MATSUS Spring 2026 Conference (MATSUSSpring26)

I3 Next-Generation Photonics: Emerging Trends and Innovations in Photon Sources, Detectors, and Photonic Technologies with Halide Perovskite Materials

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Emmanuelle Deleporte, Blas Garrido and Juan P. Martínez Pastor

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
March 25th - Day 3 (Wednesday)	
08:50 - 09:00	**Opening I3 - Room Marítima 1**
	I3-31 Chair: Blas Garrido
09:00 - 09:30 I3-31-I1	Giovanni Vescio *(Departament Enginyeria Electrònica, Universitat Politècnica Catalunya, c/ Jordi Girona 3-1, 08034, Barcelona, Spain)* Inkjet-Printed Perovskite Quantum Dots for Optical Biosensors: Materials, Processes, and Device Performance.
09:30 - 10:00 I3-31-I2	Cédric MAYER *(Université Paris-Saclay, ENS Paris-Saclay, CNRS, LuMIn, 91190, Gif-sur-Yvette, France.)* Green PeLEDs with High Luminance and Suppressed Roll-Off via Engineered Bilayer Perovskite Nanocrystals
10:00 - 10:15 I3-31-O1	Emmanuel Reyes-Francis *(Institut de Ciència dels Materials (ICMUV), Universitat de València. Catedrático José Beltrán 2, 46980 Paterna, Valencia, Spain)* Cooperative Emission and Structural Order: Self-Assembled CsPbBr3 Perovskite Quantum Dot Superlattices Embedded in Two-Photon Polymerization Resins
10:15 - 10:30 I3-31-O2	Matteo L. Zaffalon *(Dipartimento di Scienza dei Materiali, Università degli Studi di Milano Bicocca, via Roberto Cozzi 55, I-20125, Milano, Italy)* Radiation-Triggered Superfluorescent Scintillation in Quantum-Ordered Perovskite Nanocrystal Superlattices
10:30 - 11:15	**Coffee Break**
	I3-32 Chair: Juan P. Martínez Pastor
11:15 - 11:45 I3-32-I1	Éric Gros-Daillon *(Univ. Grenoble Alpes, CEA, Leti, 38000, Grenoble, France)* Ionic Migration in CsPbBr3 Radiation Detectors revealed by operando X-ray fluorescence and X-ray Diffraction
11:45 - 12:00 I3-32-O1	Humberto Emmanuel Sánchez *(Instituto de Ciencia de los Materiales de la Universitat de València (ICMUV), Paterna 46980, Valencia, España)* Advancing Perovskite Photodetector Architecture: High-Speed p-i-n Devices and Prospects for Blade-Coated Large-Area Integration
12:00 - 12:15 I3-32-O2	Nil Monrós Oliveras *(Molecular Imaging and Photonics, Department of Chemistry, Katholieke Universiteit Leuven, Celestijnenlaan 200F, 3001 Leuven, Belgium)* CsPbBr3 Microcrystals Washing Strategy Enabling Low Dark Current and Improved Limit of Detection for X-ray Detection
12:15 - 12:45 I3-32-I2	Junaid Khan *(MIND-IN2UB, Department of Electronics and Biomedical Engineering, University of Barcelona, Carrer Martí i Franquès 1, 08028, Barcelona, Spain)* Graphene Meets Perovskite: Pushing the Limits of Photodetection
	I3-33 Chair: Emmanuelle Deleporte
15:00 - 15:30 I3-33-I1	Agustín Mihi *(Institut de Ciència de Materials de Barcelona (ICMAB-CSIC), Spain)* Scalable Chiral Photonics for Circularly Polarized Light Emission

