

THE SCHEDULE

The Session Topics covered at ISECM 2016 are arranged into 7 Parallel Sessions (A-G). During each Parallel, there will be several session slots you can choose to attend in different classrooms. Each slot will feature a group of presentations related to the same topic.

The Session Slots are named with a number and letter identifier. The number refers to The Session Topic (see below) and the letter indicates during which Parallel the session will take place (see page 2). For example, Session Slot 01A means the topic is 01: Energy Storage, and it will take place during Parallel A.



SESSION TOPICS

- 01:** Energy Storage
- 02:** Photovoltaics
- 04:** Graphene-Based Nanotechnology For Energy Applications
- 05:** Fuel Cells
- 06:** Supercapacitors
- 07:** Nanomechanics
- 10:** Modelling And Simulations For Energy Applications
- 12:** Nanomaterial Design For Energy Applications
- 13:** Energy Technology
- 14:** Thermoelectrics
- 16:** High Energy Materials
- 24:** Catalysis By Nanoscale Materials
- 25:** Energy - Biology, Chemistry & Physics
- 26:** Wind Power
- 29:** Energy Saving Technology
- 33:** Dealing With Waste
- 35:** Internet Of Things

POSTER SESSION

The poster session will begin at 18:30 in the Kingsmills suite on Day 1. Please take the opportunity to view these as part of your evening.

- Session 5. Microbial fuel cell equipped with carbon nanofiber composite electrode for bioenergy generation - Sung-Hee Roh, Chosun University, South Korea
- Session 6. Grain cluster boundary fractality and micro capacitors - Vojislav Mitic, University of Nis & Serbian Academy of Sciences and Arts, Serbia
- Session 10. The role of co-injected hydrocarbon gas in the bottom-blown oxygen steelmaking - Chien-Hsiung Tsai, National Pingtung University of Science and Technology, Taiwan
- Session 12. Mechanics-based investigation into the structural integrity of core-shell nanostructured electrodes for lithium ion batteries - Weiqun Li, The Hong Kong Polytechnic University, China
- Session 14. Thermoelectric properties of caged-type compounds $M_5Rh_6Sn_{18}$ ($M = Sc, Y, Lu$) - Chin Shan Lue, National Cheng Kung University, Taiwan
- Session 14. Thermoelectric properties of nanocrystalline Bi_3Se_2Te thin films - Chih-Wei Luo, National Chiao Tung University, Taiwan
- Session 29. Researches of Braille forming technologies and its elements physical parameters - Edmundas Kibirkstis, Kaunas University of Technology, Lithuania

WANT MORE DETAILS?

For speaker bios, detailed session descriptions and abstracts, please visit our website: <http://nscj.co.uk/ecm5/sessions>



PARALLEL A Day 1 | 10:40-12:25

Session	Room
session 01A	Burns
session 02A	Culcabock
session 06A	Damfield
session 13A	Macleod
session 25A	Adams

PARALLEL B Day 1 | 13:40-15:25

Session	Room
session 02B	Burns
session 07B	Culcabock
session 10B	Macleod
session 12B	Damfield

PARALLEL C Day 1 | 15:45-17:30

Session	Room
session 05C	Damfield
session 12C	Burns
session 13C	Culcabock
session 14C	Macleod

PARALLEL D Day 2 | 9:30-11:15

Session	Room
session 06D	Burns
session 10D	Damfield
session 26D	Culcabock
session 29D	Macleod

PARALLEL E Day 3 | 8:30-10:15

Session	Room
session 04E	Culcabock
session 12E	Burns
session 35E	Damfield

PARALLEL F Day 3 | 10:35 - 12:20

Session	Room
session 01F	Burns
session 07F	Culcabock
session 12F	Adams
session 29F	Macleod

PARALLEL G Day 3 | 13:40- 15:25

Session	Room
session 01G	Burns
session 12G	Culcabock
session 16G	Adams
session 33G	Macleod

