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21st International Conference on

Advanced Materials & Nanotechnology

September 04-06, 2018
Zürich, Switzerland



SCIENTIFIC PROGRAM

Special Session

On the way to physically correct indentation analyses
Gerd Kaupp, University of Oldenburg, Germany

Keynote Forum

Hybrid conversion Solar System (HYCSOS)
Dieter M. Gruen, President, Dimerond Technologies, USA

Driving Flexible Electronics by Hybrid Materials
Rodrigo Martins, University of Lisbon, Portugal

Semiconductors and Semiconductor-Ionic heterostructure composites for next generation energy conversion technology
Bin Zhu, Hubei University, China

Switching Iron-based Superconductivity with Spin Current
Jhinhwan Lee, Korea Advanced Institute of Science and Technology, Korea

SPEAKER & KEYNOTE SLOTS AVAILABLE

Featured Speakers

Adsorbent materials for desulfurization processes under supercritical water conditions
Florentina Maxim, Paul Scherrer Institut, Swizerland

Comparative analysis on monolithic DeNOx catalysts
Giovanni Perillo, Wessex Institute of Technology, UK

Realization of Conductive Aluminum Nitride Epitaxial Layer on Silicon Substrate by Forming Spontaneous Nano Size Via-holes
Noriko Kurose, Ritsumeikan University, Japan

A new laser induced local material engineering to convert from n-type to p-type nitride semiconductor to fabricate high power vertical AlGaN/GaN devices on Si substrate
Yoshinobu Aoyagi, Ritsumeikan University, Japan

Restoration of Perovskite Phase in the Top Layer of Thin BTO Film by Plasma Treatment and Annealing
Ankita Ghatak, S.N. Bose National Centre For Basic Sciences

Hybrid Perovskite halide for detection of environmental pollutant in atmosphere
Barnali Bose, S.N. Bose National Centre For Basic Sciences

Fabrication of Micro/Nano- crystals of organic Dirac fermion system: Nano-scale electrocrystallization
Takako Konoike, National Institute for Materials Science, Japan

Featured Speakers

Growth and electrochemical characterization of graphene nanowalls and carbon nanotubes
Roger Amade, Universitat de Barcelona, Spain

Compatibilization and Reinforcement effect of Thermally Reduced Graphene - Elemental Sulphur Composites on High density Polyethylene (HDPE)
Kishore K. Jena , The Petroleum Institute, Abu Dhabi, UAE

A Green Approach for CSNL based MOFs with Antibacterial Properties
Fahmina Zafar, Jamia Millia Islamia

Thermoelectricity enhanced catalysis
Tiva Sharifi, Rice University, USA

Ultrasound in wet biological materials subjected to drying
Stefan Jan KOWALSKI, Poznań University of Technology, Poland

Fragmentation of surface adsorbed and aligned DNA molecules using soft lithography for Next-Generation Sequencing
NaHyun Cho, Korea Institute of Science and Technology Evaluation and Planning, Korea

SPEAKER & KEYNOTE SLOTS AVAILABLE

A new interfacial bio-sensing approach for detecting aberrant protein phosphorylation in cancer
Mostak Ahmed, University of Queensland, Australia

Designing and Application of Biomaterials Based Cross-linked Hybrid Hydrogels
Anujit Ghosal, Jawaharlal Nehru University

Improvement of CFRP electrical conductivity by applying nano-enabled products containing carbon nanotubes
Anna Boczkowska, Warsaw University of Technology, Poland

Relation between internal Friction and Fatigue
Wolfgang Gräfe, Germany

Journey from the 'Forest' of nanowires to the 'Flatland' of 2D materials
Albert Davydov, National Institute of Standards and Technology, Maryland, USA

Strong Hydrogels Fabricated by 3D Printing with Oppositely Charged Polymers
Lin Li, Nanyang Technological University, Singapore

Featured Speakers

Biocidal coordination polymers derived from Schiff base
Nahid Nishat, Jamia Millia Islamia

The Al-MCM-41 reinforced Epoxy-Polybenzoxazine Hybrid
Ananda Kumar, Anna University

Solution deposition of Cu doped Co3O4 for electrooxidation of glucose
Mahabubur Chowdhury, Cape Peninsula University of Technology

Boron carbide-based ceramics for thermostructural application: sintering by SPS and mechanical performances
Alexandre Maître, University of Limoges, France

Growth Control of Vertical Nanographene Network in Plasma Enhanced Chemical Vapor Deposition and Its Emerging Applications
Keigo Takeda, Meijo University, Japan

SPEAKER & KEYNOTE SLOTS AVAILABLE

Producing of aluminium matrix composite wires
Janos Dobranszky, Budapest University of Technology and Economics, Hungary

Thermal investigation of phase change materials based on LLDPE, paraffin wax and expanded graphite
Mustapha KARKRI, Université Paris Est, France

Cu metal/ Mn phthalocyanine organic spinterfaces atop Co with high spin polarization at room temperature
Wolfgang Weber, Université de Strasbourg, France

Chitosan Asiaticoside nanoparticles synthesized from Centella asiatica for Glioma therapy
V Gayathri, Jawaharlal Nehru Tropical Botanic Garden and Research Institute

Investigation on weldability behaviour of chromium-free nickel filler with stailnless steel AISI-304
Nataraj J.R, R.V.College Of Engineering

Exploring natural cohorts for synthesizing Nanomaterials: A truly Eco-benign approach
Anal K Jha, Aryabhatta Knowledge University

Featured Speakers

Conducting polymer-CNT based nanocomposites as smart promising materials
Neha Kanwar Rawat, CSIR-National Aerospace Laboratory

Low-cost printable hybrid heterostructures for energy harvesting and lighting
Sylvain G. Cloutier, Ecole de Technologie Superieure, Canada

P-type Cu2O-based heterojunction solar cells fabricated with n-type ZnO thin film prepared by electrochemical deposition method
Toshihiro Miyata, Kanazawa Institute of Technology, Japan

Synthesis of 2D layered Semiconductor GaSe for the application of Terahertz Non-Destructive Inspection
Yutaka Oyama, Tohoku University, Japan

