: Selective growth or selective deposition on patterned substrate, epitaxial lateral overgrowth, self-assembly techniques
- *Layer Transfer and TSV*: Wafer bonding, microstructure printing, die to wafer, Through Silicon Via techniques

Applications:

- *Data processing and communication*: Quantum computing and communication, Advanced CMOS scaling; high-power / frequency devices; transistors, integrated photonics; IR and THz lasers; CMOS-Si electro-optical integration
- *Life-Sciences application and environmental sensors:* Semiconductor plasmonics for SERS, THZ sensing, gas sensors etc., integration with piezo-materials for MEMS-like sensors and opto-mechanics
- *Device Simulation:* Advanced TCAD methods, nanoelectronic device simulation

Tentative list of invited speakers:

- S. Abel (IBM, Switzerland) "Oxide based modulators for Si photonic devices"
- J.-N. Aqua (Institut des NanoSciences de Paris, France) "Heteorepitaxy on compliant substrates"
- S. Ballandras (frec|n|sys, France) "Passive piezoelectric devices for RF filters & sensors"
- R. Cariou (Ecole Polytechnique Paris, France) "Integration of III/V on Si by low-temperature PECVD"
- M. Houssa (KUL, Belgium) "2D Materials for Nanoelectronics"
- F. Iacopi (Griffith University, Australia) "Graphene synthesis on SiC"
- X. Jehl (INAC/CEA, France) "CMOS silicon spin qbit"
- G. Katsaros (Institute of Science and Technology Austria) "Heavy hole states in Ge huts"
- J. Knoch (RWTH Aachen, Germany) "2D materials on Group-IV-Platforms: Devices and Technology Challenges"
- M. Camarda (CNR Catania, Italy) "Growth of monocrystalline SiC on Si micrometric pillars"
- R. Gull (Synopsys) "TCAD: Present State and Future Challenges for advanced CMOS nodes"
- M. Myronov (U Warwick, UK) "High mobility Ge channels on Si: Fabrication and Applications"
- J.-P. Raskin (UC de Louvain, Belgium) "Silicon devices for high frequency applications"
- H. Sigg (PSI, Switzerland) "Strained Ge Microbridges"
- A. Spiesser (NIST, Japan) "Efficient spin transport in Si devices using magnetic contacts"
- E. Tournie (CNRS/Univ. Montpellier, France) "III-Sb based lasers on Si"

List of scientific committee members:

- F. Alibart (France)
- H. Bhaskaran (UK)
- S. Chiussi (Spain)
- N. Curson (UK)
- J. Gómez Rivas (Netherlands)
- G. Larrieu (France)
- D. Marris-Morini (France)
- O. Nakatsuka (Japan)
- G. Niu (China)
- G. Saint-Girons (France)
- A. Seeds (UK)
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Introduction and scope:

The symposium will show the state of art of functional oxides, and will be devoted to bulk and surface properties, films, nanocrystals, structure-property relationships, electronic, optical and magnetic properties. The symposium will cover current topics of advanced oxides and comprise new trends in experimental and theoretical research

Multiple functional and multifunctional materials belong to the large family of oxides. Applications of functional oxides attract an increasing attention. Among such oxides there is a broad diversity of structures: wurtzite, corundum, zircon, scheelite, wolframite, fluorite, spinel, garnet, perovskite, bixbyite and many others. The physicochemical properties can be tuned through variation of factors such as composition, temperature, pressure, strain, external fields, defects, film orientation and nanoparticle size. The possibility to tune materials leads to design of innovative materials relationships are one of fundaments of such studies. of desired properties, and to creation of new applications. Structure-property Detailed analysis and understanding of the physicochemical properties of the oxides are prerequisites to improve their properties, and to spur development of new oxide materials. The symposium will be devoted to binary and multicomponent oxides prepared in the form of bulk crystals, films, nanocrystals, nanowires, quantum dots, heterostructures, nanoparticles, nano- inclusions, etc.

The presentations will cover:

- synthesis and crystal growth of bulk and low-dimensional oxide materials; process monitoring and control
- structure-property relationships of functional oxides
- properties of oxides exhibiting specific tunable and controllable properties: phase diagrams optical, electronic, catalysis, magnetism, multiferroic, superconductivity, ferroelectricity, piezoelectricity, heat transport, mechanical
- interface structure and propertiesprocesses studied in situ: (chemical synthesis reactions, compression, phase transitions, catalytic processes)
- dynamical properties: charge transfer, chemical reactions,etc.

We expect experimental studies, theoretical modelling and prediction of properties using e.g. ab inito theoretical methods, or semi-empirical modelling.

Applications

- energy related materials, energy storage
- dielectrics, ferroelectrics, , electro-optics, piezoelectrics, superconductors
- magnetic, ferroics and spintronic materials
- catalysis
- applications in biology and medicine

The goal of this symposium is to bring scientists working in various fields of materials science together which deal with synthesis, crystal and defect structure, physico-chemical properties of functional oxides from basic science to technological applications.

The symposium

- will bring together scientists contributing to the development of science and technology of oxide materials, creating a forum for exchange of information and new ideas.
- will become a forum for exchanging ideas between technologists and materials scientists, between experimentalists and theoreticians.
- will provide an overview of applications of oxide materials
- will give particular emphasis to the exchange of information on advances in oxide science and technology
- will serve for establishing the current state-of-the-art of oxide applications

Hot topics to be covered by the symposium:

- structure – property relationship in oxide materials
- new applications

Novel oxide functionalities:

- Novel energy materials
- Novel biomaterials
- single crystals and thin films growth of new oxides
- in-situ studies of phase diagrams and elastic and other physicochemical properties
- advanced characterization methods of oxide materials

Scientific committee members (confirmed):

- Davide Barreca, University of Messina, Italy
- Richard Catlow, University College, UK
- Hanna Dabkowska, University of Hamilton, Canada
- Ulrike Diebold, Technishe Uinversity Vienna, Austria
- Judith Driscoll, University of Cambridge, UK
- Karol Frohlich, Slovak Academy of Sciences, Slovakia
- Hideo Hosono, Tokyo University of Technology, Japan
- Giafranco Pacchioni, University of Milano, Italy
- Wojciech Paszkowicz, Polish Academy of Sciences, Poland
- Lionel Santinacci, CRNS, Marseille, France
- Jörg J. Schneider, TU Darmstadt, Germany
- Margit Zacharias, University Freiburg, Germany
- Chih-Chung Yang, National Taiwan University, Taiwan

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Introduction and scope:
Diamond grown chemical vapour deposition (CVD) or other laboratory methods is rapidly emerging as an important material for new device applications required for the 21st century. They are in the field of power electronics, room temperature quantum computing, bio-sensing, bio-interfaces, MEMS, colour centres and high energy radiation and particle detectors to name a few. It has superior properties for next generation semiconductor applications such as the highest electron and hole mobilities, highest electric field breakdown strength, and a low dielectric constant. In combination with its unmatched thermal conductivity and radiation hardness many applications have been approached meanwhile, and which is at the core of this symposium. The field is rapidly evolving and it is timely to follow the successful symposium held in 2016 with the proposed meeting at EMRS Fall 2017.