01A 11th July 2016, Monday, 10:35-12:20

Topic: Energy storage

Moderator: Dr. Christine Frayret, University of Picardie, France

Location: Burns

- Bandwidth-Based Behavioral Modeling of Large-Format Batteries (20 minutes) - Michael S. Mazzola, Mississippi State University, United States
- Multifunctional Conductive Skin Strategy for High-Performance Lithium-Ion Battery Electrode Materials (20 minutes) - Sang-Young Lee, UNIST, South Korea
- Flux-coating opens a new possibility for making additive-free electrodes with controllable their orientation toward advanced lithium-ion secondary batteries (20 minutes) - Nobuyuki ZETTSU, Shinshu University, Japan
- Novel electrolytes for lithium-ion cells with improved safety characteristics (20 minutes) - Andreas Hofmann, Karlsruhe Institute for Technology (KIT), Germany
- Fabrication of Photovoltaic lithium ion battery using the molecular precursor method (20 minutes) - Hiroki Nagai, Kogakuin University, Tokyo, Japan

02A 11th July 2016, Monday, 10:35-12:20

Topic: Photovoltaics

Moderator: Dr. Jason Stoke, Gonzaga University, United States

Location: Culcabock

- Extremely highly textured MgO [111] crystalline films on soda-lime glass by e-beam (20 minutes) - Ashok Chaudhari, Solar-Tectic LLC, United States
- A review of materials science research pathways and opportunities for building integrated photovoltaics (20 minutes) - Bjorn Petter Jelle, SINTEF Building and Infrastructure & Norwegian University of Science and Technology (NTNU), Norway
- Towards Roll2Roll processing of Perovskite based PV at Solliance (20 minutes) - Herbert Lifka, Holst Centre/TNO - Solliance, The Netherland

06A 11th July 2016, Monday, 10:35-12:20

Topic: Supercapacitors

Moderator: Prof. Xuefeng Wang, Tongji University, China

Location: Damfield

- Exploring electrolyte organisation and nanoporous carbon structures in supercapacitors with solid-state NMR (20 minutes) - Michael Deschamps, Orleans University, France
- Intense pulsed white light (IPWL)-assisted facile and agile fabrication of metal and metal oxide nanostructures for high performance supercapacitor applications (20 minutes) - Heejoon Ahn, Hanyang University, South Korea
- Synthesis of binary nickel-manganese hydroxide nanoflakes on ZnO nanowires by pulse electrodeposition for high-performance supercapacitors (20 minutes) - Jin-Hua Huang, National Tsing Hua University, Taiwan
- Facile Preparation and Enhanced Capacitance of the nanostructured conducting polymer Network for Supercapacitors (20 minutes) - Dipali Shankarrao Patil, Yeungnam University, South Korea

13A 11th July 2016, Monday, 10:35-12:20

Topic: Energy technology

Moderator: Dr. Cristina Surdu-Bob, National Institute for Lasers, Plasma and Radiation Physics, Romania

Location: Macleod

- Advanced zeolite coating on an innovative graphite exchanger for adsorption heat pumps (20 minutes) - Giovanni Restuccia, Institute of Advanced Technologies for Energy, ÁUNicola Giordano, Italy
- Impact of threading dislocations on GaInN-based LEDs with high indium compositions (20 minutes) - Tohru HONDA, Kogakuin University, Japan
- An ultralow-power silicon neuron with configurable neuron classes (20 minutes) - Takashi KOHNO, University of Tokyo, Japan
- Focusing on efficient power transmission: environmentally friendly polypropylene nanocomposites (20 minutes) - Jun-Wei Zha, University of Science and Technology Beijing, China
- Microporous Polymer Networks for energy applications (20 minutes) - Johannes Schmidt, Technical University Berlin, Germany

25A 11th July 2016, Monday, 10:35-12:20

Topic: Energy - biology, chemistry and physics

Moderator: Prof. Adalberto Lovato, SETREM Engineering College, Brazil

Location: Adams

- Valorization of glycerol from biodiesel production by ester exchange reactions with triglycerides, yielding an energetic valuable monoglyceride - diglyceride mixture. (20 minutes) - Serge M.F. Tavernier, University of Antwerp, Belgium
- Properties of carotenoid radicals relevant to bioenergetics (20 minutes) - Alexandrina Ligia Focsan, Valdosta State University, United States
- Enhancement of nutrient recovery from microalgae in hydrothermal liquefaction using activated carbon (20 minutes) - Chihiro Fushimi, Tokyo University of Agriculture and Technology, Japan
- Nitric oxide overcomes Cd and Cu toxicity in in vitro-grown tobacco plants through increasing contents and activities of rubisco and rubisco activase (15 minutes) - Alaaldin Khairy, Keimyung University, South Korea