15:30 - 15:45 I3-33-O1	Joseph Luther *(National Renewable Energy Laboratory)* Chirality Transfer and Spin Selectivity in Hybrid Metal Halide Semiconductors
15:45 - 16:15 I3-33-I2	Giuseppe Ammirati *(Istituto di Struttura della Materia - CNR (ISM-CNR), EuroFEL Support Laboratory (EFSL), Via del Fosso del Cavaliere 100, 00133, Rome, Italy.)* Charge Dynamics in Thin Films of Mixed-Dimensional Quasi-2D Perovskites
16:15 - 16:30 I3-33-O2	Jose Moreno-Tanco *(Instituto de Ciencia de los Materiales de la Universidad de Valencia (ICMUV), 46980, Paterna, Valencia, Spain.)* Optoelectronic Properties of Two-Dimensional Metal Halide Perovskites
16:30 - 16:45 I3-33-O3	Davoud Raeyani *(Instituto de Ciencia de los Materiales de la Universitat de València (ICMUV), Paterna 46980, Valencia, Spain)* Fast Response Quasi-2D/3D FASnI$_3$ Perovskite Photodiodes enabled by Thiophene-2-Ethylammonium Halide Engineering
16:45 - 17:00 I3-33-O4	Fady Elhady *(Institut de Ciència dels Materials (ICMUV), Universitat de València. Catedrático José Beltrán 2, 46980 Paterna, Valencia, Spain)* Evaluating Key Performance Metrics of Inverted Lead and Tin Perovskite Photodiodes: A Comparative Study
17:00 - 17:30 I3-33-I3	Géraud DELPORT *(Institut Photovoltaïque d'Île de France (IPVF), UMR 9006, CNRS, Ecole Polytechnique – IP Paris, Chimie Paristech – PSL, 18 boulevard Thomas Gobert, 91120 Palaiseau, France)* Ultralow-Bandgap Lead-Free Halide Perovskites Based on Mixed-Valence Gold Assemblies: From Materials Design to Light Absorption and Emission
20:00 - 22:00	**Social Dinner**

March 26th - Day 4 (Thursday)

	I3-41 Chair: Blas Garrido
09:00 - 09:30 I3-41-I1	Adelio Mendes *(LEPABE - Laboratory for Process Engineering, Environment, Biotechnology and Energy, Faculty of Engineering, University of Porto, Rua Dr. Roberto Frias, 4200-465 Porto, Portugal)* Advancements in PSC Stability, Lead Mitigation, and Circularity
09:30 - 10:00 I3-41-I2	Zhuoying Chen *(Laboratoire de Physique et d'Etude des Matériaux (LPEM), ESPCI Paris, PSL University, Sorbonne Université, CNRS UMR 8213, 10 Rue Vauquelin, F-75005 Paris, France)* Nanothermometry for Stable Perovskite Solar Cells
10:00 - 10:30 I3-41-I3	Hernán Míguez *(Institute of Materials Science of Seville, Consejo Superior de Investigaciones Científicas − Universidad de Sevilla (CSIC-US), Américo Vespucio 49, Sevilla, 41092, Spain.)* Exciton-Polaritons in Two-Dimensional Ruddlesden-Popper Perovskite Embedded in Nanoporous Optical Cavities
10:30 - 10:40	**Closing I3**
17:30 - 19:00	**Poster Session**

March 27th - Day 5 (Friday)

09:20 - 10:30 **Plenary Session - Auditorium**

MATSUS Spring 2026 Conference (MATSUSSpring26)

H3 Neuromorphic Materials

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Francesco Chiabrera, Beatriz Noheda and Albert Tarancón