Diamond technology attracts significant attention in Europe, USA and Asia as it shows unmatched properties compared to competing electronic materials. The symposium will therefore focus on several new device applications which are the most promising. These are a) diamond for power electronics, b) diamond for quantum applications and c) diamond for bio-devices. In all cases, man-made single crystalline diamond is used either as ultra-pure layer or semiconducting by boron and phosphorus doping. The growth and deposition of high quality diamond films will therefore be a subtopic at the symposium. Quantum metrologic applications (for example, magnetrometry based on NV centres) require the formation of tips with nano- scale dimensions or delta-doped layers which are generated either by gas phase doping or by implantation. In recent years these technologies have been successfully optimized so that meanwhile different bottom -up or top-down processes are available to shape for example tips and optical wave guide structures for the optimized read-out of the NV-center. Doping of diamond is currently applied to realize different electronic devices, however also to stabilize the negative charge of the NV center. The doping densities are therefore 15 -3 20 -3 varying between ultra-low (10 cm) to metallic (10 cm) in case of phosphorus and boron doping. This is challenging and will therefore be a topical part of the symposium. Finally, metallization of diamond to form high quality Schottky diodes but also low resistive Ohmic contacts is a topic which will be included. The symposium on "Diamond for Electronic Devices II" will include all major activities to realize high quality devices, following on from the very successful symposium at the Fall EMRS meeting in 2016.

Hot topics to be covered by the symposium:
- Diamond quantum metrologic sensors (magnetrometric, electric field sensors etc.)
- Diamond devices for power electronics (Schottky diodes, pin, MOS, bipolar transistors)
- Diamond wave-guide structures for optical addressing and read-out
- Doping of diamond (ultra-low, transfer-doping, metallic doping) using phosphorus and boron

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Introduction and scope:

III-Nitrides are the basis of modern optoelectronics due to their successful technological implementation. This Symposium will review the challenges related to their extension towards UV and longer wavelengths (green, yellow, IR). Nanostructures and surface phenomena have opened new opportunities for sensorics, which will also be considered.

The symposium will be devoted to the new challenges associated to the extension of the III-nitride optoelectronic technology towards the ultraviolet, green/yellow, or infrared spectral regions, as well as the new opportunities in fields like sensorics opened by research on nanostructures and surface-related phenomena. In III-nitrde optoelectronics, difficulties appear associated to substrate availability (bulk AlN/GaN or silicon), strain engineering, alloy inhomogenities, strain pulling effects, and segregation. The polarization management has become an important issue for device design, and alternative crystallographic orientations are explored as a potential solution. Furthermore, new and more demanding applications have led to the reconsideration of the doping methods, turning back to Ge and Be for a deeper evaluation as alternative dopants. The incorporation of nanostructures (quantum dots, nanowires) promises performance improvement, but requires efforts to understand strain and doping in three-dimensional objects, and the now dominant role of surface states and surface-related phenomena, such as the effect of adsorbates (hydrogen, water, oxygen, nitrogen, ammonia). A new family of sensors based on III-nitride nanostructures aims at exploiting the effect of adsorbates on nanostructures, taking advantage of the internal electric fields, optical emission properties, and intrinsic robustness of III-nitrides. Other issue directly related to surface states is the contact behavior, since surface states and metal induced gap states (MIGS) can dominate the Schottky barrier height and complicate tunneling transport.

Hot topics to be covered by the symposium:

- Recombination in nitride devices & material characterization
- Dopants and defects: Mg, Be, Ge, DX formation, other point defects…
- Nanostructures: nanowires, nanorods, quantum dots…
- Metal-semiconductor junctions, MIGS states, contact to n- and p-type
- UV devices: emitters, photodetectors & FETs
- Long wavelength emission - green, yellow and red LEDs and LDs
- Substrates & strain relaxation Intersubband devices
- Intersubband devices
- Surface properties: growth mechanism, surface states & sensor applications
- Non-polar & semi-polar structures & devices

Tentative list of invited speakers

- Martin Strassburg (OSRAM, Germany). GaN-based optoelectronics –state of the art (to be confirmed)
- Markus Weyers (Ferdinand Brown Institut, Germany). AlGaN photodetectors (to be confirmed)
- François Julien (Université Paris Sud, France). Flexible LEDs (to be confirmed)
- Yasuhiko Arakawa (The University of Tokyo, Japan). Quantum dot emission (to be confirmed)
- Koichi Kakimoto (RIAM Kyoto Japan). Dislocation creation (to be confirmed)
- Pawel Kempisty (University of Nagoya, Nagoya, Japan). Nitride polar surface properties and processes
- Chris Van de Walle (UCSB, Santa Barbara, USA). Defects related to device behavior (to be confirmed)
- Shigefusa Chichibu (Tohoku University, Japan). Segregation and growth (to be confirmed)
- John L. Lyons (NRL, Washington, USA). P-type doping (to be confirmed)
- Lorenzo Rigutti (Université de Rouen, France). Combined atom probe and µ-PL analysis of III-N nanowires (to be confirmed)
- Jürgen Christen (Magbdeburg, Germany). Ultra High resolution TEM-CL nanostructures Characterization (to be confirmed)
- Robert Kudrawiec (Wrocław University of Technology, Poland) (to be confirmed)
- Hideki Hirayama (RIKEN, Japan). Progress in high-efficiency deep-UV LEDs (to be confirmed)
- Martin Dawson (University of Strathclyde UK). Nitride LEDs for LiFi (to be confirmed)
- Motoaki Iwaya (Meijo University, Japan). Future prospects of AlGaN-based UV-emitters and Photosensors
- Jolanta Borysiuk (University of Warsaw, Poland). Dislocations in hetero- and homoepitaxial GaN
- James S. Speck (UCSB, USA). MBE as a vehicle to understand nitride materials and heterostructures (to be confirmed)
- Yoichi Kawakami (Kyoto University, Japan). Dual SNOM characterization of GaN-LED defects and droop (to be confirmed)
- Andreas Waag (Braunschweig University, Germany). Arrays of vertical AlGaN/GaN nanoFETs for power applications
- Tomas Palacios (MIT, USA). Present status and future of Nitride HEMTs (to be confirmed)
- Ramon Colazzo (North Carolina State University, Raleigh, USA). Point defect management (to be confirmed)
- Alain Doolittle (Georgia Tech, USA). P-doping of InGaN by Metal Modulation Epitaxy (to be confirmed)
- Robert Taylor (University of Oxford, UK). Non-polar nitride single photon sources (to be confirmed)
- Tao Wang (University of Sheffield, UK). High Efficiency Emission of InGaN Structures on Semi-Polar GaN (to be confirmed)
- Dabing Li (Chinese Academy of Sciences, Changchun China). AlGaN-Based Deep UV Detectors (to be confirmed)

Tentative list of scientific committee members

- Nicolas Grandjean (EPFL, Switzerland)
- Enrique Calleja (Universidad Politecnica de Madrid, Spain)
- Martin Stutzmann (TU München, Germany)
- Philomela Komninou (Aristotle University of Thessaloniki, Grece)
- Rachel Oliver (University of Cambridge, UK)
- Izabella Grzegory (IHPP PAS, Warsaw, Poland)
- Hiroshi Amano (Nagoya University, Nagoya, Japan)
- Umesh Mishra (UCSB, Santa Barbara, USA)
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Introduction and scope:

The symposium will bring together the atomic layer deposition (ALD) and synchrotron radiation (SR) communities to enable the application of SR to the study of the chemistry and materials science of thin films grown by ALD for leading-edge multiple technologies.