02B 11th July 2016, Monday, 13:40-15:25

Topic: Photovoltaics

Moderator: Herbert Lifka, Holst Centre/TNO - Solliance, The Netherland

Location: Burns

- Spectroscopic ellipsometry analysis of CdTe/CdS thin films and alloy layer (20 minutes) - Jason Stoke, Gonzaga University, United States
- Texture and nano-scale surface roughness of silicon substrates: Effect of wafer conditioning on electronic interface properties in heterojunction solar cells (20 minutes) - Heike Angermann, Helmholtz Center Berlin for Materials and Energy, Berlin, Germany
- Fabrication of earth-abundant photovoltaics on flexible Mo foil through facile electrodeposition-annealing route (20 minutes) - Md Ibrahim Khalil, Department of Chemistry, Materials and Chemical Engineering "Giulio Natta", Milan, Italy
- Plasmonic Ag nanowires network embedded in zinc oxide nanoparticles for inverted organic solar cells (10 minutes) - Malika Chalh, Limoges University, France

07B 11th July 2016, Monday, 13:40-15:25

Topic: Nanomechanics

Moderator: Prof. Sung Youb Kim, Ulsan National Institute of Science and Technology, South Korea

Location: Culcabock

- Tribological reliability of MEMS multi-layered thin films (20 minutes) - Hartono (Anton) Sumali, Sandia National Laboratories, United States
- Strain dependent energy band alignments at $\text{ASnO}_3\text{-SrTiO}_3$ (A = Ca, Sr, and Ba) and $\text{ASnO}_3\text{-ASnO}_3$ heterointerfaces revealed through in situ photoemission (20 minutes) - John David Baniecki, Fujitsu Laboratories, Atsugi & Tokyo Institute of Technology, Japan
- Non-linear creep behaviors of LLM-105/fluoropolymer nanocomposites (20 minutes) - Juan Zhang, China Academy of Engineering Physics, China
- Improved mechanical characteristics under dynamic and static tests of composites carbon fibers by the addition of stainless steel and alumina powders at interfaces (15 minutes) - Youcef Mebarki, University A. Mira of Bejaia, Algeria
- Structure defects in anthracite: Implications for its ductile deformation mechanism (10 minutes) - Yuzhen Han, University of Chinese Academy of Sciences, China

10B 11th July 2016, Monday, 13:40-15:25

Topic: Modelling and simulations for energy applications

Moderator: Dr. Tesfaye Tadesse Molla, Technical University of Denmark, Denmark

Location: Macleod

- A fractional calculus approach to damping process in reverse martensitic transformation of a NiTi ribbon: towards martensitic transformations understanding for energy applications (20 minutes) - Edgar Reyes-Melo, Autonomous University of Nuevo Leon, Mexico
- Magnetic hybrid materials for energy applications: finite element simulations and applications as microactuators (20 minutes) - Beatriz Cristina Lopez Walle, Autonomous University of Nuevo Leon, Mexico
- Rheonomic shrinkage phenomenon holes in polymer composites after drilling (20 minutes) - Aleksandr Dudarev, Perm National Research Polytechnic University, Russia

- CFD Simulation of Natural Ventilation and Pedestrian Comfort (10 minutes) - Harry Eggo, University of Dundee, United Kingdom

12B 11th July 2016, Monday, 13:40-15:25

Topic: Nanomaterial design for energy applications

Moderator: Prof. Dr Vojislav Mitic, University of Nis & Serbian Academy of Sciences and Arts, Serbia

