



European Materials Research Society

Spring Meeting 2022

May 30 | June 3

Virtual Conference

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CONFERENCE CHAIRS



Martina LUYSBURG
Research Centre Jülich

Ernst Ruska-Centre, Wilhelm-Johnen-Str, D-52425
Jülich, Germany

Mail : m.luysberg@fz-juelich.de



Juan Ramón MORANTE
IREC Catalonia Institute
for Energy Research and University of Barcelona

Jardins de les Dones de Negre 1 Sant Adrià del Besòs
08930 Spain

Mail : jrmorante@irec.cat



Henry H. RADAMSON
Mid Sweden University

Holmgatan 10, 85170 Sundsvall,
Sweden & Chinese Academy of Sciences,
Department of Microelectronics,
100029 Beijing, China

Mail : henry.radamson@miun.se & rad@ime.ac.cn

E-MRS 2022

PLENARY SESSIONS



Monday 30 May, 2022 (13:00 - 13:45)
ERC Individual and Synergy Grants

Christine Courillon

Research Program Agent for “Synthetic Chemistry and Materials”
ERC Executive Agency
Place Rogier, 16
B-1049 Brussels, Belgium



Tuesday 31 May, 2022 (13:45 - 14:45)
Visualising patterning and crystal growth on 2D materials using in situ electron microscopy

Frances M. Ross

Department of Materials Science and Engineering
Massachusetts Institute of Technology
Cambridge, Massachusetts, USA



Wednesday 1 June, 2022 (13:45 - 14:45)
CO₂ - Decarbonisation & CO₂ as Future Feedstock

Dr. Armin Günther

Director New Technologies & Energy Transition
Air Liquide Global E&C Solutions



Wednesday 1 June, 2022 (18:00 - 18:30)
2022 E-MRS EU-40 Materials Prize Presentation
**The Versatility of Perovskite Materials
for Optoelectronics**

Prof. Michael Saliba

Institute for Photovoltaics (ipv) University of Stuttgart,
and Research Center Jülich, Germany

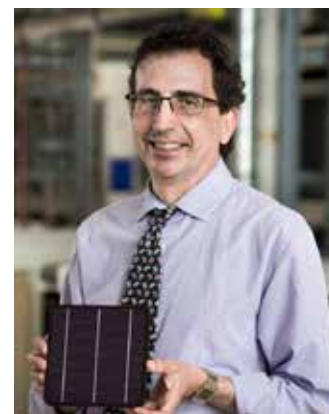


Wednesday 1 June, 2022 (18:30 - 19:00)
2022 MRS Mid-Career Researcher Award Presentation

Designing biomaterials to repair the body and detect diseases earlier

Prof Molly M Stevens

Imperial College London
U.K.



Thursday 2 June, 2022 (13:45 - 14:45)
Accelerating the clean energy transition with materials innovation

Dr Chris Case

Chief Technology Officer
Oxford PV
U.K.