Effect of Voltage on Micro Arc Oxidation of 6061-Al Alloy
Qingjun Zhu, Chinese Academy of Science, Qingdao, China

Electrochemical method for Research on Anticorrosion performance of Graphene-like materials composite coating on carbon steel
Xia Zhao, Chinese Academy of Science, Qingdao, China

SPEAKER & KEYNOTE SLOTS AVAILABLE

Energy efficient CuO-ZnO heterojunction nanocomposite: Study of bandgap tuning, energy bend alignment and photo-induced charge transfer mechanisms
Subodh Kumar Gautam, CSIR-National Chemical laboratory

Competitive crystallization in Al-Sm involving metastable large-unit-cell intermetallic phases: Chemical partitioning and crystal genes
R. E. Napolitano, Iowa State University, USA

The synergistic effect of SRB and calcareous deposit on corrosion of carbon steel in seawater
Jie Zhang, Chinese Academy of Science, Qingdao, China

Designing anisotropic metamaterials with wave propagation isolation properties
N. Karathanasopoulos, ETH Zurich, Switzerland

Studying the mechanisms of the secondary phase precipitation in spark plasma sintered Duplex stainless steel
Olanipekun Ayorinde Tayo, University of Johannesburg

YRF

Development of functionalized coating by sol-gel process on aluminium alloy
Clément Genet, Université de Toulouse, France

Sustainable development of thermally stable and biologically active Cardanol-Formaldehyde based Coordination Polyurethanes
Shabnam Khan, Jamia Millia Islamia

Protein -Templated Biomimetic Synthesis of Luminescent Noble Metal Nanocluster for Biomedical Applications
Meegle S. Mathew, Indian Institute of Space Science and Technology

Modification of cotton fibers with magnetic core-shell mesoporous silica nanoparticles
David Patiño Ruiz, University of Cartagena, Colombia

Development of high strength-high porosity bodies via a modified gel-casting process
Amir Parsi, Iran University of Science and Technology

FEM analysis for burring process of large diameter SUS304 tube: Finite element method analysis. Burring Process, SUS304 pipe, Cold Plastic Forming
Junshi Ichikawa, Gunma University, Japan

Horizontal twin roll casting of aluminum alloy A7075: Twin roll strip casting, Aluminum alloy A7075, Solidification crack
Yuta Kashitani, Gunma University, Japan

Cold plastic forming of ABS plastic pipe: ABS plastic pipe, Cold plastic forming, Pipe expansion
Kentaro Tsunoda, Gunma University, Japan

Engineering protein interfaces yields ferritin disassembly and reassembly under benign experimental conditions
Hai Chen, China Agricultural University, China

Vibration reduction effect with damping alloys
Yuto Horigome, Gunma University, Japan

YRF Slots Available

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SEPTEMBER 04-06, 2018, ZÜRICH, SWITZERLAND

AGENDA

Title: Multiferroic properties and structural characterizations in Mn and Cr doped 0.9bifeo3-0.1batio3 compositions

Ricardo A. M Gotardo

Technological Federal University of Paraná, Brazil

Ricardo A. M Gotardo studied Physics and completed his PhD. in Condensed Matter Physics at the State University of Maringá. He is a professor at the Technological Federal University of Paraná in the city of Cornélio Procópio since 2013. His research focus on multiferroic materials, relating materials structure with the magnetic and electronic properties.

Title: Confined nanoscale geometries to enhance sensitivity of plasmonic immunoassays

Rishabh Rastogi

Institute of Science and Technology, Luxembourg

Rishabh Rastogi is a PhD. Student from Delhi, India. During his studies he worked within different laboratories learning scientific skills and gaining experience in nanofabrication, which made him motivated towards this field. He is working on fabrication of structures that engineered nanoscopically in order to achieve enhancement in electromagnetic waves due to confinement effects. At LIST he is working towards developing plasmonic immunoassays with extreme sensitivity.

Title: Advanced protection and evaluation techniques against corrosion

Sudesh Wijesinghe

Singapore institute of manufacturing technology, Singapore

Sudesh, who is specialised in the Corrosion area, is a Scientist in the Singapore Institute of Manufacturing Technology (SIMTech) under Agency for Science Technology and Research (A* STAR) Singapore and also an Adjunct Associate Professor in the Department of Materials Science and Engineering, National University of Singapore. He obtained his PhD in the area of Corrosion and Electrochemistry from the National University of Singapore in 2005. He has worked as a Research Fellow in National University of Singapore for three years before he joined SIMTech in 2008. He is focussing on corrosion mechanisms, evaluation techniques and also on advanced corrosion protection solutions. Sudesh is working closely with industry in corrosion related activities. He has more than 40 journal and conference publications.

SPEAKER SLOTS AVAILABLE

Title: Fabrication of Micro/Nano- crystals of organic Dirac fermion system: Nano-scale electrocrystallization

Takako Konoike
National Institute for Materials Science (NIMS), JAPAN

Takako Konoike has expertise in evaluation and passion in improving the various measurements under pressure and crystal growth of organic conductors, especially organic Dirac fermion system α-(BEDT-TTF)2I3. We have measured the specific heat and thermopower of organic Dirac fermion system under high pressure. We have succeeded in obtaining the first experimental results of the specific heat of Dirac fermions, and observing the giant Nernst effect reflecting the intrinsic nature of the zero-mode Landau level, which is characteristic of the Dirac fermion system. From these results, we can conclude that the high-purity organic crystal can provide an ideal testing ground for experimental studies of Dirac fermions.

Title: Low Stress ZNO Thin Films for Device Applications

Jitendra Singh
Central Electronics Engineering Research Institute

Jitendra Singh received M.Tech. degree in 2006 from IIT Delhi. Further, he joined Central Research Laboratory, Bharat Electronics Ltd. (BEL) Bangalore and worked till 2010. Currently, he is a scientist in CSIR-CEERI Pilani. He has completed Ph.D. degree from CSIR, New delhi. He has also worked in IISc Bangalore under joint research programme. He has published more than 50 research papers in SCI journals and conference proceedings.