Despite that materials deposited by ALD are already at the production level, the ALD process is not yet fully understood and thin films deposited by ALD require more sophisticated investigation. Full understanding and control of the mechanisms underlying this growth method would lead to optimization of structure of the materials and better exploitation of their properties in devices. The use of SR techniques, both in-situ during ALD and ex-situ on ALD deposits, to characterize both the early stage of the growth and the final products is a novel activity that is nowadays seeding at major synchrotron light sources all over the world. At the same time, many new types of ALD processes are being developed, including thermally, plasma or electron enhanced ones, as well as ALD processes for spatial pattering. ALD films are widely investigated to be used in:

- solar cells as electrode, barrier, or encapsulating layers,
- LED,
- HEMT,
- RRAM,
- LMR silica-fiber sensors,
- functional coatings for medical materials,
- GaN power devices,
- TSV field effect transistor,
- MEMS.

The aim of this symposium is to gather the research communities involved in ALD and in SR and to provide a forum for them to discuss principles, results, and methodologies related to the study of ALD processes by SR experiments.
Papers relating to all aspects of the ALD, starting from different deposition method types and selection of precursors, going through laboratory- and synchrotron-based characterization methods of the surface, interface and ALD film growth and finally ending with potential applications of the ALD are invited.

Hot topics to be covered by the symposium:

- Characterization of ALD processes and materials (metals, oxides) using synchrotron light (PES, XANES, EXAFS, GISAXS, XRD, XRR, XRF, etc.)
- Investigation of ALD film nucleation, interface properties and growth by laboratory-based tools
- In situ/operando monitoring of ALD processes (APXPS, infrared spectroscopy, etc.)
- Modeling of the Atomic Layer Deposition
- ALD method types (thermal, plasma and electron enhanced, spatial, etc.)
- Application of ALD (solar cells, LED, HEMT, MIM capacitors, LMR silica-fiber sensors, GaN power devices, TSV field effect transistor, MEMS, etc.)

Tentative list of invited speakers:

- Dr. J. Dendooven (Ghent University, Belgium), ALD to grow metals - Pt
- Dr. S. Elliott (Tyndall National Institute, Ireland), Simulating Atomic Layer Deposition
- Dr. D. Fong (Argonne National Laboratories, USA), Applying in-situ X-ray scattering and fluorescence to monitor the ALD growth of materials
- Prof. E. Kessels (TU Eindhoven, The Netherlands), Application of ALD in solar cells
- Prof. J. L. MacManus-Driscoll (University of Cambridge, UK), Atmospheric pressure spatial atomic layer deposition of thin films: Reactors, doping, and devices
- Prof. M. Ritala (University of Helsinki, Finland), ALD of thin films for microelectronics
- Dr. T. Schenk (Namlab, Germany), ALD for memory devices
- Dr. J. Sprenger (University of Colorado at Boulder, USA) Low temperature Electron Enhanced ALD
- Dr. M. Tallarida (ALBA, Spain), Characterization of ALD processes and materials using synchrotron

Tentative list of scientific committee members:

- Dr. Manh-Hung Chu (Vietnam)
- Dr. Chittaranjan Das (Germany)
- Dr. Catherine Dubourdieu (Germany)
- Dr. Karol Froehlich (Slovakei)
- Dr. Kamil Kosiel (Poland)
- Dr. Alessio Lamperti (Italy)
- Dr. Alex Martinson (USA)
- Dr. Uwe Schröder (Germany)

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Introduction and scope:

Recently, there has been a growing interest in organic light-emitting diodes (OLEDs) that emit in the near infrared (NIR) region (700–2500 nm), as well as in organic photovoltaic devices (OPVDs) in organic photodetectors with a sensitivity window extended into the NIR region and in organic photosensors with NIR sensitivity. Therefore, the topic of the planned symposium is focused on synthesis and characterization of NIR absorbing and emitting organic materials and their application in devices for NIR optoelectronic applications.

Started over 30 years ago with the discovery that conjugated polymers can act as electrical conductors, the area of organic electronics is now on its way to the first commercially successful applications. Hereby, large area, low-cost manufacturing methods and compatibility with flexible substrates are two of the most exciting features. One day soon, these attributes may enable flexible and inexpensive large-area organic photovoltaic cells and integrated single-use photodetectors. Recently, there has been a growing interest in organic light-emitting diodes (OLEDs) that emit in the near infrared (NIR) region (700–2500 nm). NIR OLEDs are particularly interesting for night vision-readable displays and for biomedical applications, imaging and sensing. Moreover, organic photovoltaic cells (or organic photovoltaic devices, OPVDs) with a sensitivity window extended into the NIR region should allow a better coverage of the solar emission spectrum and lead to an increased photovoltaic performance. Furthermore, organic photosensors with NIR sensitivity will be important for integration into optoelectronic devices for chemical/biological sensing. The planned symposium will present new trends in design, synthesis and characterization of NIR absorbing and emitting organic materials, and their application potential for NIR OLEDs, NIR OPVDs and NIR photodetectors. During the Symposium a poster session will be organized. The selection for the BPA will be based on the presented posters. The posters will be evaluated by the scientific committee.

Hot topics to be covered by the symposium:

- NIR absorbing and emitting materials,
- Near-infrared emitting OLEDs, Near-infrared absorbers for organic solar cells, Near-infrared absorbers for photodetectors, Applications of NIR organic electronic devices

Tentative list of invited speakers:

- D. Comoretto (University of Genova, Italy)
- R. C. Evans (University of Cambridge, United Kingdom)
- D. T. Gryko (Polish Academy of Sciences, Warsaw, Poland)
- M. Muccini (CNR-ISM, Bologna, Italy)
- T. Riedl (University of Wuppertal, Germany)
- K. Vandewal (Technical University Dresden, Germany)

Tentative list of scientific committee members:

- T. Ameri, (Germany)
- M. Andersson (Australia)
- C. J. Brabec (Germany)
- R. A. J. Janssen (The Netherlands)
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Introduction and scope:

This symposium will cover:

- Materials growth: From 0D - 3D nanomaterials.
- Investigations: Structure-property Relations, Computation Modeling, Analytical Simulations.
- Applications: (a) Nanoelectronics- Gas/Pressure/Chemical/Biological Sensors, (b) Plasmonics/ Nanophotonics/Solar Cells/Photovoltaics, (c) Piezoelectrical/Energy Harvesting (e) Photocatalysis (f) Antiviral/Antibacterial/Biomedical.