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
March 24th - Day 2 (Tuesday)	
10:30 - 11:15	**Coffee Break**
March 25th - Day 3 (Wednesday)	
08:50 - 09:00	**Opening H3 - Room Port Vell 1**
	H3-31 Chair: Albert Tarancón
09:00 - 09:30 H3-31-I1	Elliot Fuller *(Sandia National Laboratories, Materials Physics Department)* Building Next-Generation Analog Processors with Electrothermally-Activated Electrochemical Random-Access Memory
09:30 - 10:00 H3-31-I2	sami oukassi *(Grenoble Alpes University CEA LETI)* ECRAM as a Resource-Efficient Hardware Platform Enabling Advanced Neuromorphic Computing
10:00 - 10:30 H3-31-I3	S. Spiga *(CNR – IMM, Unit of Agrate Brianza, Italy)* Exploiting Volatile and Non-Volatile Resistive Switching in Oxide Memristors for Unconventional Computing
10:30 - 11:15	**Coffee Break**
	H3-32 Chair: Albert Tarancón
11:15 - 11:45 H3-32-I1	Jordi Sort *(Universitat Autonoma de Barcelona)* Magneto-Ionic Materials for Synaptic Memory and Advanced Computing
11:45 - 12:00 H3-32-O1	Dominic Maria Borgialli *(Institut de Recerca en Energia de Catalunya (IREC))* B-Site Engineering of Voltage-Driven Oxygen Migration: A Comparison of SrFeO3-d and SrFe0.5Co0.5O3-d
12:00 - 12:15 H3-32-O2	Huan Tan *(Departament de Física, Universitat Autònoma de Barcelona, 08193 Bellaterra, Spain)* Light-Controlled Multiferroic Heterostructures for Next-Generation Energy-Efficient Neuromorphic Computing
12:15 - 12:30 H3-32-O3	Xavier Vea Falguera *(Institut de Recerca en Energia de Catalunya (IREC))* Modulation of thermal conductivity through oxygen-stoichiometry variation
12:30 - 13:00 H3-32-I2	Liza Herrera Diez *(C2N, Centre de Nanosciences et de Nanotechnologies, CNRS, University Paris-Saclay)* Magneto-Ionic Synaptic Devices
	H3-33 Chair: Francesco Chiabrera
15:00 - 15:30 H3-33-I1	Regina Dittmann *(Peter-Grünberg-Institute for Electronic Materials (PGI-7), Forschungszentrum Jülich GmbH, Jülich 52425, Germany)* Engineering Band-Alignment in Memristive Oxide Heterostructures
15:30 - 15:45 H3-33-O1	Swapnadeep Poddar *(The Hong Kong University of Science and Technology,)* Engineering Stable Perovskite Nanowire Memristors for Next-Generation Neuromorphic and Memory Devices
15:45 - 16:15 H3-33-I2	Ignasi Fina *(Institut de Ciència de Materials de Barcelona (ICMAB-CSIC), Campus UAB, Bellaterra, Barcelona 08193, Spain)* Epitaxial Ferroelectric HfO_2 as a Platform for Novel Neuromorphic Devices

16:15 - 16:45 H3-33-I3	Mireia Bargalló Gonzalez *(Institute of Microelectronics of Barcelona, IMB-CNM (CSIC), Bellaterra, Spain)* Insights into HfO_2 Memristors: Switching Behavior, Variability, and Synaptic Plasticity
16:45 - 17:00 H3-33-O2	So-Yeon Kim *(Instituto de Tecnología Química (ITQ), Universitat Politècnica de València- Consejo Superior de Investigaciones Científicas (UPV-CSIC), València, 46022 Spain)* Lead-Free Bismuth Halide Perovskite Memristors: Low-Voltage Switching and Dynamic Physical Modeling
20:00 - 22:00	**Social Dinner**

March 26th - Day 4 (Thursday)

	H3-41 Chair: Francesco Chiabrera
09:00 - 09:15 H3-41-O1	Luis Martinez Armesto *(UAB)* Independent Magnetic and Electric Field Control of Magneto-Ionic States for Energy-Efficient Synaptic-Like Functionalities
09:15 - 09:30 H3-41-O2	Irena Spasojevic *(Departament de Física, Universitat Autònoma de Barcelona, 08193 Bellaterra, Spain)* Analog Modulation of Magneto-Ionic States in Nanoscale Dot Arrays for Low-Power Multifunctional Device Platforms
09:30 - 10:00 H3-41-I1	Francesca Borghi *(CIMAINA and Dipartimento di Fisica "A. Pontremoli", Università degli Studi di Milano)* Adaptiveness and Programmability of Self-Assembled Nanostructured Materials to Electrical and Environmental Stimuli: Towards Self-Regulating Computing Systems
10:00 - 10:30 H3-41-I2	Qing Cao *(Department of Materials Science and Engineering, University of Illinois at Urbana-Champaign, Urbana, IL 61801, USA)* Electrochemical random-access memory for deep-learning accelerator
10:30 - 10:40	**Closing H3**
17:30 - 19:00	**Poster Session**