Monday may 30			11:45	Discussion	
08:45	Welcome and Introduction to the Symposium		12:00	LUNCH	
Supercapacitor : Olivier Crosnier					
09:00	INV Tracking ion fluxes in electrodes for energy storage applications Patrice SIMON 1. Université Toulouse-3 Paul Sabatier, CIRIMAT Laboratory, Toulouse, France 2. RS2E, FR CNRS 3459, F-31062 Toulouse, France E-mail address: simon@chimie.ups-tlse.fr	J 1.1	13:45	INV Composite electrodes for higher energy supercapacitors: a path towards fit for purpose devices M. F. Montemor Centro de Química Estrutural, Institute of Molecular Sciences, Departamento de Engenharia Química Instituto Superior Técnico, Universidade de Lisboa, Av. Rovisco Pais 1049 001 Lisboa, Portugal	J 1.9
09:30	INV Microsupercapacitors: between a rock and a hard place Thierry Brousse1,2, Jean Le Bideau1,2 and Christophe Lethien2,3 1. Institut des Matériaux Jean Rouxel (IMN), CNRS UMR 6502 – Université de Nantes, 2 rue de la Houssinière BP32229, 44322 Nantes cedex 3, France 2. Réseau sur le Stockage Electrochimique de l'Energie (RS2E), CNRS FR 3459, 33 rue Saint Leu, 80039 Amiens Cedex, France 3. Institut d'Electronique, de Microélectronique et de Nanotechnologies (IEMN), Université de Lille, CNRS, Centrale Lille, ISEN, Université de Valenciennes, UMR 8520 - IEMN, F-59000 Lille, France	J 1.2	14:15	Synergistic Contributions of Two Magnetic Elements for Improving the Performance of Magnetic Supercapacitors Joyanti Halder, Ananya Chowdhury, Puja De, Sakshi Kansal, Surbhi Priya, Amreesh Chandra Indian Institute of Technology, Kharagpur, Department of Physics, Indian Institute of Technology, Kharagpur, Department of Physics, Indian Institute of Technology, Kharagpur, Department of Physics, Indian Institute of Technology, Kharagpur, School of energy science and engineering, Indian Institute of Technology, Kharagpur, School of energy science and Engineering, Indian Institute of Technology, Kharagpur, Department of Physics	J 1.10
10:00	Developpement of polysiloxane based polymer electrolyte for application in solid state micro-supercapacitors Mathieu Deschanel(1), Marc Dietrich(2,3), Pascale Gentile(3), Saïd Sadki(2), Cristina Iojoiu(1) et Fannie Alloin(1) 1) Univ. Grenoble Alpes, CNRS, Grenoble INP LEPMI, 38000 Grenoble, France 2) Univ. Grenoble Alpes, CEA, CNRS, IRIG-SyMMES, 38000 Grenoble, France 3) Université Grenoble Alpes, CEA-Grenoble, IRIG-DEPHY-PHELIQS-SINAPS, F-38000 Grenoble, France	J 1.3	14:30	Sustainable, non-volatile supercapacitors for photo-supercapacitors applications Nilanka M. Keppetipola* (1), G. R. A Kumara (2), Marie-Anne Dourges (1), Céline Olivier (1), Thierry Toupance (1), Ludmila Cojocaru (1) (1) The University of Bordeaux, Institute of the Molecular Science, 351 Cours de la Libération F-33405 Talence Cedex, France (2) National Institute of Fundamental Studies, Hantana Road, 20000 Kandy, Sri Lanka	J 1.11
10:15	Asymmetric VN // RuN micro-supercapacitors based on sputtered metal nitride films Khac Huy Dinh (1 2 3), Kevin Robert (1 3), Florent Blanchard (2), Marielle Huvé (1 2), Pascal Roussel (1 2), Christophe Lethien (1 3 4) 1 Institut d'Electronique, de Microélectronique et de Nanotechnologies, Université de Lille, CNRS, Centrale Lille, Université Polytechnique Hauts-de-France, UMR 8520 - IEMN, F-59000 Lille, France 2 Unité de Catalyse et de Chimie du Solide (UCCS), Université de Lille, CNRS, Centrale Lille, Université d'Artois, UMR 8181 – UCCS, F-59000 Lille, France 3 Réseau sur le Stockage Electrochimique de l'Energie (RS2E), CNRS FR 3459, 33 rue Saint Leu, 80039 Amiens Cedex, France 4 Institut Universitaire de France (IUF)	J 1.4	14:45	Discussion	
10:30	Discussion		1 - Electrodes for energy storage : Cristina Flox		