Micro- and nanoscale structures particularly from inorganic metal oxide materials and carbon family are very important material candidates because of their size and shape dependent interesting physical and chemical properties suitable for various technological applications. The on going deployments in the direction of 2D and 3D networked materials have become further very relevant in terms of application aspects because, on one hand, they exhibit the necessary nanoscale features, and on the other hand, they exhibit less utilization complexities. Due to their sufficiently large size, they can be easily handled or integrated in desired manner in the devices or sensors. Thanks to interesting plasmonic properties, 0D, 1D, 2D nanostructures from noble metals (Au, Ag, Cu, etc.) have found immense applications in sensing, biomedical, waveguides and telecommunications, etc. Nanostructures from metal oxides have been very interesting (fundamental as well applied) materials due to interesting bandgap values (intermediate between metals and insulators) suitable for various advanced technological applications. When these metal oxides are combined with metals in form of hybrid nanomaterials, they become further very relevant in terms of understanding the properties and accordingly applications. The family of carbon nanostructures, i.e., fullerenes, carbon nanotubes, graphene, graphene oxide, etc., has shown very strong potential ranging from fundamental properties to advanced energy applications and hence has been the subject of great attention in the past decades and the recent developments in the direction 3D carbon networks have opened an entirely new dimensions in nanotechnology research. Research on 3D flexible ceramics from metal oxides interconnected networks, which is currently going on now-a-days, is very important because it can be very helpful in up scaling the nanotechnology related applications.

However, the appropriate growth of different structures (0D, 1D, 2D and 3D) using simple methods, understanding their structure properties relations, their applications in different directions, etc. are still very interesting aspects and it requires an interdisciplinary research platforms which are equipped with: (i) fabrication groups for developing different nanostructures, (ii) computational scientists who can do simulations to understand the structure-property relations, and (iii) application groups who can accordingly utilize the nanostructures in different applications and this is actually the main aim of the present symposium.

Hot topics to be covered by the symposium:

- Inorganic Metals and Metal Oxide Materials (0D to 3D): Fabrication & Characterizations, Structure-property relations, Simulations studies, Applications: Nanoelectronics- Sensing- Biomedical- Energy Harvesting- Photocatalysis- Environmental- Membranes- Antiviral- Biomedical- Applications.
- Plasmonic Nanostructures: Synthesis & Characterizations, Computational Modeling, Sensing- Nanophotonics- Waveguide- Lasing- Nanoelectronics- Applications.
- Carbon Family (Fullerenes to 3D graphene): Fabrication & Characterizations, Structure-property relations, Simulations studies, Applications: Nanoelectronics- Sensing- Supercapacitor-Bioelectronics- Batteries-Energy.
- Hybrids and Composites: Inorganic-carbon-rubber-polymer based composites, Applications-Sensing- Self reporting- Self healing.
- Synchrotron radiations/Ion beams based materials characterizations and engineering.

Tentative list of invited speakers:

- Prof. Dr. Hidenori Mimura, Shizuoka University, Japan
- Prof. Dr. Jan Linnros, KTH, Sweden
- Prof. Dr. Sanjay Mathur, Cologne, Germany
- Prof. Dr. Jan Seidel, Australia
- Prof. Ashutosh Tiwari, Utah, USA
- Dr. Andrei Sarua, Bristol University (UK)
- Dr. Susanne Hoffmann-Eifert, FZ-Jülich, Germany
- Prof. Dr. Vasudevan Biju, Hokkaido Univ, Japan
- Prof. Dr. Haibo Zeng, China
- Prof. Dr. Ashutosh Tiwari, Linköping Univ, Sweden
- Prof. Dr. Jani Kotakoski, Austria
- Prof. Dr. Devesh Avasthi, Amity Univ, India
- Prof. Dr. Kostya K. Ostrikov, Australia
- Dr. Ranjan Singh, NTU Singapore
- Prof. Harry Shrikanth, USF Florida
- Dr. Saroj P. Dash, Chalmers Univ, Sweden
- Prof. Teresa Monteiro, Averio Univ, Portugal
- Prof. Narayan Pradhan, IACS, Kolkata, India
- Prof. Nicola M. Pugno, Trento Univ, Italy
- Prof. Rajendrer S. Varma, US-EPA, Cincinnati
- Prof. Mady Elbahri, Aalto Univ, Finland
- Dr. Amit Das, IPF, Dresden
- Dr. Helder Santos, Helsinki Univ, Finland
- Prof. N. Ravishankar, IISC Bangalore, India
- Dr. Sanjeev Srivastava, IIT Kharagpur, India
- Dr. Vijay Thakur, Crannfeld Univ, UK
- Dr. Sreejith Shankar, NIST Trivendrum, India
- Dr. Ilker Bayer, IIT Italy

Tentative list of scientific committee members:

- Prof. Dr. Rainer Adelung, Germany
- Prof. Dr. Franz Faupel, Kiel, Germany
- Prof. Dr. Devesh Kumar Avasthi, India
- Prof. Dr. Rajeev Ahuja, Sweden
- Prof. Dr. Hisatoshi Kobayashi, Japan
- Prof. Dr. Ashutosh Tiwari, Sweden

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Introduction and scope:

Nanocomposites of group-IV nanomaterials combined with metal, dielectric, polymer (etc.) materials are currently investigated from technological, theoretical and experimental point of view with the aim to improve inherent limitations and gain new functionalities.

Group IV materials (C, Si, Ge) are between the most abundant and technologically important elements. The interest to study the group IV-based nanostructures is rapidly growing with motivation to use them for various application extending from electronics, photonics, photovoltaics, sensorics up to bio-medicine. Most of such applications require creation of composite structures of group-IV nanostructures with dielectrics, polymers, plasmonic structures etc. This symposium covers many intensely studied forms of group-IV nanostructures, namely: Si and Ge nanocrystals and nanowires, silicon carbide and carbon dots and nanodiamonds. Basic characteristics of these materials are already well known and some limitations become evident: For example relatively low absorption cross section, limited luminescence yield, problems with doping and energy transport, unstable surface termination and defects etc. One possible way to overcome limitations of group-IV nanomaterials is creation of nanocomposite structures with metals (Au, Ag, Pt nanocrystals and nanorods), organic materials (like conductive polymers, fluorescent dyes, ligands etc.). The symposium will address the field of group-IV such composite structures from technological, theoretical and experimental point of view.