March 27th - Day 5 (Friday)

09:20 - 10:30 **Plenary Session - Auditorium**

MATSUS Spring 2026 Conference (MATSUSSpring26)

D7 Low-Dimenisonal Halide Perovskites – Exploring Unique Challenges and Opportunities in 0D, 1D and 2D Materials

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Kunal Datta, Silvia Motti and Ajay Ram Srimath Kandada

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
March 25th - Day 3 (Wednesday)	
08:50 - 09:00	**Opening D7 - ROOM S11+12**
	D7-31 Chair: Selina Olthof
09:00 - 09:30 D7-31-I1	Song Jin *(University of Wisconsin-Madison, Department of Chemistry)* Noncentrosymmetric 2D Hybrid Halide Perovskites for Ferroelectricity and Rashba Physics
09:30 - 09:45 D7-31-O1	Pabitra Kumar Nayak *(Indian Institute of Technology Delhi, Department of Chemistry)* Optimizing Excited Charge Dynamics in Layered Halide Perovskites through Compositional Engineering
09:45 - 10:15 D7-31-I2	Yifan Dong *(Department of Chemistry, University of California, Riverside, CA 92507)* Spin Dynamics in Chiral 2D Hybrid Organic-Inorganic Perovskites
10:15 - 10:30 D7-31-O2	Mattia Lizzano *(Electron Spectroscopy and Nanoscopy, Istituto Italiano di Tecnologia, Genova 16163, Italy)* Structural Insights into 2D Perovskite Hetero-junctions from Transmission Electron Microscopy
10:30 - 11:15	**Coffee Break**
	D7-32 Chair: Simon Kahmann
11:15 - 11:45 D7-32-I1	Gabriele RAINO *(Institute of Inorganic Chemistry, Department of Chemistry and Applied Biosciences, ETH Zurich, 8093 Zurich, Switzerland.)* Optical phenomena in lead halide perovskite quantum dots
11:45 - 12:15 D7-32-I2	Jovana Millic *(Department of Chemistry, University of Turku, 20500 Turku, Finland.)* 1/1 Layered Hybrid Perovskites for Resistive Switching Memories and Artificial Synapses in Neuromorphic Computing
12:15 - 12:45 D7-32-I3	Selina Olthof *(Chair of Material and Surface Analysis, University Wuppertal, Rainer Gruenter Str 21, 42119 Wuppertal, Germany)* Investigation of the electronic structure of 2D halide perovskites as well as 3D/2D interfaces
13:15 - 15:00	**Lunch Break**
	D7-33 Chair: Silvia Motti
15:00 - 15:30 D7-33-I1	Simon Kahmann *(Institute of Physics, Chemnitz University of Technology, Germany)* Halide perovskites for optical communication - characterisation, optimisation, and limitations
15:30 - 16:00 D7-33-I2	Simon Thébaud *(Université Rennes, INSA Rennes, CNRS, Institut FOTON)* Modeling low-dimensional halide perovskite heterostructures : quantum confinement and excitons in buried quantum dots
16:00 - 16:15 D7-33-O1	Juan F. Galisteo-López *(Institute of Materials Science of Seville, Consejo Superior de Investigaciones Científicas − Universidad de Sevilla (CSIC-US), Américo Vespucio 49, Sevilla, 41092, Spain.)* Energy transport in halide perovskite quantum dot films
16:15 - 16:45 D7-33-I3	Michał Baranowski *(Department of Experimental Physics, Faculty of Fundamental Problems of Technology, Wroclaw University of Science and Technology, 50-370 Wroclaw, Poland)* Optoelectronic Impact of Exciton Fine Structure and Exciton-Phonon Interactions in 2D Perovskites
16:45 - 16:55	**Closing D7**

