



European Materials Research Society

Spring Meeting 2022

May 30 | June 3

Virtual Conference

www.european-mrs.com

CONFERENCE CHAIRS



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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

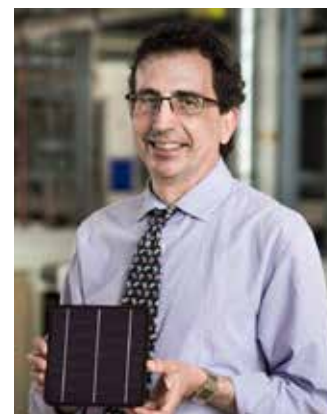


Wednesday 1 June, 2022 (18:30 - 19:00)
2022 MRS Mid-Career Researcher Award Presentation

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.

18:30	Boosting Perovskite based tandem solar cell performance S. Aazou1,2*, E. Ntsoenzok3, Z. Sekkat1,2, E. M. Assaid4 1 Faculty of Sciences, University of Mohammed V in Rabat, Rabat, Morocco, 2 Optics and Photonics Center, Moroccan Foundation for Advanced Science, Innovation & Research- MAScIR- UM6P, Rabat, Morocco, 3 CEMHTI-CNRS Site Cyclotron, 3A Rue de la Férollerie, Orléans, 45071, France, 4 Faculty of Sciences, University of Chouaib Doukkali, El Jadida, Morocco, * Correspondence: s.aazou@um5r.ac.ma	W 3.3	18:30	Impact of chopping frequency and voltage/light bias during EQE measurements of perovskite/Silicon tandem solar cells Vasiliki Paraskeva1, Maria Hadjipanayi1, Matthew Norton1, George E. Georgiou1 1. FOSS Research Centre for Sustainable Energy, Department of Electrical and Computer Engineering, University of Cyprus, 75 Kallipoleos St., Nicosia, 1678, Cyprus Email: vparas01@ucy.ac.cy	W 3.13
18:30	Carbon-Based Mesoscopic Screen-Printed Perovskite Solar Cells: Fabrication and Characterization Kylie Thompson1, David Tanenbaum1* 1. Pomona College, Department of Physics and Astronomy, Claremont, California 91711 Email: david.tanenbaum@pomona.edu	W 3.4	18:30	Metallophthalocyanines as Efficient Hole Transporting Materials in Perovskite Solar Cells Ángela Sastre-Santos,1, * Adrián Herrero, Desiré Molina,1 Jorge Follana-Berná, Lydia Ferrer, 1 Javier Ortiz1 1. Área de Química Orgánica, Instituto de Bioingeniería, Universidad Miguel Hernández, Elche 03202 (Alicante), Spain. E-mail: asastre@umh.es	W 3.14
18:30	New Fluorene-Based Derivatives as Hole Transporting Materials for Efficient Perovskite Solar Cells Aistė Jegorovė1, Cristina Momblona2, Marytė Daškevičienė1, Artiom Magomedov1, Vyntas Jankauskas3, Mohammad Khaja Nazeeruddin,2 Vytautas Getautis1 1. Department of Organic Chemistry, Kaunas University of Technology, Lithuania. 2. Group for Molecular Engineering of Functional Material, Institute of Chemical Sciences and Engineering, École Polytechnique Fédérale de Lausanne, Switzerland. 3. Institute of Chemical Physics, Vilnius University, Lithuania. aislc@ktu.lt	W 3.5	18:30	A bichromophoric organic-inorganic semiconductor nanocomposite: device ready broad spectral response light-harvesting material Kajari Dutta, 1, * Swarna Goswami,1 Arnab Dey, 1 Sagareeka Ghosh, 1 Susmita Das, 2 Avisek Dutta4, Shibsankar Dutta3, Sukanta Dec3 1. Department of Physics, Amity University, Major Arterial Road (South-East), Action Area II, Newtown, Kolkata, 700135, India. 2. Department of Chemistry, Amity University, Major Arterial Road (South-East), Action Area II, Newtown, Kolkata, Kolkata, 700135, India 3. Department of Physics, Presidency University, 86/1, College Street, Kolkata, 700073, India 4. School of Materials Sciences, Indian Association for the Cultivation of Science, Kolkata, 700032 Email: das.kajari@gmail.com, kdutta@kol.amity.edu	W 3.15
18:30	Photo-storage devices based on perovskite solar cells and supercapacitors Cojocar, L.*(1), Keppetipola, N. K.(1), Kumara, G. R. A. (2), Olivier, C. (1), & Toupance, T(1). (1) University of Bordeaux, CNRS, Bordeaux INP, ISM, UMR 5255, 351 Cours de la Libération, F-33405 Talence Cédex, France (2) National Institute of Fundamental Studies, Hantana Road, 20000 Kandy, Sri Lanka	W 3.6	18:30	Metrology on Commercial Thin Film Photovoltaic Modules – Working the Black Box Bettina Friedel1.* 1. Physikalisch-Technische Bundesanstalt (PTB), Department for Applied Radiometry – Solar Modules. Bundesallee 100, 38116 Braunschweig, Germany. Email: bettina.friedel@ptb.de	W 3.16