Hot topics to be covered by the symposium:

- Conjugates of nanocrystals with plasmonic nanostructures
- Experimental studies of single nanobjects and nanoconjugates
- Embedding nanostructures in photonic crystals, microcavities, waveguides etc.
- Doping and defects in group-IV nanostructures
- Influence of interface effects – surface functionalization, strain, charge transfer etc.
- Applications in biology studies, medicine, bio-imaging and sensing
- Theoretical description and modelling of nanostructures and composites
- Fabrication techniques (both bottom-up and top-down)
- Device design and fabrication with nanocomposites
- Physics of quantum colour centres
- Quantum sensing and imaging at nanoscale Single molecular NMR

List of invited speakers (confirmed):

- Brian Korgel, University of Texas, Austin, USA
- Ivan Marri, University of Modena, Italy
- Petr Cigler, Institute of Org. Chemistry & Biochemistry, AVCR, Czechia
- Ilya Sychugov, Royal Institute of Technology, Stockholm, Sweden
- Daniel Hiller, IMTEK, U. Freiburg, Germany
- Lukáš Ondič, Institute of Physics, AVCR, Prague, Czechia
- Christoph Delerue, University of Lille, France
- Naoki Fukata, NIMS, Tsukuba, Japan
- Detlev Grützmacher, Forschungszentrum Julich, Germany
- Anke Krüger, U. Würzburg, Germany
- Li Quan , The Chinese University of Hong Kong, China
- and more to be specified later

List of scientific committee members (confirmed):

- Margit Zacharias, IMTEK, U. Freiburg, Germany
- Marie Hubalek Kalbacova, Charles University, Prague, Czechia
- Romuald Beck, Warsaw Technical University, Poland
- Tom Gregorkiewicz, University of Amsterdam, Netherlands
- Bohuslav Rezek, Institute of Physics, ASCR, Prague, Czechia
- Xiandong Pi, Zhejiang University, China
- Francesco Priolo, University of Catania, Italy
- Ivan Pelant, Institute of Physics, ASCR, Prague, Czechia
- Leonid Khriachtchev, U. Helsinki, Finland
- Salvatore Mirabella, IMM CNR, Catania, Italy
- Sergey V. Gaponenko, Stepanov Institute of Physics, Minsk, Belarus
- Jean Francois Roch, Laboratoire Aimé Cotton, France

Symposium Organizers:

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Engineering Surfaces to Control and Elucidate Cellular Response

Introduction and scope:

A growing number of studies has been exploring the role of micro and nanostructured surfaces on the precise mechanisms that guide cellular and bacterial response. Adhering cells including bacteria sense and respond to the substrate's physicochemical properties as well as surface mechanics and cell deformations at the micro- and nanoscale.

This symposium will cover recent advances on the mechanisms that control how mammalian cells and bacteria respond to micro- and nano-engineered surfaces. A particular emphasis will be given to the effects of the topographical (e.g. micro and nanostructures) and chemical (e.g. surface chemistry, surface functionalization, chemical gradients) environment, both at the micro and nanoscale, on the events that ultimately dictate cell fate, including cell migration, cell deformation and shape, biomechanical alterations, development of adhesion structures (e.g. focal adhesions, lamellopodia and filopodia), bacterial protrusions, proteins and gene expression, among others. The contribution of the physical/mechanical environment (e.g. substrate's stiffness, stiffness gradients) to these events will also be considered. The symposium will consider the creation of novel ultra-small features that recently have been attracting much attention, such as nanometric clusters of adhesion molecules and cellular protrusions that have been referred to as nanopodia. Finally, the effects of micro- and nano-engineered surfaces under in vivo conditions will be distinctively addressed. A particular emphasis will be given to micro and nanofabrication technologies that allow to fabricate structures that mimic the natural architecture of the extracellular matrix (ECM) and biological tissues, highlighting emerging approaches that have permitted to achieve an increasingly more sophisticated ability to manufacture three-dimensional substrates to investigate cell response. These technologies will encompass both "bottom-up" and "top-down" strategies that permit to engineer and fine tune the physicochemical properties of substrates. In addition, the most advanced experimental techniques for both the characterization of surfaces (e.g. multimodal imaging) and cell response (e.g. super-resolution microscopy) will be considered.

Hot topics to be covered by the symposium:

- Cell- and bacteria-surface interactions;
- Micro- and nano-engineered substrates to control cell fate;
- Biomechanical and biochemical changes in response to micro and nanostructured surfaces;
- Cellular and bacterial adhesion on micro and nanostructured surfaces;
- Cell motility, shape and deformation;
- Antibacterial surfaces;
- Chemical and physical gradients;
- Micro and Nano-fabrication;
- Characterization techniques of surfaces and cellular response;

Tentative list of invited speakers:

- Dr. Gabriele Candiani [Politecnico di Milano]
- Dr. Matthew Dalby [University of Glasgow]
- Dr. Eileen Gentlemann [King's College London]
- Dr. Anna Lagunas [Institute for Bioengineering of Catalonia]
- Dr. Cornelia Lee-Thedieck [Karlsruhe Institute of Technology]
- Dr. Marga Cornelia Lensen [TU Berlin, Germany]
- Dr. Diego Mantovani [Laval University]
- Dr. Antonio Nanci [Université de Montréal]
- Dr. Ketul Popat [Colorado State University]
- Dr. Duncan Sutherland [Interdisciplinary Nanoscience Center - iNANO-Fysik, iNANO-huset]
- Dr. Thomas J. Webster [Northeastern University]

Tentative list of scientific committee members:

- Dr. Fabio Variola [University of Ottawa]
- Dr. Krasimir Vasilev [University of South Australia]
- Dr. Elena Martinez [Institute for Bioengineering of Catalonia]
- Dr. Aldo Boccaccini [University of Erlangen-Nuremberg]
- Dr. Alessandro Lauria [ETH]

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Nanocarbon Electrochemistry and Interfaces II

Introduction and scope:

This symposium will focus on electrochemical and interface properties of carbon and carbon- related materials (e.g., diamond, CNTs, graphene, carbon particles, and composites, etc). The key topics will include their application for electroanalysis, biosensing, electrocatalyst, electrosynthesis, energy storage and conversion, etc.

Following by the successful symposium held in 2015, this symposium will continuously focus on the electrochemistry and interfaces based on nanocarbons, including novel carbon films (e.g. conductive diamond, fullerenes, DLC, CNTs, graphene, etc.), carbon nanoparticles (e.g. diamond nanoparticles, carbon dots, carbon powders, graphene dots, etc.) and micro-fabricated and CVD grown carbon structures (e.g. carbon foam, diamond nanowires, porous diamond, carbon nanofibers, etc.) as well as carbon nanocomposites (e.g. diamond/SiC nanocomposite films, carbon nitrite, etc.). The topics with respect to the growth and electrochemical characterization of these novel carbons in different media as well as their interfacial properties will be covered. The relationships between the carbon bulk structure, electronic properties and surface chemistry with their nanostructures for different electrochemical and interface applications will be contained. Of particular focus will be the applications of these nanocarbons for electroanalysis, biosensing, electrocatalytic reactions, electrosynthesis, environmental degradation, and energy storage and conversion. In vivo and in vitro electrochemical sensing with novel carbons, electrocatalytic electrochemical performance will be included. The generation of various carbon reactions (e.g., hydrogen evolution reaction, oxygen reduction reaction, CO2 reduction reactions) using carbocatalysts, organic synthesis using diamond electrodes, electrochemical-photochemical degradation of environmental pollutants as well as supercapacitors/batteries from carbon nanomaterials are the main hot topics in the symposium. The fabrication, characterization, and application of micro and nanostructured carbon materials for electrochemical devices and setups (e.g., scanning probe microscopes) and spectroelectrochemistry (e.g., transparent electrodes), the novel nanocarbons for single molecular detection such as DNA sequencing using graphene nanopores will be highlighted.