20:00 - 22:00 **Social Dinner**

March 26th - Day 4 (Thursday)
17:30 - 19:00 **Poster Session**
March 27th - Day 5 (Friday)
09:20 - 10:30 **Plenary Session - Auditorium**

MATSUS Spring 2026 Conference (MATSUSSpring26)

A1 Lead-free perovskites: Fundamentals and device application

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Krishanu Dey, Eline Hutter and Iván Mora-Seró

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
March 24th - Day 2 (Tuesday)	
13:15 - 14:50	**Lunch Break**
14:50 - 15:00	**Opening A1 - Room Port Vell 2**
	A1-23 Chair: Krishanu Dey
15:00 - 15:30 A1-23-I1	Song Jin *(University of Wisconsin-Madison, Department of Chemistry)* Enhancing the Stability and Performance of 2D Tin Halide Perovskites for Lasing and Photovoltaics
15:30 - 16:00 A1-23-I2	Lorenzo Malavasi *(Department of Chemistry and INSTM, University of Pavia, via Taramelli 16, Pavia, 27100, Italy)* Lead-Free Chiral Metal Halides
16:00 - 16:15 A1-23-O1	Ange B Chambissie Kameni *(Institut Photovoltaïque d'Ile-de-France (IPVF), UMR 9006, CNRS, Ecóle Polytechnique, IP Paris, Chimie Paristech, PSL, 91120 Palaiseau, France)* Unveiling Electron-Phonon interactions in Gold Based Lead Free Double Perovskites Cs2Au2X6 (X = Cl, Br, I)
16:15 - 16:30 A1-23-O2	Mohammad Ali Nasiri *(Instituto de Ciencia de los Materiales Universidad de Valencia, C. José Beltrán 2, 46980 Paterna, Spain.)* Amplified Spontaneous Emission in Lead-Free 2D Tin Perovskite Nanoplatelets: A Path to Stable Optoelectronics
16:30 - 16:45 A1-23-O3	Yukta Yukta *(Centre for Analysis and Synthesis, Department of Chemistry, Lund University, P.O. Box 124, Lund 221 00, Sweden)* Lattice Engineering of Lead-Free Layered Double Perovskite Nanocrystals for Photoelectrochemical Applications
16:45 - 17:00 A1-23-O4	Ignacio Sanjuán *(Institute of Advanced Materials (INAM), University Jaume I, Castellon, Spain)* Pb-free Memristors Fabricated With Perovskite-inspired Materials for Neuromorphic Computing.
17:00 - 17:15 A1-23-O5	Jorge Pascual *(Instituto de Tecnología Química (Universitat Politècnica de València − Consejo Superior de Investigaciones Científicas), 46022 Valencia, Spain)* Pre-crystallization Stages of Tin and Lead Halide Perovskites
17:30 - 19:00	**Poster Session**

March 25th - Day 3 (Wednesday)