Title: Realization of Conductive Aluminum Nitride Epitaxial Layer on Silicon Substrate by Forming Spontaneous Nano Size Via-holes

RA.Baseer
Polymers and pigments department, National Research Centre

RA.Baseer is a PhD holder. She is a researcher in national research centre Egypt in polymer science field. She has published 3 paper in national journals and one in conference.

SPEAKER SLOTS AVAILABLE

Title: Chitosan Asiaticoside nanoparticles synthesized from Centella asiatica for Glioma therapy

V Gayathri
Jawaharlal Nehru Tropical Botanic Garden and Research Institute

V Gayathri is a Senior Scientist employed at Phytochemistry and Phytopharmacology Division of Jawaharlal Nehru Tropical Botanic Garden and Research Institute, Palode Thiruvananthapuram, Kerala, India. She has obtained her Bachelors and Masters in Biochemistry from Bharathidasan University, Trichy, Tamil Nadu, India. She pursued her Ph.D. from Jawaharlal Nehru Tropical Botanic Garden and Research Institute (formerly Tropical Botanical Garden and Research Institute) and Rajiv Gandhi Centre for Biotechnology, Trivandrum, India.

Title: Current-voltage characteristics of [Ta2O5]1-x-[tio2]x (x = 0.08) thin films

Mahesh Kumar Agarwal
G. B. Pant Engineering College

Dr. Mahesh Kumar Agarwal is Assistant Professor in the Department of Electronics & Communication Engineering at G. B. Pant Institute of Engineering & Technology, Ghurdauri (Pauri-Garhwal) Uttrakhand (India). He completed his Ph. D. in the field of advanced materials and thin films. He studied Electronics & Communication Engineering and completed Master's in Integrated Electronics & Circuits at Indian Institute of Technology, Delhi. He has done his research at the School of Engineering H N B G U, Srinagar and at the C S R, Indore. He has attended two conferences presenting his research works and has published four papers in high impact journals.

Title: FEM analysis for burring process of large diameter SUS304 tube: Finite element method analysis, Burring process, SUS304 pipe, Cold plastic forming

Junshi Ichikawa
Gunma University, Japan

Junshi Ichikawa is pursuing his 1st year postgraduate degree. He studied Metal Plastic Forming and FEM Analysis at the Gunma University, Japan. He has done his research at the Faculty of Mechanical Science and Technology of the Gunma University. He has attended six conferences presenting his research works and has published three papers in high impact journals.

SPEAKER SLOTS AVAILABLE

Title: Development of advanced nano-coatings for application in corrosive environments

Zulfiqar Khan
Bournemouth University, UK

Professor Zulfiqar Khan is currently leading NanoCorr, Energy and Modelling (NCEM) Research Group within the University Design & Engineering Department. This was previously known as Sustainable Design Research Centre (SDRC) and received its REF14 Panel Feedback as, "Sustainable Design Research Group had the highest proportion of outputs judged to be internationally excellent". He is current lead/champion of REF 2021 UoA 12 (engineering).

Professor Zulfiqar Khan has developed multidisciplinary research in corrosion, corrosion condition monitoring, nano-coating incorporating corrosion and durability issues. He has successfully supervised 9 PhD research projects to completion. He is currently supervising 5 PhD students with and a Post-Doctoral Research Assistants. He has over 120 publications including peer reviewed journal papers.

Title: Hybrid Perovskite halide for detection of environmental pollutant in atmosphere

Barnali Ghosh
S.N. Bose National Centre for Basic Sciences

Dr. Barnali Ghosh (Saha), is now working as a Scientist, (Associate Professor) in the Department of Condensed Matter Physics and Material Sciences and Head of the department of Technical Research facility programme. She is a member of Indian Physics Association. She got Ph.D degree in Physic award in 1998. She got research Awards in Woman Scientist programme in 2003 and 2008 from "Department of Science and Technology, Government of India". She along with her research group while focusing on basic physics, is also exploring application oriented and technology driven basic research in Material Sciences as well as Nano-Science and Technology.

Title: Restoration of Perovskite Phase in the Top Layer of Thin BTO Film by Plasma Treatment and Annealing

Ankita Ghatak
S.N. Bose National Centre for Basic Sciences

Ankita GhataK ,National Post doctoral Fellow has her expertise in growth of nanostrcutured binary as well as complex oxides. She has grown aligned 1-D nanostructured binary oxide which has a strong influence in the field of applications. She has a hands on expertise on microstructural analysis of complex oxide nanostructures that has provided up a new field of research from technological point of view. Her interface analysis of complex materials with substrates has open up a challenging field in the device fabrication process. She in her publications has tremendously contributed about the benefit of creating atomically sharp interfaces that will enhance the future device performances. A new approach in looking into atomic columns of manganite nanowires has been achieved by her recently through structural simulation.

SPEAKER SLOTS AVAILABLE

Title: Designing anisotropic metamaterials with wave Propagation isolation propertiesflavone from Rapanea

N. Karathanasopoulos
Institute of Computational Science, ETH Zurich, Switzerland

N. Karathanasopoulos is a Research Associate in the ETH Zürich. He has studied and worked in Greece, USA and Switzerland in both academic and industry positions. He has published several articles in International peer-reviewed journals and conference proceedings.

Title: Synthesis by Hydrogen Reduction and Characterization of cunico with Nanoparticles Content

Eduardo Brocchi
Pontifical Catholic University of Rio de Janeiro, PUC-Rio, Brazil

Eduardo Brocchi are professors, all at the Chemical and Materials Engineering Department, PUC-Rio, Brazil.

Title: Solution deposition of Cu doped Co3O4 for electrooxidation of glucose

Mahabubur Chowdhury
Mugla Sıtkı Kocman University

Mahabubur Chowdhury holds a doctoral degree in Chemical Engineering and is currently a senior lecturer in the department of chemical Engineering at Cape Peninsula University of Technology. His research is on advanced functional materials for bio sensing and water treatment. His interest is on the relationship of electronic structure and ionic transport properties in semiconductor electrodes. He has published many journal articles, conference proceedings, book chapter and patent.