Location: Damfield

- Size-dependent effects: Energy conversion processes based on nanoparticles of Cu, Ag, and Au in different matrices (glass, ionic liquids, polylactic acid, porous materials) with relevance for photonic materials, catalysts and thermoelectrics (20 minutes) - Klaus Rademann, Humboldt University of Berlin, Germany
- Adsorption-induced strain in meso and microporous media: modeling and experimental validation (25 minutes) - David Gregoire, University Pau & Pays Adour, Anglet, France
- The Effect of Pressure, Guest Uptake and Structural Flexibility on Porous Framework Materials (20 minutes) - Stephen Moggach, The University of Edinburgh, United Kingdom
- Design of Metal-Organic Frameworks (MOFs) derived materials for fuel gas storage (20 minutes) - Vera Isaeva, National Engineering Technological University of Steel and Alloys, MISiS, Moscow, Russia
- Tetrahedral and pseudo-octahedral building blocks as components in Microporous Organic Polymers (15 minutes) - Alexandra Schade, Karlsruhe Institute of Technology, Germany

05C 11th July 2016, Monday, 15:45-17:30

Topic: Fuel cells

Moderator: Prof. Masataka Nagaoka, Nagoya University, Japan

Location: Damfield

- Modular enzyme reactors based on nanoporous alumina: Perspectives for the design of enzymatic fuel cells (20 minutes) - Gunnar Johansson, Uppsala University, Sweden
- Highly-dispersed Group IV or V Metal Oxide Nanoparticles on Carbon Black as Oxygen Reduction Electrocatalysts for PEFCs (20 minutes) - Jeongsuk Seo, The University of Tokyo, Japan

- A study on desulfurization properties and efficiencies of the solid oxide fuel cells for biogas system using simulated syngas (20 minutes) - Jindo Chung, Hoseo University, South Korea

- Degradation of LSCF6428 SOFC Cathodes at the Nanometre Scale and Below (15 minutes) - Na Ni, Imperial College London, United Kingdom

12C 11th July 2016, Monday, 15:45-17:30

Topic: Nanomaterial design for energy applications

Moderator: Prof. Jonas Fransson, Uppsala University, Sweden

Location: Burns

- Fractals for Nanotechnology and Energy Applications (25 minutes) - Vojislav Mitic, University of Nis & Serbian Academy of Sciences and Arts, Serbia
- Advanced oxidative process by a thermal treatment in organic liquid effluent and modelling by artificial neural networks (20 minutes) - Yana Batista Brando, University Federal Rural of Pernambuco, Brasil
- Graphene modification for preparation of stable nanofluids (20 minutes) - Brigitte Vigolo-Greffier, CNRS-University of Lorraine, France
- Simulation on the separation behavior of the multiphase flow in a HIGEE hydraulic oil purifier (10 minutes) - Hui Ji, Beijing University of Technology, China
- Mechanics-based investigation into the structural integrity of core-shell nanostructured electrodes for lithium ion batteries (10 minutes) - Weiqun Li, The Hong Kong Polytechnic University, China

13C 11th July 2016, Monday, 15:45-17:30

Topic: Energy technology

Moderator: Giovanni Restuccia, National Council of Research, Italy

Location: Culcabock

- Molecular-Based Approaches to Artificial Photosynthesis (20 minutes) - Craig J. Richmond, University of Zurich, Zurich, Switzerland
- Amplified Hydrogen Evolution of Ternary Photonic Crystal Structured Photocatalyst by Slow Photon Effect (20 minutes) - Min Wu, Wuhan University of Technology, China

- Nuclear dynamics in the metastable phase of the solid acid caesium hydrogen sulphate (20 minutes) - Matthew Krzystyniak, Nottingham Trent University, United Kingdom
- Compact-TVA plasma - new opportunity for thin film deposition for energy applications (20 minutes) - Cristina Surdu-Bob, National Institute for Lasers, Plasma and Radiation Physics, Romania