	A1-31 Chair: Eline Hutter
09:00 - 09:30 A1-31-I1	Qing Shen *(The University of Electro-Communications)* Lead-Free Double-Perovskite Quantum Dots for Next-Generation Optoelectronics: Synthesis, Photophysical Properties, and Device Applications
09:30 - 10:00 A1-31-I2	Lakshminarayana Polavarapu *(CINBIO, Department of Physical Chemistry, Centro de Investigacións Biomédicas)* Chiral Lead-Free Metal Halides
10:00 - 10:30 A1-31-I3	Junsheng Chen *(Nano-Science Center & Department of Chemistry, University of Copenhagen, Universitetsparken 5, KøbenhavnØ 2100, Denmark)* Control of Luminescence in Perovskite-Inspired Lead-Free Halides via Doping and Lattice Distortion
10:30 - 11:15	**Coffee Break**
	A1-32 Chair: Iván Mora-Seró
11:15 - 11:45 A1-32-I1	Pablo P. Boix *(Instituto de Tecnología Química (ITQ), Universitat Politècnica de València- Consejo Superior de Investigaciones Científicas (UPV-CSIC), València, 46022 Spain)* Embracing Chemical Dynamics in Tin-Based Perovskites for Degradation Monitoring and Recovery
11:45 - 12:00 A1-32-O1	Raphael Neisius *(Italian Institute of Technology, Centre for Sustainabe Future Technology, Turin, 10144, Italy)* Mitigation of Particle Size-Dependent Instability Effects of Tin Halide Perovskites
12:00 - 12:15 A1-32-O2	Qianrui Li *(Molecular Imaging and Photonics, KU Leuven, Belgium)* Bifunctional Polymer-Assisted Growth of Crack-Free Thick Perovskite Films for Flexible X-ray Detection
12:15 - 12:30 A1-32-O3	Bhawna Kamboj *(Indian Institute of Technology Delhi, Department of Chemistry)* Unraveling A-Site Cation Control of Hot Carrier Relaxation in Vacancy-Ordered Halide Perovskites Through Quantum Dynamics and Interpretable Machine Learning
12:30 - 13:00 A1-32-I2	Daniele Meggiolaro *(Computational Laboratory for Hybrid and Organic Photovoltaics - Istituto CNR di Scienze e Tecnologie Chimiche (SCITEC-CNR) c/o Department of Chemistry, Biology and Biotechnologies, University of Perugia Via Elce di Sotto 8, 06123 Perugia, Italy)* The Challenging Route Towards Stable and Efficient Tin-Halide Perovskite Solar Cells: a Computational Perspective
13:00 - 13:15 A1-32-O4	Ricardo Vergaz Benito *(GDAF-UC3M, Dep. Tecnología Electrónica, Universidad Carlos III de Madrid, Avda. Universidad s/n, 28911, Leganés, Madrid)* Comparative Analysis of Pb-Free Perovskite and Silicon Solar Cells for Indoor Battery-Free Energy Harvesting in BLE IoT Systems
13:15 - 13:25	**Closing A1**
13:15 - 14:50	**Lunch Break**
20:00 - 22:00	**Social Dinner**

March 27th - Day 5 (Friday)

09:20 - 10:30 **Plenary Session - Auditorium**

MATSUS Spring 2026 Conference (MATSUSSpring26)