SPEAKER SLOTS AVAILABLE

Title: Strong Hydrogels Fabricated by 3D Printing with Oppositely Charged Polymers

Lin Li
Nanyang Technological University,
Singapore

Lin Li received his PhD degree in Polymer Science in 1989 from Kyoto University, Japan. During the period from 1989 to 1999, he worked as a R&D scientist, research fellow, and senior scientist at several industrial and academic laboratories in Japan and Canada. He did his postdoctoral research in the group of Professor Mitchell A Winnik in Department of Chemistry, University of Toronto, Canada. Since August 1999, he has been an Associate Professor in the School of Mechanical & Aerospace Engineering, Nanyang Technological University (NTU).

Title: One-pot synthesis of hybrid nano particles for catalytic applications

Heeyeon Kim
KIER,
South Korea

Heeyeon Kim got Ph.D. from chemical engineering department in Seoul National University. She has worked in Korea Institute of Energy Research (KIER) since 2004. She has investigated nano metals, nano carbons and their hybrids for energy applications. The main applications of the metal-carbon hybrids are catalysts for low temperature fuel cell, the catalysts for hydrogen production, the CO2 absorbents and the electrode material of secondary battery. The main focus of her study is to develop cost-effective materials which improve the catalytic performance and concurrently maintain the long-term stability.

Title: The synergistic effect of SRB and calcareous deposit on corrosion of carbon steel in seawater

Jie Zhang
Institute of oceanology,
Chinese academy of sciences,
China

Zhang Jie, born in November, 1976, research professor and master tutor. Dr. Zhang won the outstanding award of the President of the Chinese Academy of Sciences in 2004 and got his PhD on Marine Chemistry in the Institute of Oceanology, Chinese Academy of Sciences in 2005. Dr. Zhang is mainly engaged in the research of microbial corrosion, biofouling and marine cathodic protection.

SPEAKER SLOTS AVAILABLE

Title: Fragmentation of surface adsorbed and aligned DNA molecules using soft lithography for Next-Generation Sequencing

NaHyun Cho
KISTEP,
South Korea

NaHyun Cho is working KISTEP (Korea Institute of S&T Evaluation and Planning) as an associate research fellow. She is in charge of Korea R&D budget program evaluation and planning in Materials Science field. She finished her PhD in Materials Science and Engineering at Stony Brook University in New York. She previously earned a BS in Engineering Chemistry and a ME in Materials Science and Engineering from at Stony Brook University. She spent two and half years in the field as a research engineer with LG Electronics in Seoul, South Korea, working in their crystalline solar cell R&D Center.

Title: Effect of Voltage on Micro Arc Oxidation of 6061-Al Alloy

Qingjun Zhu
Institute of Oceanology of Chinese Academy of Sciences,
China

Qingjun Zhu is a researcher in Institute of Oceanology, Chinese Academy of Sciences.. He studied materials science and engineering in marine corrosion. He has done his research at open studio for marine corrosion and protection, Qingdao National Laboratory for Marine Science and Technology. He has attended six conferences presenting his research works and has published eleven papers in high impact journals.

Title: Comparative photoluminescence study of gdbo3:Eu phosphor in bulk and nano phase for its implication in solid state lightening

Ramya Nair
Bhabha Atomic Research Centre

Ms. Ramya Nair completed her M.Sc. from University of Mumbai with an outstanding grade in the year 2012. During the masters program, she successfully completed six month dissertation work at Tata Institute of Fundamental Research (TIFR), Mumbai. Afterwards she got selected in prestigious DAE fellowship scheme for Ph.D. in basic sciences and currently she is pursuing her research work as senior research fellow at Chemistry Division of Bhabha Atomic Research Center, Mumbai. She has five papers published in journals of international repute and participated in several international conferences and workshops. Her topic of interest is synthesis of nano materials for environmental and energy applications.

SPEAKER SLOTS AVAILABLE

Biography

Title: Electrochemical method for Research on Anticorrosion performance of Graphene-like materials composite coating on carbon steel

Xia Zhao
Institute of Oceanology,
Chinese Academy of Science,
China

Xia Zhao is a researcher on anticorrosion performance of organic coatings for about 10 years. She has done her research at the Institute of Oceanology of Chinese Academic of Science. She has attended seven conferences presenting her research works and has published twenty papers in high impact journals.

Title: Development of functionalized coating by sol-gel process on aluminium alloy

Clément Genet
CNRS,
France

Clément Genet is a Ph.D. Student at Université de Toulouse Paul Sabatier and research associate at CIRIMAT laboratory and Amphenol Socapex company. He has obtained his Engineer's degree in Materials Science at ESIR (Rennes-France) and he has a specialization with his Master's degree in Materials Science for Aeronautics and Aerospace at Université de Toulouse (Toulouse-France). He has experience in the synthesis and characterization of nanostructured materials and coating for more particularly anticorrosion properties in aeronautic field.

Title: Vibration Reduction Effect with Damping Alloys

Yuto Horigome
Gunma University,
Japan

Yuto Horigome is pursuing master degree program. He studied the characteristics of the damping alloy sleeve for boring at National Institute of Technology, Gunma College (NITGC). He entered Gunma University after graduating from NITGC, and he studies Machining Science.

SPEAKER SLOTS AVAILABLE

Title: Contribution on Lithium intercallating carbon nanotubes produced by SHS-method for ion Batteries

Naseddine Chakri
Université Badji Mokhtar

I present a brief summary of pedagogical activities and scientific research since the date of entry to Badji-Mokhtar University on September 9, 1982, with my first Postgraduate Diploma in Solid Physics obtained in June 1982 . Then a training to obtain the Magister by a passage to the Diploma of Advanced Studies in Physics of Semiconductors, the Year: 1987. I finished this cycle by obtaining the Diploma of 1st Post-graduation: Magister in physics semiconductor materials, the Year: 1992 with a thesis titled 1st degree '- Characterization by Ultrasound and Acoustic Microscopy of BN, Y2O3 in the matrix (AL2O3 ALON) .