14C 11th July 2016, Monday, 15:45-17:30

Topic: Thermoelectrics

Moderator: Prof. Dr. Klaus Rademann, Humboldt University of Berlin, Germany

Location: Macleod

- Theory and simulation for improving thermoelectric performance of nanoscale materials (20 minutes) - Neophytos Neophytou, University of Warwick, United Kingdom
- Optimization of thermoelectric performance of SrSi₂-based alloys via the modification in band structure and phonon-point-defect scattering (20 minutes) - Yung-Kang Kuo, National Dong Hwa University, Taiwan
- Theoretical approach to the current across a single electron transistor with spin degeneracy at low temperatures: Perturbation theory up to sixth order in the tunnelling coupling (15 minutes) - Johannes Kern, University of Regensburg, Germany
- Enhancement of the thermoelectric figure-of-merit via Sr vacancy of Sr_{0.9}Ca_{0.1}Si₂ (15 minutes) - Chia Nung Kuo, National Cheng Kung University, Taiwan

06D 12th July 2016, Tuesday, 9:30-11:15

Topic: Supercapacitors

Moderator: Prof. Michael Deschamps, Orleans University, France

Location: Burns

- High performance hybrid supercapacitors by using para-Benzoquinone ionic liquid redox electrolyte (25 minutes) - Rebeca Marcilla Garcia, Technology Park of Mostoles, Spain
- In-situ Growth of Binder-free CNTs@Ni-Co-S Nanosheet Core/Shell Hybrids on Ni Mesh for High Energy Density Asymmetric Supercapacitors (20 minutes) - Xuefeng Wang, Tongji University, China

- Deconvolution of electrochemical double layer capacitance between fractions of active and total surface area of graphite felts (20 minutes) - Thomas J. Rabbow, GILDEMEISTER energy storage GmbH, Austria

10D 12th July 2016, Tuesday, 9:30-11:15

Topic: Modelling and simulations for energy applications

Moderator: Aleksandr Dudarev, Perm National Research Polytechnic University, Russia

Location: Damfield

- A Rigorous Upscaling Procedure to Predict Macro-scale Transport Properties of Natural Gas in Shales by Coupling Molecular Dynamics Simulation with Lattice Boltzmann Method (20 minutes) - Guan Qin, University of Houston, United States
- Funnel Flight Controller for a Simulation Model and real Attitude Control System (20 minutes) - Norman Hopfe, Bayern-Chemie GmbH, Germany
- Computational efficient thermo-mechanical modelling of interconnects in SOFC stacks including the effect of contact (20 minutes) - Tesfaye Tadesse Molla, Technical University of Denmark, Denmark
- Investigating natural ventilation of the Dundee University campus using computational fluid dynamics (10 minutes) - Steven Ross, University of Dundee, United Kingdom
- CFD Modelling of a Cooling Tower with Gas Inlet Injection and Applied Crosswind for Optimal Efficiency (10 minutes) - James Scott, University of Dundee, United Kingdom

26D 12th July 2016, Tuesday, 9:30-11:15

Topic: Wind power

Moderator: Dr. Henry Tan, University of Aberdeen, UK

Location: Culcabock

- Distributed ammonia synthesis (20 minutes) - Edward L. Cussler, University of Minnesota, United States
- Wind power plant resonances (20 minutes) - Luis Sainz Sopera, ETSEIB-UPC, Spain
- Fatigue evaluation for RC foundation of wind turbine based on field measurement and nonlinear FE analysis (20 minutes) - Chikako Fujiyama, Hosei University, Japan
- Application of Artificial Intelligence techniques

to harmonize the consumption of an SWRO desalination plant with the variability of a renewable energy source (15 minutes) - Pedro Cabrera, University of Las Palmas de Gran Canaria, Spain

29D 12th July 2016, Tuesday, 9:30-11:15

Topic: Energy saving technology

Moderator: Prof. Ing. Dr. Jan Vittek, University of Zilina, Slovakia

Location: Macleod

- Multicolor Electrochromic Device with LSPR of Silver Electrodeposition toward Energy Saving Technology (20 minutes) - Norihisa KOBAYASHI, Chiba University, Japan
- Flag-shaped damper for bridges against seismic shakings (20 minutes) - Eunsoo Choi, Hongik University, South Korea
- Feasibility study of an air-to-air energy recovery system for buildings application in hot-humid climate (20 minutes) - Mardiana I. Ahmad, Universiti Sains Malaysia, Malaysia