Hot topics to be covered by the symposium:

- Simulation of carbon nanoelectrochemistry
- Carbocatalysts for water splitting
- Carbocatalysts for CO2 reduction
- Nanocarbon for supercapacitors
- Nanopcarbon for batteries
- Nanocarbon for single molecule detections
- Electrosynthesis using diamond electrodes
- Electrocatalysts on nanocarbon electrodes
- Nanocarbons for in-vivo electrochemistry
- Nanocarbon interfaces for sensing
- Nanocarbon based electrochemical devices

Confirmed list of invited speakers:

- Hua Zhang (Nanyang Technological University, Singapore)
- Robert Hamers (University of Wisconsin-Madison, USA)
- Gregory F. Schneider (Leiden University, Netherlands)
- Wenjun Zhang (City University of Hongkong, China)
- Philippe Bergonzo (CEA, France)
- Teruhiko Matsubara (Keio University, Japan)
- Osamu Niwa (Saitama Institute of Technology, Japan)
- Dai-Wen Pang (Wuhan University, China)
- Franceso Paolucci (University of Bologna, Italy)
- Robert Dryfe (The University of Manchester, UK)
- Yang Tian (East China Normal University, China)
- Paula Colavita (Trinity College Dublin, Ireland)
- Xiaodong Zhuang (Technische Universitaet Dresden, Germany)

Selected papers will be published at Journal CARBON (https://www.journals.elsevier.com/carbon/).
The submission deadline is Oct. 1st and Paper type is "VSI: NanoC for Electrochem.

Symposium Organizers:

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Introduction and scope:

Research on nanomaterials and nanostructures is continuing to grow as they play a key role in miniaturized electronic devices, sensors, components of modern tools for diagnosis and treatment in medicine. The role of structure, stress, and stoichiometry will have a great impact on their properties and allow for new functionalities to be engineered.

It is proposed a symposium that will be the follow-up of the three symposia "Stress, structure and stoichiometry, effects on the properties of nanomaterials", held at the E-MRS Fall Meetings of 2011, 2013 and 2015 with very good attendance. Nanomaterials play now a crucial role in most aspects of advanced technologies, because of their surprising variety of functional properties. These properties can be finely tuned with a vast multitude of physical and chemical synthesis techniques. In particular, structure and stoichiometry are the key ingredients in this tuning at the nanometer scale. Stress, chemical phase and presence of defects and dislocations are critical factors governing the (nano)fabrication procedures; the investigation of their influence on the electric, magnetic optical and mechanical properties of the ever growing collection of nanosystems is a crucial challenge in material science, and it is also necessary for the engineering of the new devices to be realized for future applications. The scope of the symposium is to provide a forum for presentation and discussion of innovative methods in fabrication, characterization and modelling of nanomaterials and nanostructures: ultrathin films, nanotubes, nanopillars, nanowires, nanoparticles, with emphasis on influence of stress and stoichiometry on their properties.

Hot topics to be covered by the symposium:

- Influence of the deposition process on the structure of nanomaterials
- Heterostructures and superlattices
- Investigations and engineering of interfaces in nanomaterials for enhanced properties
- Advances in small scale characterization techniques
- Use of self-organization and templates to grow nanostructures
- Strain control and its effects on functional properties
- Atomistic models for stress and defects in nanostructures
- Interface effects in magnetic, optical and electric properties of nanosystems

Tentative list of invited speakers (Partial and not confirmed)

- Jens Kreisel, Luxembourg Institute of Science and Technology, Luxembourg: Strain & phase transitions in oxide heterostructures and ultrathin films
- Nicolas Gauquelin, University of Antwerp, Belgium: Determining the structure/property relation at oxide interfaces by means of advanced TEM spectroscopy and imaging
- Fabio Miletto Granozio (CNR-SPIN, Naples, Itlay)
- Arunava Gupta, University of Alabama, USA
- C. Himcinschi (TU Bergakademie Freiberg, Germany), Strain tuning and ferroelastic domain identification in multiferroic oxides: Raman Spectroscopic Investigations
- Olivier Schneegans, (CNRS, Paris VI and Paris-Sud Universities), Stoichiometric effects linked to resistive switching phenomena in cobalt oxides
- Jørgen Schou (Technical University of Denmark), Non-stoichiometry in films produced by pulsed laser deposition
- Regina Dittmann (Jülich, Germany)
- Ignasi Fina (ICMAB-CSIC Barcelona, Spain)
- H. Makino (KUT, Kochi, Japan)
- Sylvain Peugeot (CEA Marcoule, France)

Tentative list of scientific committee members:

- Maria DINESCU (Romania)
- Sergio D'ADDATO (Italy)
- Achim W. Hassel (Austria)
- V. Chirita (Sweden)
- F. Paumier (France)
- Z. Barber (UK)
- J. Narayan (USA)
- D. Simeone (France)
- E. Meletis (USA)
- H. Swart (RSA)
- Tetsuya Yamamoto (Japan)
- F. Gosse (Germany)
- F. Iacomi (Romania)

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WORKSHOP

'SUSTAINABLE STEELS FOR DIRECT DEPOSITION OF PHOTOVOLTAIC SOLAR CELLS' (STEELPV)

Date: 19/09/2017

Duration: 2 Hours

Abstract:

By 2020, several European Directives promoting renewable sources to produce 20% of the EU energy consumption and to reach a nearly Zero Energy Buildings have to be fulfilled. Steel products are currently competing with other construction materials such as glass, ceramic, plastic, or other metals to be used as substrates for photovoltaic devices. To date, only high cost solar grade stainless steel has been industrially used as direct flexible substrate for photovoltaic applications, offering a great possibility for steel value added products expansion. In fact, these new solutions could be integrated for the building envelope (façades and roofs) of both new and retrofitted buildings, to any kinds of use (residential, industrial), encompassing practically the whole building market. Finally, other sectors such as road infrastructures and transports could take advantages of these developments.

The European STEELPV project main objective (RFSR-CT-2014-00014), belonging to the Research Fund for Coal and Steel Programme, is to make compatible low cost steel as direct substrates for thin film photovoltaic devices, through the development of ad-doc intermediate layers using non-vacuum and vacuum strategies. At the end of the STEELPV project, a portfolio of value added steel products will be ready, enabling steel partners direct access to the photovoltaic industry. Sectors such as building envelopes for new and existing buildings, road infrastructures and transport will take benefit of the STEELPV developments.

Workshop:

Main topic covered in this workshop will be the use of steel for novel BIPV concepts.