Title: Boron carbide-based ceramics for thermostructural application: sintering by SPS and mechanical performances

Alexandre Maître
University of Limoges, France

Alexandre Maître is professor at IRCER at Limoges in France. His thesis diploma (1995-1998) was devoted to the kinetic and thermodynamic aspects of the synthesis of transition metal carbides by carbothermal reduction. In october 2000, he obtained a permanent position as CNRS researcher at the Laboratory LCSM (Laboratory of Chemistry of Inorganic Solid) at Nancy to develop investigations concerning the thermodynamic modelling, the electrochemical behaviour in corrosive environment, the metallurgical aspects of lead-based alloys. In September 2004, he became assistant professor in IRCER to implement research activities about the elaboration by Polymer Derived Ceramics (PDCs) route and the mechanisms of sintering of high temperature ceramics.

Title: Ultrasound in wet biological materials subjected to drying

Stefan Jan Kowalski
Poznań University of Technology, Poland

His currently working as a professor in charge, head of the Process Engineering Department in Poznan University of Technology. His research field is in dynamic issues of the theory of elasticity and plasticity, including contact issues; (for habilitation): mechanics and thermo-technical of saturated and unsaturated porous media (insulating and damping properties - acoustics), theory of mixtures and diffusion processes in solid bodies; (currently): thermo-hydro-mechanics of drying processes of moistened capillary-porous materials (deformation, cracking), hybrid drying, process optimization (drying time, energy consumption, product quality - no cracks, visual qualities, preserving the natural properties of biological materials), process monitoring using the acoustic emission method, ultrasound drying support.

SPEAKER SLOTS AVAILABLE

Title: Switching Iron-based Superconductivity with Spin Current

Jhinhwan Lee
KAIST,
South Korea

Prof. Jhinhwan Lee received his Bachelor's degree from Seoul National University in 1995. After he obtained his Ph.D. degree from Seoul National University in 2002, he joined Professor J. C. Davis' Laboratory at Cornell University as a Postdoctoral Associate in 2004 and was appointed Research Associate in 2007. Jhinhwan Lee went to Korea Advanced Institute of Science and Technology as Assistant Professor in 2009 and began his life-long investigations on magnetism and unconventional superconductivity. He received Korea Physical Society Bombee Physics Award in 2004 and the Albert Nelson Marquis lifetime achievement award in 2018.

Title: Heat Exchanger Technology and Applications: Ground-Source Heat Pump System for Buildings Heating and Cooling

Abdeen Omer
Energy Research Institute,
UK

Abdeen Mustafa Omer (BSc, MSc, PhD) is an Associate Researcher at Energy Research Institute (ERI). He obtained both his PhD degree in the Built Environment and Master of Philosophy degree in Renewable Energy Technologies from the University of Nottingham. He is qualified Mechanical Engineer with a proven track record within the water industry and renewable energy technologies. He has been graduated from University of El Menoufia, Egypt, BSc in Mechanical Engineering. His previous experience involved being a member of the research team at the National Council for Research/Energy Research Institute in Sudan and working director of research and development for National Water Equipment Manufacturing Co. Ltd., Sudan. He has been listed in the book WHO'S WHO in the World 2005, 2006, 2007 and 2010. He has published over 300 papers in peer-reviewed journals, 200 review articles, 7 books and 150 chapters in books.

Title: Modification of cotton fibers with magnetic core-shell mesoporous silica nanoparticles

David Patiño
University of Cartagena,
Colombia

David Patiño Ruiz is a Doctoral Candidate in Engineering with Emphasis in Science and Technology of Materials at the University of Cartagena and Chemical Engineer from the same Institution. The researches directed by him has been focused on the synthesis, characterization and application of nanomaterials for different fields in which includes water and soil treatments, drug load and delivery, among others. He has made oral presentation in different conferences with nanotechnology approaches, and has made research exchanges repeated times in Cornell University with the collaboration of Doctoral Students in order to increase his knowledge in nanomaterials with highly desired characteristics for different purposes. His thesis is being directed to the synthesis of core-shell nanoparticles to combine properties of two different precursors in the developmente of a smart material with medical applications.

SPEAKER SLOTS AVAILABLE

Title: Hybrid conversion Solar System (HYCSOS)

Dieter M. Gruen
President, Dimerond Technologies, USA

Dr. Dieter Martin Gruen is an Agronne Distinguished Fellow, Emeritus and President of Dimerond Technologies LLC. Dr. Gruen received his B.S. cum laude and M.S. degrees from Northwestern University and his Ph.D in Chemical Physics from University of Chicago. He has had a distinguished research career involving several disciplines of materials science relevant to fission and fusion energy.

Title: On the way to physically correct indentation analyses

Gerd Kaupp
University of Oldenburg, Germany

Gerd Kaupp has completed his PhD at the age of 24 years from Würzburg University and postdoctoral studies from Iowa State University, Lausanne University, and Freiburg University. He held a full-professorship till 2005 in Oldenburg Germany, and he privately continues his research on wasteless solid-state chemistry temperature-controlled with 100% yield (since 1984), AFM on rough surfaces (since 1988), the non-stochastic but versatile and better resolving sub-diffraction-limit microscopy for unstained non-fluorescing materials of all types (resolution <10 nm, since 1995), and (nano)indentations (since 2000). In the latter field he is still urging ISO(NIST) to correct their 50 years old standards for conformity with physics. He has published more than 300 papers in renowned journals and has been serving as an editorial board member of several scientific journals.

Title: A new interfacial bio-sensing approach for detecting aberrant protein phosphorylation in cancer

Mostak Ahmed
University of Queensland, Australia

Mr. Mostak Ahmed is a PhD student at the Centre for Personalized Nano-medicine, AIBN, UQ. He has completed B.Sc. (Honours with first class) and M.S. (with Distinction) degrees in Chemistry from Shah Jalal University of Science and Technology (SUST), Sylhet, Bangladesh. Before joining the AIBN, he served as a Scientific Officer at Bangladesh Council of Scientific and Industrial Research (BCSIR). He is currently researching “Detection Protein modifications using Protein-Gold affinity interactions”. He has seven publications in highly reputed peer reviewed journals.