18:30	Pathways of Cations Migration in Minerals: Theoretical Modeling N. A. Kabanova*a,b, T. L. Panikarovskii, S. M. Aksenov, E. A. Morkhovaa aSamara Center for Theoretical Materials Science, Samara state technical university, Molodogvardeyskaya Str. 244, Samara 443100, Russia bLaboratory of nature-inspired technologies and environmental safety of the Arctic, Kola Science Centre, Russian Academy of Sciences, Fersmana str. 14, 184209 Apatity, Russia, cLaboratory of arctic mineralogy and material sciences, Kola Science Centre, Russian Academy of Sciences, Fersmana str. 14, 184209 Apatity, Russia	W 3.7	18:30	The role of the organic/inorganic cation and the halide anion on the structural, optical properties and stability of perovskite Hajar Moumine1,2, Hasnae Chfi1, Bernabé Mari Soucase2, Mohammed Abd-Lefdi1, Lahoucine Atourki1 1. Mohammed V University of Rabat, Department of physics, Rabat, Morocco. Email : hajar.moumine@um5r.ac.ma 2. Polytechnic University of Valencia, Institute of Design & Fabrication (IDF), Valencia, Spain Email : hmoumin@doctor.upv.es	W 3.17
18:30	Manufacture of Stable and higher efficiency FA-based lead triiodide perovskites solar cells through doping Amal Bouich, Júlia Mari Guaita, Inmaculada Guaita Pradas, Bernabé Mari, Pablo Palacios. Institut de Disseny i Fabricació, Universitat Politècnica.,València, Spain Dept. Física Aplicada, Universitat Politècnica Madrid, Spain	W 3.8	18:30	Pathway Toward Fabrication of Efficient and Stable Perovskite Solar Modules Narges Yaghoobi Nia1,2*, Mahmoud Zendehe1, Aldo Di Carlo1,2 1. CHOSE, Department of Electronic Engineering, University of Rome Tor Vergata, via del Politecnico 1, 00133 Rome, Italy 2. CNR-ISM Istituto di Struttura della Materia, via del Fosso del Cavaliere 100, 00133 Rome, Italy Email: YAGHOOBI.NIA@ing.uniroma2.it	W 3.18
18:30	Bismuth-based hybrid perovskites for thermoelectrics Vanira Trifiletti, Simona Binetti, Simone Fabiano, Oliver Fenwick Vanira Trifiletti, Simona Binetti Department of Materials Science and Solar Energy Research Center (MIB-SOLAR), University of Milano-Bicocca, Via Cozzi 55, 20125 Milano, IT Vanira Trifiletti, Oliver Fenwick School of Engineering and Materials Science, Queen Mary University of London, 327 Mile End Road, London E1 4NS, UK Simone Fabiano Laboratory of Organic Electronics, Department of Science and Technology, Linköping University, Norrköping, SE.	W 3.9	18:30	Detailed electron nanoscopy investigations on Zn3P2 nanowires with photovoltaics application Spadaro Maria Chiara1*, Escobar-Steinval Simon2,3, Dzade Nelson Y.4, Martí-Sánchez Sara1, Torres-Vila Pol1, Fontcuberta i Morral Anna2 and Arbiol Jordi1,5 1. Catalan Institute of Nanoscience and Nanotechnology (ICN2), CSIC and BIST, Campus UAB, Bellaterra, 08193 Barcelona, Catalonia, Spain. 2. Laboratory of Semiconductor Materials, Institute of Materials, Ecole Polytechnique Fédérale de Lausanne, 1015 Lausanne, Switzerland 3. Center for Analysis and Synthesis and NanoLund, Lund University, Box 124, 221 00 Lund, Sweden 4. School of Chemistry, Cardiff University, CF10 3AT Cardiff, United Kingdom 5. ICREA, Pg Lluís Companys 23, 08010 Barcelona, Catalonia, Spain. * Email: mariachiara.spadaro@icn2.cat	W 3.19
18:30	An innovative Wireless Energy Transfer System based on thermoelectric devices powered by an incident high-power laser beam M. M. Maia, A. L. Pires, M. Rocha, A. M. Pereira IFIMUP - Institute of Physics for Advanced Materials, Nanotechnology and Photonics, Faculdade de Ciências da Universidade do Porto, 4169-007 Porto, Portugal	W 3.10	18:30	Efficient Perovskite Solar Cells using Enamine-derived Hole Transporting Materials Deimante Vaitukaityte1, Minh Anh Truong2, Yasuko Iwasaki2, Richard Murdey2, Kasparas Rakstys1*, Atsushi Wakamiya2*, Vytautas Getautis1* 1. Department of Organic Chemistry, Kaunas University of Technology, Lithuania. Email: deimante.vaitukaityte@ktu.lt 2. Institute for Chemical Research, Kyoto University, Japan	W 3.20
18:30	Liquid Crystal Based New Generation Organic Photovoltaics Nimet Yilmaz Canli1* 1. Yildiz Technical University, Department of Physics, 34210 Istanbul, Turkey. Email: niyilmaz@yahoo.com, niyilmaz@yildiz.edu.tr	W 3.11	18:30	Novel Organic Materials for the Redox Flow Batteries: Implementation of Triarylamine and Phenazine Core Structures Elena I. Romadina 1,*, Keith J. Stevenson 1 1. Skolkovo Institute of Science and Technology, Bolshoy Boulevard 30, 1, Moscow, Russia Email: Elena.Romadina@skoltech.ru	W 3.21
18:30	Stepping towards net zero goals with green powered charging stations Jayasree K S, Sahana L, Toni Zhimomi, Bhagyasree, Shweta Kalia Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)GmbH Email: ksjayasree97@gmail.com, sahana.l@giz.de, toni.zhimomi@giz.de, bhagyasree.bhagyasree@giz.de, shweta.kalia@giz.de	W 3.12			