Tentative program

- Welcome and short introduction to STEELPV workshop (ITMA) – 10min
- Current BIPV technologies on non-glass materials (Invited speaker to be confirmed) – 30min
- Vacuum strategies for steel substrate coatings – 15min
- Coating/printing techniques on steel substrates_ Prof. D.T. Gethin (University of Swansea) – 15min
- Preparation of metallic substrates for BIPV_ Dr. Y. Lan (MK Metallfolien GmbH) – 15min
- Applying OPVs/PSCs directly to steel_ Dr. J. Kettle (University of Bangor) – 15 min
- The STEELPV project: General overview and main results Dr. P. Sanchez (ITMA) – 20min

The research leading to these results has received funding from the European Union's Research Fund for Coal and Steel (RFCS) research programme under grant agreement n° RFSR-CT-2014-00014

Workshop contact persons:

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Full information about the scientific programme, abstract submission, registration and accommodation can be found through the link to

www.european-mrs.com

For general information about the conference contact the E-MRS Fall Meeting Conference Secretary

CONFERENCE SECRETARIAT

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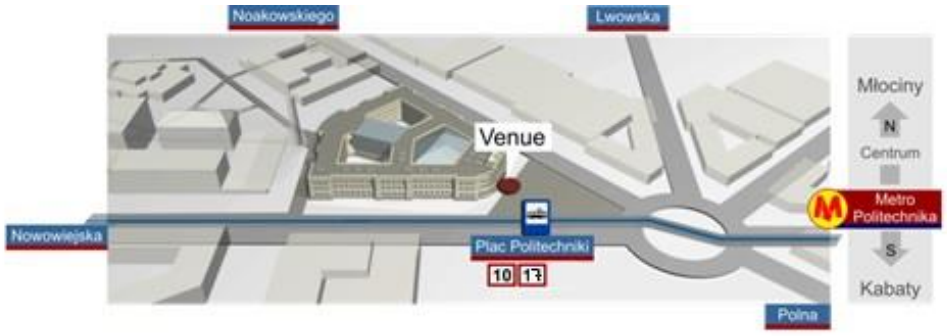
Any additional information regarding a specific symposium can be obtained by making direct contact with the symposium organizers. The correspondence address will be found at the end of the description of each symposium given in this announcement.

LANGUAGE

The conference language is English.

CONFERENCE VENUE



Central Campus of Warsaw University of Technology
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Many places of interest are within easy walking distance of the University. The area around the campus has a 'student town' atmosphere with many student pubs, which are excellent places to meet and share experiences after the symposia.

Good public transport connections to the university, by metro, tramway, or by bus are available from anywhere in Warsaw. The Central Campus is located just 10 minutes from the city centre and 20-30 minutes from the Old Town.

REGISTRATION

Online registration is mandatory and we strongly recommend that you submit your registration payment online, in order to avoid queuing during on-site registration.
All participants (including chairpersons, authors, presenting authors, Invited Speakers, Scientific Committee members…) must register online. PLEASE NOTE conference registration and abstract submission are separate items and are not linked.
To be eligible for the early registration fee online registration must be made by 5 p.m. (EST) on July 31st, 2017.

On-site registration will be open on Sunday, September 17th, 2017, from 12:00 to 18:00
Online registration and payment is recommended to avoid long queues.

On-site payment hours:

Sunday, September 17th, 2017	12:00 - 18:00
Monday,September18th, 2017	08:00 - 18:00
Tuesday, September 19th, 2017	08:00 - 18:00
Wednesday, September 20th, 2017	08:00 - 18:00
Thursday, September 21st, 2017	08:00 - 18:00

REGISTRATION FEES

FULL RATE

Early registration fee (before July 31st, 2017): 450 EUR
Late (after July 31st, 2017) and on-site registration fee: 500 EUR

STUDENT RATE

Early registration fee (before July 31st, 2017): 280 EUR
Late (after July 31st, 2017) and on-site registration fee: 330 EUR

The registration fee for a Regular Participant includes:

1. Admission to the Plenary Session, all parallel symposia and workshops (except the Young Scientists Workshop)
2. Programme and Book of Abstracts
3. Conference Badge
4. Refreshments during breaks
5. Lunches
6. Evening reception on Wednesday, September 20th, 2017
7. Admission to the poster sessions
8. One copy of the proceedings of a named symposium

The following payment options are offered:
- Credit card (Carte Bleue, Visa, Eurocard/Mastercard)
- Cheque (to thethe order of E-MRS)
- Bank transfer (please see. BANK INFORMATION section)

NB: A Purchase Order from a company is also acceptable.

IMPORTANT DEADLINES

- May 29th, 2017: Deadline for abstract submission is
- June 26th, 2017: Notification of acceptance and mode of presentation.
- July 31st, 2017: Deadline for registration at the discounted fee.
- after July 31st, 2017: Regular registration fees apply.

Please note that the early registration fee is applicable only for a participant who registers and submits payment by 31st July, 2017.

PROCEEDINGS

The submitted papers being considered for publication will be subjected to a peer review procedure. The decisions about the deadline and procedure for submitting manuscripts are made by the symposium organisers. The authors of papers accepted for presentation at the conference should ensure that they have the appropriate instructions for the preparation of the manuscript.

CONFERENCE SCIENTIFIC PROGRAMME

The complete scientific program will be available on the website from mid July 2017.

ABSTRACT SUBMISSION

Abstract length: Website submissions are limited to 1500 characters. (plain text only, no figures, no formulae…)

Note: All abstracts must be submitted through the E-MRS website at www.european-mrs.com

Submitting abstracts through the website is very easy and convenient. Follow the step-by-step instructions on the template, making sure that the complete mailing address information is included for the presenting and contact authors. After submitting the abstract, please use the given Control ID number in all communications with E-MRS regarding the abstract UNTIL a paper number (e.g., A 8) is assigned. After that date, any change must be submitted to: emrs@inmat.pw.edu.pl (Subject: Abstract Revision) and the email must include your Control ID number. Please state exactly where the text revisions are located (e.g., title, author, body, etc)

POSTER PRESENTATIONS

There will be two poster sessions on 18th and 19th of September. The authors presenting posters are required to be present at the appropriate session to discuss or defend the paper.
The maximum poster size is A0 (841×1189 mm);
No tapes or pins will be needed for hanging posters;
The posters must be removed immediately after the session and the Conference Organisers accept no responsibility for posters left up after this time.
Conference participants may preview the posters during the morning and afternoon sessions, before the formal presentation.

ORAL PRESENTATIONS

Duration of oral presentation, including discussion, depends on a Symposium Organisers but recommendations are:
45 minutes for plenary talks,
30 minutes for invited talks,
15 minutes for contributed talks.

EXHIBITION

The exhibition will be held from September 18th – 20th, 2017 in the historic Main Hall of Warsaw University of Technology, close to the technical session rooms. The Main Hall is also the venue for all refreshment breaks between scheduled sessions to facilitate the maximum contact between exhibitors and participants.
The 2017 E-MRS Fall Meeting will provide an excellent opportunity for participants to become aware of some of the latest equipment and services relevaant for materials science research and to obtain information, costs and availability.