H2 Halide perovskites for quantum technologies

Barcelona, Spain, 2026 March 23rd - 27th

Conference Chairs: Quinten Akkerman, Simon Boehme and Maksym Kovalenko

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
11:15 - 11:25	**Opening H2 - Room Port Vell 1**
	H2-12 Chair: Ivan Infante
11:25 - 11:55 H2-12-I1	Carole Diederichs *(Laboratoire de Physique de l'ENS, Université PSL, CNRS, Sorbonne Université, Université Paris Cité, 75005 Paris, France)* Quantifying cQED figures of merit in single perovskite quantum dots using a tunable microcavity
11:55 - 12:25 H2-12-I2	Hendrik Utzat *(Massachusetts Institute of Technology (MIT))* Frequency-Resolved 2D-g(2) Measurements Reveal Triexciton Features in Cesium Lead Bromide Perovskite Nanocrystals
12:25 - 12:40 H2-12-O1	Marina Cagnon Trouche *(Laboratoire de physique de l'Ecole Normale Supérieure, ENS, Université PSL, CNRS, Sorbonne Université, Université de Paris, Paris, 75005 France)* Optical Properties of Single CsPbBr3 Perovskite Quantum Dots Synthesized by a Modified LARP Method
12:40 - 12:55 H2-12-O2	Gauttam Dash *(New Chemistry Unit, International Centre for Materials Science and School of Advanced Materials, Jawaharlal Nehru Centre for Advanced Scientific Research, Jakkur, Bangalore-560064, India)* Magneto-Optical Probing of Lattice Distortion Induced Magnetism in Quantum-Confined $CsPbX_3$ (X=Cl, Br) Nanocrystals
13:15 - 14:45	**Lunch Break**
	H2-13 Chair: Carole Diederichs
15:00 - 15:15 H2-13-O1	Philipp Gebauer *(Department of Physics, University of Konstanz, 78464 Konstanz, Germany,)* Exploring Fluctuations in Individual Halide-Perovskite Nanocrystals using Heralded Spectroscopy
15:15 - 15:45 H2-13-I1	Kyoung-Duck Park *(Pohang University of Science and Technology (POSTECH))* Tip-Enhanced Strong Coupling and Nano-Optical Trapping Spectroscopy of Single Quantum Dots
15:45 - 16:15 H2-13-I2	Brahim Lounis *(University of Bordeaux, Institut d'Optique & CNRS, France)* Exciton Fine Structure and Coherent Single-Photon Emission in Lead-Halide Perovskite
16:15 - 16:45 H2-13-I3	Grigorios Itskos *(Experimental Condensed Matter Physics Laboratory, Department of Physics, University of Cyprus, Nicosia 1678, Cyprus)* Amplified Spontaneous Emission in Metal Halide Perovskite Nanocrystals: From Glassy Thin Film Waveguides to Ordered Superlattice Structures
16:45 - 17:15 H2-13-I4	Ilya Akimov *(Experimentelle Physik 2, Technische Universität Dortmund, Germany)* Coherent Optical Spectroscopy of Excitons in Halide Perovskites
17:15 - 17:45 H2-13-I5	Ron Tenne *(Shulich faculty of chemistry, Technion Israel)* Observing Fast Phase Transitions in Individual Nanocrystals through Single-Photon Detection

March 24th - Day 2 (Tuesday)

H2-21
Chair: Sergio Brovelli

09:00 - 09:30 H2-21-I1 Simon Thébaud *(Univ. Rennes, INSA Rennes, CNRS, Institut FOTON - UMR6082, F-35000 Rennes, France.)*
Theory of Excitonic States and their Fine Structure in Halide Perovskite Quantum Dots

09:30 - 10:00 H2-21-I2 Ivan Infante *(BCMaterials, Basque Center for Materials, Applications, and Nanostructures, UPV/EHU Science Park, Leioa, Spain)*
Machine Learning in Quantum-Dot Computational Chemistry: Challenges and Opportunities

10:00 - 10:15 H2-21-O1 Zeli Xu *(Univ Rennes, INSA Rennes, CNRS, Institut FOTON-UMR 6082 F-35000, Rennes, France)*
Influence of the Anharmonicity and Phase Transitions on the Fröhlich Electron-Phonon Coupling of CsPbBr3: A First-Principles Study

10:15 - 10:30 H2-21-O2 Mikhail Nestoklon *(Technische Universität Dortmund, 44227 Dortmund, Germany)*
Anisotropic Photostriction and Deformation Potentials in Perovskite Semiconductors

10:30 - 11:15 **Coffee Break**

H2-22
Chair: Grigorios Itskos

11:15 - 11:30 H2-22-O1 Aliki Souzou *(Experimental Condensed Matter Physics Laboratory Department of Physics, University of Cyprus, Nicosia 1678, Cyprus)*
Exciton-plasmon interactions in superlattices of CsPbBr3 nanocrystals and Au nanoparticles

11:30 - 12:00 H2-22-I1 Yitong Dong *(Department of Chemistry and Biochemistry, University of Oklahoma, Norman OK, 73019, USA)*
Towards Non-blinking and Photostable Single-photon Sources Based on Halide Perovskite Quantum Dots