SPEAKER SLOTS AVAILABLE

Title: The role of CNTs on the characteristics of mechanically alloyed and spark plasma sintered CNT-Fe nanocomposites

Jongsuk Nam
Myongji University,
Republic of Korea

Jongsuk Nam is a graduate student at Department of Materials Science and Engineering, Myongji University in Republic of Korea. His expertise is in manufacturing composites utilizing ball milling and spark plasma sintering. He is expected to finish his Master's degree in February, 2019.

Title: Cu metal/ Mn phthalocyanine organic spinterfaces atop Co with high spin polarization at room temperature

Wolfgang Weber
Université de Strasbourg,
France

Dr. Wolfgang Weber is mainly working on the magnetism of thin films and has great expertise in spin-polarized electron spectroscopies. He started recently work in organic spintronics.

Title: MB-UiO-66-NH2 Metal-Organic Framework as Chromogenic and Fluorogenic Sensor for Hydrazine Hydrate in Aqueous Solution

Aasif Helal
King Fahd University of
Petroleum and Minerals

Dr. Aasif Helal completed his PhD in 2010 in "Synthesis and Ion Sensing Properties of Thiazole based Receptors" from Kyungpook National University, South Korea in applied organic chemistry. The same year he was awarded "Best Researcher of the year 2009" by Kyungpook National University. In August 2012 he joined Department of Material Science and Engineering at Seoul National University of Seoul, South Korea as a Post-Doctoral Fellow for "the synthesis of novel molecular materials and metal organic frameworks and their application in Organic Solar Cells, and sensors". In December 2013 he joined CENT as Research Scientist III. His research interests include design and synthesis of novel organic molecular materials, and metal organic framework as sensors, carbon capture and catalysts. Modification and functionalization of nanomaterials for tuning their photophysical and other properties.

SPEAKER SLOTS AVAILABLE

Title: Horizontal twin roll casting of aluminum alloy A7075: Twin roll strip casting, Aluminum alloy A7075, Solidification crack

Yuta Kashitani
Gunma University,
Japan

Yuta Kashitani is pursuing his 1st year postgraduate degree. He studied Metal Strip Casting at the Gunma University, Japan. He has done his research at the Faculty of Mechanical Science and Technology of the Gunma University. He has attended six conferences presenting his research works and has published three papers in high impact journals.

Title: Improvement of CFRP electrical conductivity by applying nano-enabled products containing carbon nanotubes

Anna Boczkowska
Warsaw University of Technology,
Poland

Anna Boczkowska is an associate professor at the Faculty of Materials Science and Engineering, Warsaw University of Technology in Poland. She graduated from the same faculty in 1989 and received her PhD degree in 2000 and D.Sc degree in 2011. Scientific experience is related to the processing and structure of polymer matrix composites, nanocomposites and smart materials. Industrial background of over 15 years in the development and application of polymers and composites. Member of many international organizations (e.g. ACS, AAAS, SPIE) and author of numerous scientific publications, books and patents.

Title: Studying the mechanisms of the secondary phase precipitation in spark plasma sintered Duplex stainless steel

Olanipekun Ayorinde Tayo
University of Johannesburg

I have expertise in Material science engineering, I apply the principle of physics and chemistry melding them in the process to the interrelationship between structure, properties and performance of complex materials with technological applications, and also putting to effective use design and simulation skills to address product development requirements more accurately and efficiently, while aiming to enhance the communication between experimental materials research and computational material science working on both existing and new advanced materials, their application leveraging on the proliferation of computing power as an enabling exciting new approach to simulate properties of new materials. Am currently having my Doctoral research Centre for Nanoengineering and Tribocorrosion

SPEAKER SLOTS AVAILABLE

Title: Designing and Application of Biomaterials Based Cross-linked Hybrid Hydrogels

Anujit Ghosal
Jawaharlal Nehru University

Dr. Anujit has a PhD in Chemistry with a throughout first division academic record. He has expertise in designing and characterizingnano-materials (nano-conducting polymers, metal and their oxides) and formulation of organic-inorganic hybrid nano-composites for various applications (electrochemical anti-corrosive coatings, magnetic adsorbents, photolytic dye degradation, hyperthermia, etc.).My previous education and research have predisposed my scientific enthusiasm towards doing interdisciplinary research in the areas integrating Biology and Nanotechnology. Currently, I am the principal Investigator of a project working for development of hydrogel based 3D extra cellular culturing material. The outcome will help in creation of greener biodegradable 3D cell cultures for more accurate in-vitro studies and 3D graft materials. Email: anujitghosal@gmail.com, anujitghosal@jnu.ac.in

Title: A Green Approach for CSNL based MOFs with Antibacterial Properties

Fahmina Zafar
Jamia Millia Islamia

Dr. Fahmina Zafar is a senior researcher working at the Department of Chemistry, JMI, New Delhi, India, under the Women Scientists Scheme for Research in Basic/Applied Sciences, DST, India. Dr. Zafar has received her PhD degree (Chemistry), JMI in 2006. She has worked as a postdoctoral fellow under UGC Kothari Postdoctoral Fellowship, as a scientist pool, research associate, and senior research fellow (CSIR) at the same Department. She has > 50 publications in peer-reviewed journals and books, and has presented >40 research papers in national and international conferences. Her research work involves the development of bio-based polymers, metallopolymers, organic-inorganic hybrids, coordination polymers, and nanocomposites for green environment in different fields including adsorption, antimicrobial, and corrosion-protective applications.

Title: Semiconductors and Semiconductor-Ionic heterostructure composites for next generation energy conversion technology

Bin Zhu
Hubei University, China

Bin Zhu received M.Sc., in 1987 from University of Sci. & Tech. of China and PhD in 1995 from Chalmers University of Technology, Physics and Engineering Physics, Sweden and during 10/ 95-12/97 worked as Postdoc. in Uppsala University (in Ångström Lab). Since 1998, Dr. Zhu moved to KTH and in 1999 became associate professor in Dept of Chemical Engineering and Technology, and now in Dept of Energy Technology, KTH. He is visiting professor in Aalto University and Nanyang Technological University as well as has acted as guest professor and professor in several Chinese universities to co-supervise research projects and PhD students. From 2018, Bin has been appointed as visiting professor, a Honorary Appointment in Loughborough University, UK.