04E 13th July 2016, Wednesday, 8:30-10:15

Topic: Graphene-based nanotechnology for energy applications

Moderator: Prof. Ian Ferguson, Missouri University of Science and Technology, USA

Location: Culcabock

- Graphene-based Multicomponent Catalysts for Water Treatment (25 minutes) - Jun Jiao, Portland State University, United States
- Strong-field effects in the photo-emission spectrum of the C₆₀ fullerene (20 minutes) - Phuong Mai Dinh, University Paul Sabatier, France
- High Performance of Graphene-Reinforced Ion-Exchange Composite Resins for the Hydration of Ethylene Oxide to Ethylene Glycol (20 minutes) - Hongli Guo, Sinopec Shanghai Research Institute of Petrochemical Technology, China
- Nanocarbon-modulated multi-metallic hydroxides towards superior oxygen evolution reactivity (15 minutes) - Xiaolin Zhu, China University of Petroleum, Qingdao, China
- Investigating electrochemical behaviors of materials based on single-layer graphene as flexible electrodes using scanning electrochemical microscopy (SECM) (10 minutes) - Thuan Nguyen PHAM TRUONG, Paris Diderot University - ITODYS Lab UMR 7086, France

12E 13th July 2016, Wednesday, 8:30-10:15

Topic: Nanomaterial design for energy applications

Moderator: Prof. Dr. Zhi-Min Dang, Tsinghua University, China

Location: Burns

- Iron based Metal Organic Framework as an effective Lead ions remover from aqueous solution: thermodynamic and kinetics studies (10 minutes) - Ezekiel Dixon Dikio, Vaal University of Technology, South Africa
- New Generation of Hybrid Photovoltaic Solar Cells via integration of Thermoelectric, Transparent Oxides and self assembled cooperative ionic solids (20 minutes) - Tito Busani, University of New Mexico, United States
- Multifunctional zinc oxide nanostructures by chemical spray (20 minutes) - Malle Krunks, Tallinn University of Technology, Estonia
- Interface structures and strain relaxation mechanisms of ferroelectric BaTiO₃/SrTiO₃ multilayers on a (001) MgO substrate (20 minutes) - Jianghua (J. H.) Chen, Hunan University, China
- Charge transport and symmetry of nanostructures in photovoltaic materials (20 minutes) - Branislav Vlahovic, North Carolina Central University, United States

35E 13th July 2016, Wednesday, 8:30-10:15

Topic: Internet of things

Moderator: Dr. Henry Tan, University of Aberdeen, UK

Location: Damfield

- Internet of Things Based on IPv6 (30 minutes) - Latif Ladid, University of Luxembourg, Luxembourg
- Tinnitus and cell phones: the role of electromagnetic radiofrequency radiation (20 minutes) - Luisa Nascimento Medeiros, Association for Interdisciplinary Research and Divulcation of Tinnitus (APIDIZ), Sao Paulo- SP, Brazil
- Energy Efficient Sensor Data Transmission Protocol (20 minutes) - Hiroaki Higaki, Tokyo Denki University, Japan

01F 13th July 2016, Wednesday, 10:35-12:20

Topic: Energy storage

Moderator: Dr. Andreas Hofmann, Karlsruhe Institute for Technology (KIT), Germany

Location: Burns

- Numerical study on energy storage in rock salt caverns considering thermo-mechanical cyclic loading (20 minutes) - Tom Schanz, Ruhr University Bochum, Germany
- Split Exergy Storage Systems (20 minutes) - Ron Tolmie, Kanata, Ontario, Canada
- Preparation of fiber-type $\text{LiNi}_{0.5}\text{Mn}_{1.5}\text{O}_4$ cathode for lithium ion battery (20 minutes) - Yi-Hung Liu, National University of Tainan, Taiwan
- High performance positive electrode materials for Na ion batteries: Na_xTMO_2 based on Ni, Fe and Mn. (20 minutes) - Elena Gonzalo, CIC Energigune, Spain