10:45			16:30	Silicon/Graphene Composite for Electrochemical Energy Storage Farjana J. Sonia*, Golam Haider, Martin Müller, Milan Bousa, Antonin Fejfar, Martin Kalbáč, Otakar Frank Farjana J. Sonia, Golam Haider, Milan Bousa, Martin Kalbáč, Otakar Frank - J. Heyrovsky Institute of Physical Chemistry of the AS CR, v.v.i., Dolejskova 2155/3, 182 23 Prague 8, Czech Republic, Martin Müller, Antonin Fejfar - FZU-Institute of Physics of the Czech Academy of Sciences, 16200 Prague 6, Czech Republic	J 2.4
11:00	Decorating porous current collectors with ALD RuOx for supercapacitor applications Sakeb Hasan Choudhury, Guillaume Vignaud, Botayna Bounor, Jensheer Shamsudeen Seenath, Pascal Dubreuil, David Bourrier and David Pech Sakeb Hasan Choudhury: Botayna Bounor: Jensheer Shamsudeen Seenath: Pascal Dubreuil: David Bourrier: and David Pech LAAS-CNRS, Université de Toulouse, CNRS, 7 avenue du colonel Roche, Toulouse 31400, France. Guillaume Vignaud Université Bretagne Sud, 2 rue Coat Saint-Haouen, BP 92116 Lorient, France	J 1.5	16:30	Electrochemical studies on Cs-functionalized carbon nanotubes E.I.Ionete1 , S.M. Iordache2 ,3, A.M. Iordache2 ,3, I. Stamatin3, E. Tanasa4, V. Barna5, I. C. Vasiliu2, M.Elisa2, I. Chilibon2, S. Caramizoiu3,6, C.E.A. Grigorescu2 1National R&D Institute for Cryogenics and Isotopic Technologies – ICSI Rm.Valcea, 4 Uzinei Str. RM Valcea, 240050, Valcea, Romania. 2National Institute for Research and Development in Optoelectronics-INOE 2000,Optospintronics Department, 409 Atomistilor, 077125, Magurele Romania 3University of Bucharest, Faculty of Physics, 3Nano-SAE Research Center, 405 Atomistilor, P.O. Box MG-38, 077125, Magurele, Romania. 4Politehnica University of Bucharest, 313 Splaiul Independenței, Bucharest, Romania. 5University of Bucharest, Faculty of Physics, 405 Atomistilor, 077125, Magurele, Romania 6National Institute for R&D in Microtechnologies IMT-Bucharest, 126A Erou Iancu Nicolae Str., Voluntari, 077190, Romania	J 2.5
11:15	Single walled-carbon nanotube electrodes boosted by iodonium salts for electrochemical capacitors Maciej Tobis*(1), Anetta Platek-Mielczarek(1), Justyna Piwek(1), Łukasz Przypis(2), Dawid Janas(2), Elżbieta Frąckowiak(1) (1) Poznan University of Technology, Institute of Chemistry and Technical Electrochemistry, 60 – 965 Poznań, Berdychowo 4, Poland, (2) Silesian University of Technology, Faculty of Chemistry, 44 – 100 Gliwice, B. Krzywoustego 4, Poland * lead presenter	J 1.6	16:30	Porous cobalt oxides nanostructures electrodeposited on graphene electrode for energy storage applications H. Ghannam*(1,2), O.Elkhouja (1,3), T. Tite (1), C. Ungureanu(4), M. Buga(4), A. A. Zaulet(4), E. Matei(1), C. C. Negrilă(1), A.C. Galca(1), G. Stan(1), A. Chahboun(2) (1) National Institute of Materials Physics, RO-077125 Magurele, Romania (2) Abdelmalek Essaadi University, FSTT, Thin Films and Nanomaterials Lab., 90000 Tangier, Morocco (3)Laboratory of Materials and Subatomic Physics, Faculty of Sciences, Ibn Tofail University, Campus Universitaire, 14000 Kenitra, Morocco (4) National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Uzinei Street no. 4, PO Box Răureni 7, 240050, Râmnicu Vâlcea, Romania	J 2.6
11:30	Nitrogen-doped graphene matrix decorated with Sn particles as negative electrode for high performance lithium-ion capacitors Miguel Granados-Moreno*(1)(2), Gelines Moreno-Fernández(1), Rosalía Cid(1), Juan Luis Gómez Urbano(1)(2) and Daniel Carriazo(1)(3). (1)Centre for Cooperative Research on Alternative Energies (CIC energiGUNE), Basque Research and Technology Alliance (BRTA), Alava Technology Park, Albert Einstein 48, 01510 Vitoria-Gasteiz, Spain. (2)Universidad del País Vasco, UPV/EHU, 48080 Bilbao, Spain (3)IKERBASQUE, Basque Foundation for Science, 48013 Bilbao, Spain	J 1.7			