SPEAKER SLOTS AVAILABLE

Title: Conducting polymer-CNT based nanocomposites as smart promising materials

Neha Kanwar Rawat
CSIR-National Aerospace Laboratory

Dr. Neha Rawat is a recipient of DST Young Scientist Post-doctoral fellowship and working under Dr. P.K. Panda, in Materials Science Division, CSIR-National Aerospace laboratories, Bangalore, India. Her main interests include, nanomaterials Nanotechnology and Nanostructure synthesis and characterization, Nano conducting polymers/Nanocomposites, Conducting films, Adsorption kinetics and Thermodynamics, Ceramics, Silicones, Matrices: Epoxies, alkyds, polyurethanes, etc., Electrochemistry, Organic-Inorganic hybrid nanocomposites and Protective surface coatings for corrosion inhibition. She has published 12 papers in international journals including RSC publishing group, including many book chapters and has won many prestigious research fellowships.

Title: Producing of aluminium matrix composite wires

Janos Dobranszky
BUTE, Hungary

Janos Dobranszky. He is working as scientific advisor in the common Research Group for Composite Science and Technology of the Hungarian Academy of Sciences and Budapest University of Technology and Economics. He is mechanical engineer and International Welding Engineer, He has obtained the PhD degree in 1997. Since 2015 he is habilitated doctor of the Faculty of Mechanical Engineering of BME and doctor of the Hungarian Academy of Sciences (DSc. His main research field actually are the followings: metal matrix composites, biomaterials and biocomposites, weldability of stainless steels, failure analysis of woodcutting bandsaw blades. He is the Hungarian delegate in the Commission VI of the International Institute of Welding.

Title: The effect of annealing temperature on structural and optical properties of ZnGa2O4: Cr3+ synthesized by citrate sol-gel method

Megersa kasim
University of the Free State

Mr.Megersa kasim has completed his MSc education from Addis Ababa, university in 2005G.c .He has been working as lecturer, head of physics department and director for continuing education of Dire Dawa University in Ethiopia for past ten years. He is now second year PhD students at university of the Free State South Africa. I have one paper accepted for publication in Applied Physics A in tittle" Effect of citric acid on material properties of ZnGa2O4: Cr3+ nano powder prepared by sol-gel method". I have also two paper under review.

SPEAKER SLOTS AVAILABLE

Title: Protein -Templated Biomimetic Synthesis of Luminescent Noble Metal Nanocluster for Biomedical Applications

Meegle S. Mathew
Indian Institute of Space Science and Technology

I am Meegle S Mathew. I took post-graduation in Chemistry in the year 2012 in first class. I have qualified in National Eligibility Test (NET) and GATE in the year 2013. I have been working as a PhD Student since 2013 under the guidance of Professor Kuruvilla Joseph at Department of Chemistry, Indian Institute of Space Science and Technology, Thiruvananthapuram in the area of "Synthesis, Studies and biomedical Applications of protein protected fluorescent noble metal quantum clusters". I have three publications in international journals, I presented papers in 4 international conference and two national conferences. My PhD work is mainly focused on the sustainable synthesis of fluorescent noble metal quantum clusters and their biomedical applications.

Title: Effect of electrolyte aging on the morphology and mechanical properties of anodic titanium dioxide

Junzhe Dong
The University of Auckland, New Zealand

Junzhe Dong receives his bachelor degree in Materials Physics from Southwest University, China in 2011. Then he goes to Northwestern Polytechnical University (China) with project of research on Ti alloy deformation and graduates in 2014. After that he comes to University of Auckland, New Zealand for his PhD study in transition metal oxide and their applications. Junzhe has his expertise in Micro- and nano-indentation test, electrochemical anodization technique, Raman signal enhancement and photocatalysis.

Title: Sustainable development of thermally stable and biologically active Cardanol-Formaldehyde based Coordination Polyurethanes

Shabnam Khan
Jamia Millia Islamia

Shabnam Khan was born in 1989 at Aligarh (Uttar Pradesh), India. She received her B.Sc (2010) and M.Sc. (2012) in Industrial Chemistry from Aligarh Muslim University, Aligarh (UP), India. She is currently a doctoral (Senior Research Fellow) under the supervision of Prof. (Dr.) Nahid Nishat at Inorganic Materials Research Lab, Department of Chemistry, Jamia Millia Islamia, New Delhi. Her current research interest is on the exploitation of cashew nut shell liquid and its constituents as a starting precursor for development of thermally stable and biologically active polymers and coordination polymers.

SPEAKER SLOTS AVAILABLE

Title: Thermal investigation of phase change materials based on LLDPE, paraffin wax and expanded graphite

Mustapha KARKRI
Université Paris Est, France

Mustapha KARKRI obtained his PHD in heat transfer in polymer flow from Polytechnic High School of Nantes in 2004. He holds a full Associate Professor with University of Paris-Est Créteil since September 2007, and is affiliated with the Center for Study and Research on Thermal Science, Environment and Systems (CERTES). From 2005-2007, He has been Temporary Lecturer and Research Assistant position with Femto-st Institut and PostDoc with LEMTA Laboratory of Lorraine University. He has also coordinated many committees and developed national and international collaborations.

Title: Biocidal coordination polymers derived from Schiff base

Nahid Nishat
Jamia Millia Islamia

Prof. (Dr.) Nahid Nishat is a senior professor, Department of Chemistry, Jamia Millia Islamia (JMI), New Delhi, India since 1998. Her Ph.D. has been awarded from Aligarh Muslim University, Aligarh in 1993 in the area of Coordination Chemistry. Ten students completed their Ph.D and number of Ph.D students is presently working under her supervision. More than forty M.Sc. project students completed their project under her guidance. Dr. Nishat has more than 80 peer reviewed research articles and book chapters in international reputed journals. Dr. Nishat has presented and participated in number of national and international conferences. Her research area of interest is inorganic, bioinorganic and materials chemistry. Her research focuses specially on the development of coordination polymers for antimicrobial applications.