07F 13th July 2016, Wednesday, 10:35-12:20

Topic: Nanomechanics

Moderator: Dr. Hartono (Anton) Sumali, Sandia National Laboratories, USA

Location: Culcabock

- Thermal Behaviour of Nanostructured Surfaces at Low Pressure (20 minutes) - Ali Khabari, Wentworth Institute of Technology, United States
- A study on failure modes of nanoscale materials (20 minutes) - Sung Youb Kim, Ulsan National Institute of Science and Technology, South Korea
- Effective moduli of fibrous piezoelectric nanocomposites (20 minutes) - Tungyang Chen, National Cheng Kung University, Taiwan
- Preparation of shape stable and enhanced thermal conductivity of mineral-supported composite phase change materials for thermal energy storage (10 minutes) - Yali Li, China University of Geosciences (Beijing), China

12F 13th July 2016, Wednesday, 10:35-12:20

Topic: Nanomaterial design for energy applications

Moderator: Prof. Dr. Klaus Rademann, Humboldt University of Berlin, Germany

Location: Adams

- Phosphate and Carbon-based Catalysts for the Reforming of Greenhouse Gases (30 minutes) - Ange Nzihou, University of Toulouse, France
- Size and morphology control of $\text{NH}_2\text{-MIL-125}(\text{Ti})$ for photocatalysis (20 minutes) - Min Liu, Dalian University of Technology, China
- Catalytic dehydrogenation of isobutane to isobutene over metal sulfide catalysts (20 minutes) - Guowei Wang, China University of

Petroleum, Qingdao, China

- Design, preparation and properties of polymer nanocomposites for application in dielectric elastomer generator (20 minutes) - Zhi-Min Dang, Tsinghua University, China

29F 13th July 2016, Wednesday, 10:35-12:20

Topic: Energy saving technology

Moderator: Prof. Norihisa KOBAYASHI, Chiba University, Japan

Location: Macleod

- Energy Consumption Visualization Using Thin Film Based Flexible Current Sensors (20 minutes) - Jan Vittek, University of Zilina, Slovakia
- Energy Consumption Visualization Using Thin Film Based Flexible Current Sensors (20 minutes) - Takahiro Yamashita, National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan
- Theoretical analysis and simulation study of water hydraulic reciprocating piston pump driven by the linear motor (10 minutes) - Yeqing Huang, Beijing University of Technology, China

01G 13th July 2016, Wednesday, 13:40-15:25

Topic: Energy storage

Moderator: Dr. Elena Gonzalo, CIC Energigune, Spain

Location: Burns

- Computational Molecular Technology towards Energy Challenges: Molecular Control of Complex Chemical Reactions and Aggregate Structures (25 minutes) - Masataka Nagaoka, Nagoya University, Japan
- Accelerating the discovery of Novel Electrode Materials for Organic Batteries: towards new Strategies of Engineering (25 minutes) - Christine Frayret, University of Picardie, France
- Chemical degradation of polyphenylene oxide based polymer membrane for vanadium redox flow battery (20 minutes) - Ho-Young Jung, Chonnam National University, South Korea
- Modelling and Analysis of Electric Vehicle DC Fast Charging Infrastructure Based on PSIM (20 minutes) - Tri Hardimasyar, PLN Research Institute, Jakarta, Indonesia

12G 13th July 2016, Wednesday, 13:40-15:25



Topic: Nanomaterial design for energy applications

Moderator: Prof. Malle Krunk, Tallinn University of Technology, Estonia

Location: Culcabock

- Voltage induced switching dynamics of a coupled spin pair in a molecular junction (25 minutes) - Jonas Fransson, Uppsala University, Sweden
- Complex ferromagnetic nano-objects displaying both heating and catalytic properties (20 minutes) - Anca Meffre, Laboratory of Physics et Chemistry of Nano Objects, LPCNO, UMR5215 INSA-UPS-CNRS, France
- Quantum dot sensitized solar cell through assembly of TiO₂ based CdS and CdSe photoanode (20 minutes) - Sachin Apparao Pawar, Chonnam National University, South Korea
- Behaviour of compacted buffer material under repository relevant boundary conditions: small scale experiment approach (20 minutes) - Tom Schanz, Ruhr University Bochum, Germany
- Sunflower stalk, rice husk and jute as components of thermal insulation of solar collector (20 minutes) - Adalberto Lovato, SETREM Engineering College, Brazil
- Behavior, cutting property and environmental load of machine tool in mist of strong alkaline water (20 minutes) - Ikuo TANABE, Nagaoka University of Technology, Japan