GETTING TO WARSAW

By plane

Warsaw Chopin Airport
Departures and Arrivals Information, phone + +48 22 650 4220
On-line timetable www.lotnisko-chopina.pl
Warsaw's Chopin Airport is located some 12 km from the city centre, which can be easily reached by car, public bus or taxi. http://www.lotnisko-chopina.pl/en/passenger/access-and-car-parks
Warsaw Modlin Airport
Airport Information, phone +48 22 315 18 80
Airport webpage: http://www.modlinairport.pl/
Train: By Modlin shuttle-bus to Modlin train station, then by train (KM) to Central Railway Station. (4-5 €)
Bus: Modlin-bus connects Modlin Airport and Central Railway Station

The Star Alliance member airlines are pleased to be appointed as the Official Airline Network for E-MRS 2017 Fall Meeting

STAR ALLIANCE™

Taxis

For arrivals at the airport use the official taxi rank as airport is served only by 3 Radio-Taxi companies: Ele Taxi, Sawa Taxi and Super Taxi and the fare to the city centre should not exceed 40PLN. .When using taxis in Warsaw, it is strongly recommended that you use only those showing: the symbol of Warsaw – a mermaid – on both front doors, yellow/red stripes affixed to the glass along the front doors, a number on the side of the vehicle, a hologram with the licence number and the vehicle's registration number on the upper right-hand corner of the front glass and a sticker with price information per kilometer displayed on the glass of the right-hand side back door. It is recommended that you use one of the city's official Radio-Taxi companies shown above, and order a taxi by telephone or through your hotel.

By train

There are three train stations in Warsaw that handle international and domestic train traffic:

- Warszawa Centralna (Central Warsaw) (Aleje Jerozolimskie 54) - situated in the city centre and very well connected to all areas of the city'.
- Warszawa Zachodnia (West Warsaw) (Aleje Jerozolimskie 144) – adjacent to the international bus terminal where those travelling in or out of the country make their transfers.
- Warszawa Wschodnia (East Warsaw) (Lubelska 1) - located on the east side of Vistula River (Praga)

Railway tickets can be purchased using cash or credit cards at the windows (kasa) in the stations, on the Internet or at selected travel agencies. You can also purchase your ticket on the train from the conductor, immediately after boarding the train. This is not applicable to travel on Pendolino services. Tickets sold on the train are subject to an additional fee.

The train Timetable is available at: www.pkp.pl or www.intercity.pl

By car

The main way to access to Warsaw by road is to take one of four major European routes:

- from the north: Route E77 (from Gdańsk)
- from the east: Route E67 (from Białystok), route E30 (from Terespol)
- from the south: Route E67 (from Wrocław), route E77 (from Kraków)
- from the west: Route E30 (from Poznań)

Along the roads are signs giving the number of kilometers to the centre of Warsaw.

Parking

There is no free public parking around the Conference Venue.
The whole area of Warsaw city centre is a controlled parking zone. This rule applies from Monday to Friday, from 8 am to 6 pm. On Saturdays, Sundays and public holidays parking is free.

Warsaw Car parks system "Park & ride":
http://www.ztm.waw.pl/parkujijedz.php?c=116&l=2

Useful links:
http://www.ztm.waw.pl/
http://warsawtour.pl/en

LOCAL PUBLIC TRANSPORT

The WUT Central Campus can be easily reached using lpublic transport. The tram stop "Plac Politechniki" for lines 10, 14 and 15 is right in front of the venue and the metro station "Politechnika" is a 10 min. walk from the venue.

From the main railway station "Warszawa Centralna" in the city centre, it is about a 20 min. walk, or 3 min.by tram No. 10, to the conference venue. T ram 10 departures from the stop "Dworzec Centralny" in the direction "Wyscigi" and "Służewiec" every 10-15 minutes. There are three stops to the "Plac Politechniki" tram stop.

The local trains (SKM -Fast Urban Railway, and KM - Masovian Railways), buses, trams and metro require a valid ticket – the one-way price is 1-2 € and can be bought in any kiosk, in ticket machines (on most bus stops or inside trains and buses) or from the bus or tram driver.

ACCOMMODATION

Nobell Congressing, as the OFFICIAL HOTEL PROVIDER FOR E-MRS 2017 FALL MEETING, is pleased to offer you various standards of accommodation at discounted rates. We offer hotel accommodation in hotels located a few steps from a conference venue – in walking distance. You may choose from a range of hotel standards to suite all budgets. All prices are discounted specifically for participants aat the E-MRS 2017 Fall Meeting s. Book your hotel at https://emrs.nobell.pl/hotels.

Booking team
Nobell Congressing
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phone: +48 22 621 67 37
email: norbert@nobell.pl

Please note that hotel booking and conference registration are totally separate systems and are not linked in any way.

SOCIAL EVENTS

All participants are invited to attend the Conference Reception on Wednesday September 20th, 2017 starting at 18:00. Musical entertainment and refreshments will be provided as part of conference arrangements. Symposium organizers and Best Presentation Award Winners will be honoured at the commencement of the reception.

BEST PRESENTATION AWARD

The Best Presentation Award is made in recognition of the best student oral or poster presentation in each symposium. A maximum of two winners per symposium receive a diploma and a cash award of 200 EUR. No application is necessary.

AUDIOVISUAL EQUIPMENT

For the oral presentations - the following equipment will be available:

- laptops with XP or Windows 2000 and Microsoft Office Power Point. It is preferable that presentations are on CD or USB flash memory, if author require something else please contact the organisers
- digital projector
- laser pointers and microphones if necessary

INTERNET ACCESS / WIFI

The Computer Lab will be open from 8:00 to 18:00 for all participants during the conference. In addition wireless access to the internet will be provided for all conference participants having their own laptops.

PASSPORTS AND VISAS

All foreign visitors must possess a passport valid for at least 6 months following the conference. Some participants may require visas in order to enter Poland. Please check with your local Polish Consulate or Embassy for details regarding visa and entry requirements. Poland is part of the Schengen area so that participants traveling within the Schengen area are not required to show passports on entering Poland.

LETTERS OF INVITATION

The Scientific Secretariat will, on request, send a personal invitation to participate. This invitation is only to assist potential participants to raise funds or to obtain a visa, and is not a commitment on the part of the organisers to provide any financial support.

LIABILITY

The E-MRS and Local Organizers of the 2017 Fall Meeting cannot accept liability for any personal accidents, loss of belongings or damage to the private property of participants, either during, or directly arising from, the E-MRS 2017 Fall Meeting. Participants are requested to make their own arrangements with respect to health, travel and property insurance before leaving for the conference. Participants who are citizens of a European Union member state may obtain an European Health Insurance Card which gives some entitlement to medical treatment whilst in Poland.

E-MRS
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France

Motif de non distribution / not deliverable for doe following reason :

- ❑ Adresse insuffisante / Insufficient address
- ❑ Inconnu / Unknown
- ❑ Refusé / Refused
- ❑ Parti sans laisser d'adresse / Moved without leaving address
- ❑ Auture / Other