Title: Competitive crystallization in Al-Sm involving metastable large-unit-cell intermetallic phases: Chemical partitioning and crystal genes

R. E. Napolitano
Iowa State University, USA

R. E. Napolitano is Professor of Materials Science and Engineering at Iowa State University, where he serves as Associate Chair for Graduate Education and Research. He is an expert in solidification science and physical metallurgy, and he heads the Structures and Dynamics in Condensed Systems team within the Division of Materials Sciences and Engineering at the Ames Laboratory

SPEAKER SLOTS AVAILABLE

Title: Driving Flexible Electronics by Hybrid Materials

Rodrigo Martins
Universidade NOVA de Lisboa, Portugal

Rodrigo Martins is Full Professor and head of Materials Science Department at Faculty of Science and Technology of New University of Lisbon, director of the Centre of Excellence in Microelectronics and Optoelectronics Processes of the Institute of New Technologies; President of the European Academy of Science; Head of the group of Materials for Electronics, Optoelectronics and Nanotechnologies of the Research Materials Center of the Institute for Nanostructures, Nanomodeling and Nanofabrication, Chair of the European Committee Affairs of European Materials Research Society and of The Global Leadership and Service Award Committee of the International Union of Materials Research Societies; Member of the journal management committee for the journal npj 2D Materials and Applications.

Title: Corrosion study of sintered 304 austenitic stainless steel reinforced with titanium nitride in chloride media

Samuel O. Akinwamide
University of Johannesburg

Akinwamide Samuel Olukayode is a doctoral student at university of Johannesburg. He is specialized in corrosion of stainless steel and development of nanocomposite materials using powder technology technique. He currently works with a research institute with the name centre for nanoengineering and tribocorrosion.

Title: Low-cost printable hybrid heterostructures for energy harvesting and lighting

Sylvain G. Cloutier
Ecole de Technologie Superieure, Canada

Prof. Sylvain G. Cloutier received his PhD from Brown University in 2006. At the University of Delaware, he then received the DARPA Young Faculty Award for his work on the use of nano-engineered materials for lasers. In 2011, he joined ÉTS, where he leads both the Canada Research Chair on printable hybrid optoelectronic materials & devices and the ArianeGroup Industrial Research Chair on emerging materials for aerospace & space. He was lead investigator on several large-scale research projects in the USA and Canada. He contributed over 80 publications and was elected at the College of the Royal Society of Canada in 2014.

SPEAKER SLOTS AVAILABLE

Title: Microstructural evolution of friction stir welded AISI 304 austenitic stainless steel

Tohid Saeid
Sahand University of Technology

Sajad Emami is interested in investigation of microstructural evolution of metallic alloys during and after different manufacturing processes like metal forming & joining processes, Heat treatment.

Title: Relation between internal Friction and Fatigue

Wolfgang Gräfe
Germany

W. Gräfe was born in 1938 in Berlin, Germany. He received his degree in physics from the Humboldt-Universität in Berlin (GDR) in 1962. In the following years he worked with semiconductors and semiconductor surfaces at the Akademie der Wissenschaften in Berlin. With the results of those investigations he received also at the Humboldt-Universität in 1969 the degree Dr. rer. nat. (Ph D). From 1971 he worked in the field of mechanical properties of mineral glasses. With the results of these investigations he received the degree Dr. sc. nat. in 1984 at the Akademie der Wissenschaften in Berlin. From 1991 till his retirement in 2001 he was employed in a federal administrative authority in Berlin.

Title: Ag+ ion emission from a sharp tip of Ag+ ion conducting glass and Schottky-model analysis

Yusuke Daiko
Nagoya Institute of Technology

Yusuke Daiko has his expertise in ion conducting materials including glasses, ceramics and organic-inorganic hybrids. He received Donald R. Ulrich Award 2013, International Sol-Gel Sciety(ISGS) and the 67th Ceramic Society of Japan (CerSJ) Awards (for Advancements in Ceramic Science and Technology) in 2013 for his research development about proton conducting glasses.

SPEAKER SLOTS AVAILABLE

Title: Synthesis of 2D layered Semiconductor gas for the application of Terahertz Non-Destructive Inspection

Yutaka Oyama
Tohoku University,
Japan

Yutaka Oyama was born in Sendai, Japan. He received the B.S., M.S., and Ph.D. degrees in electronics from Tohoku University, Japan. He was a Researcher with the Semiconductor Research Institute (SRI) in Japan and became a Senior Researcher with SRI. He was a Group Leader of the Nishizawa Teraherz Project of the Research Development Corp. of Japan (JRDC). He has been an Associate Professor, and Professor with Materials Science and Engineering, Graduate School of Engineering, Tohoku University. He was a visiting researcher with IHP (Institute fur halpleiter physik) at Frankfurt (Oder) Germany, and also EPFL (École polytechnique fédérale de Lausanne) at Lausanne Swiss. He is the author or coauthor of over 300 international journal and conference publications on material science and its application for ultrafast semiconductor devices.

Title: Growth of Single Wall Carbon Nanotubes (SWCNTs) by PECVD Technique for Gas Sensing and Field Emission

Mohd Yaseen Lone
Jamia Millia Islamia

Mohd Yaseen Lone has completed his M.sc and M.Phil with first division from Barkatullah University Bhopal (M.P) India and has completed his Ph.D in Physics (Nanotechnology) from Jamia Millia Islamia New Delhi India. His area of interest is Synthesis, Characterization of Single Wall Carbon Nanotubes by PECVD Technique and their Gas Sensor and Field Emission applications.

Title: Thermoelectricity enhanced catalysis

Tiva Sharifi
Rice University,
USA

Tiva Sharifi received her PhD in material science from Physics Department, Umeå University, Sweden. Her research has been mainly focused on the synthesis and understanding of the properties of doped carbon based materials for energy conversion reactions. She then moved to Ajayan's research group at Rice University, Houston, TX and pursued her post-doctoral research on the understanding and resolving of the properties of low-dimensional materials.

SPEAKER SLOTS AVAILABLE

Zürich Attractions


A Confectioner's Cafe


Burkliplatz and Lake Zurich

Zurich


Zurich Lake


Zurich Zoo


Uetliberg


Old Town


Limmatquai and Rathaus (Town Hall)


Fraumünster

Advanced Materials Reminisce










Glimpses of Advanced Materials 2017