16G 13th July 2016, Wednesday, 13:40-15:25

Topic: High energy materials

Moderator: Dr. Henry Tan, University of Aberdeen, UK

Location: Adams

- Optimization, ring formation mechanism of ammonium and azide groups on synthesis of 1H-Tetrazole (20 minutes) - Jiping Liu, Beijing Institute of Technology, China
- Preparation and characterization of ammonia borane (20 minutes) - Jiping Liu, Beijing Institute of Technology, China
- The “augmented-rocket” propulsion system for the one-man hopper “Ludion” (20 minutes) - Christophe ROTHMUND, Airbus Safran Launchers, France
- Synergetic effects of graphene and neutral polymeric bonding agent on the non-linear viscoelastic properties of polymer bonded explosives (20 minutes) - Congmei Lin, China Academy of Engineering Physics (CAEP), China
- Nanostructures Induced Mechanics and Safety Performance Variation in Energetic Material: Triaminotrinitrobenzene (TATB) (20 minutes) - Yushi Wen, China Academy of Engineering Physics (CAEP), China

33G 13th July 2016, Wednesday, 13:40-15:25

Topic: Dealing with waste

Moderator: Prof Ange Nzihou, University of Toulouse, France

Location: Macleod

[Surname, First Name, Affiliation, Country]

Ahmad, Mardiana I., Universiti Sains Malaysia, Malaysia	Fushimi, Chihiro, Tokyo University of Agriculture and Technology, Japan
Ahn, Heejoon, Hanyang University, Republic of Korea	Gonzalo, Elena, CIC Energigune, Spain
Angermann, Heike, Helmholtz-Zentrum Berlin für Materialien und Energie, Germany	Gregoire, David, University Pau & Pays Adour (UPPA/LFCR), France
Batista Brandao , Yana, UFRPE, Brazil	Guo, Hongli, SINOPEC, China
Busani, Tito, University of New Mexico, United States	Han, Yuzhen, University of Chinese Academy of Sciences, China
Cabrera, Pedro J., University of Las Palmas de Gran Canaria, Spain	Hardimasyar, Tri, PLN Indonesia, Indonesia
Chalh, Malika, Université de Limoges , France	Higaki, Hiroaki, Tokyo Denki University, Japan
Chaudhari, Ashok, Solar-Tectic LLC, United States	Hofmann, Andreas, Karlsruher Institut für Technologie, Germany
Chen, Tungyang, National Cheng Kung University, Taiwan	Honda, Tohru, Kogakuin University, Japan
Chen, Jianghua, Hunan University, China	Hopfe, Norman, Bayern-Chemie GmbH, Germany
Choi, Eunsoo, Hongik University, Republic of Korea	Huang, Jin-Hua, National Tsing Hua University, Taiwan
Chung, Jindo, Hoseo University, Republic of Korea	Huang, Yeqing, Beijing University of Technology, China
Cussler, Edward L., University of Minnesota, United States	Isaeva, Vera, National Engineering Technological University of Steel and Alloys, Russian Federation
Dang, Zhimin, Tsinghua University, China	Jelle, Bjørn Petter, Norwegian University of Science and Technology (NTNU) & SINTEF Building and Infrastructure, Norway
Deschamps, Michael, University of Orléans, France	Ji, Hui, Beijing University of Technology, China
Dikio, Ezekiel Dixon, Vaal University of Technology, South Africa	Jiao, Jun, Portland State University, United States
Dinh, Phuong Mai, University Paul Sabatier, France	Johansson, Gunnar, Uppsala University, Sweden
Dudarev, Aleksandr, Perm National Research Polytechnic University, Russian Federation	Jung, Ho-Young , Chonnam National University, Republic of Korea
Eggo, Harry, University of Dundee, United Kingdom	Kern, Johannes, Unicontrol Systemtechnik GmbH, Germany
Ferguson, Ian , Missouri University of Science and Technology, United States	Khabari, Ali, Wentworth Institute of Technology, United States
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