12:00 - 12:30 H2-22-I2 Maryna Bodnarchuk *(Empa-Swiss Federal Laboratories for Materials Science and Technology, 8600 Dübendorf, Switzerland)*
Shape-Engineered $CsPbBr_3$ Nanorods as Tunable Quantum Emitters

12:30 - 13:00 H2-22-I3 Sergio Brovelli *(Dipartimento di Scienza dei Materiali, Università degli Studi di Milano-Bicocca, Via R. Cozzi 55, 20125, Milano, Italy)*
From High-Z Sensitization to Cooperative Emission: Perovskite Nanoscintillators Beyond Classical Limits

13:00 - 13:10 **Closing H2**

13:15 - 14:45 **Lunch Break**

17:30 - 19:00 **Poster Session**

March 25th - Day 3 (Wednesday)
20:00 - 22:00 **Social Dinner**
March 27th - Day 5 (Friday)
09:20 - 10:30 **Plenary Session - Auditorium**

MATSUS Spring 2026 Conference (MATSUSSpring26)

G3 Stability Challenges and Solutions in metal halide Perovskites materials

Barcelona, Spain, 2026 March 23rd - 27th

Conference Chairs: Andres Fabian Gualdron Reyes, Sofia Masi and Teresa S. Ripolles

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
March 24th - Day 2 (Tuesday)	
14:50 - 15:00	**G3 Opening - Room A3**
	G3-23 Chair: Andres Fabian Gualdron Reyes
15:00 - 15:30 G3-23-I1	Dmitry Baranov *(Division of Chemical Physics and NanoLund, Lund University, Sweden)* Stability and Structure Engineering of Perovskite Nanocrystal Superlattices Using Mixed Ligands
15:30 - 15:45 G3-23-O1	Joshua R. S. Lilly *(Clarendon Laboratory, Department of Physics, University of Oxford)* Unravelling the Impact of Halide Alloying on the Phase Segregation of Mixed-Halide Perovskites via Multimodal In-Situ Spectroscopy
15:45 - 16:00 G3-23-O2	Nikolaos Tzoganakis *(Department of Electrical & Computer Engineering, Hellenic Mediterranean University (HMU), Heraklion 71410, Crete, Greece.)* Passivation Engineering for Wide-Bandgap Perovskites Under Solar and Artificial Illumination
16:00 - 16:15 G3-23-O3	Klara Kiselman *(Division of Solar Cell Technology, Department of Material Science and Engineering, Uppsala University, Uppsala, Sweden)* Microscopic Analysis of Heat and Light Induced Degradation in Evaporated Perovskite Films
16:15 - 16:20 G3-23-S1	Elisa Collado *(Wiley-VCH)* Publish in Wiley's Advanced Portfolio – Where Breakthrough Research Finds Its Voice
16:20 - 16:50 G3-23-I2	Loreta Muscarella *(Department of Physics and Astronomy, Faculty of Sciences, Vrije Universiteit Amsterdam)* When Soft Becomes Strong: Thermal Robustness in Metal-Free Halide Perovskites
17:30 - 19:00	**Poster Session**

March 25th - Day 3 (Wednesday)

	G3-31 Chair: Andres Fabian Gualdron Reyes
09:00 - 09:30 G3-31-I1	Iván Infante *(BCMaterials - Basque center for materials, applications & nanostructures)* Quantum Dot Space: A Web Platform for Building, Exploring, and Sharing Quantum-Dot Structures
09:30 - 10:00 G3-31-I2	Joseph Luther *(National Renewable Energy Lab (NREL))* The Role of Double Transport Layers on the Stability and Performance of Perovskite Solar Cells
10:00 - 10:30 G3-31-I3	Rafael Abargues *(Instituto de Ciencia de los Materiales de la Universitat de València (ICMUV), Paterna 46980, Valencia, Spain)* Beyond Conventional Approaches: In Situ Synthesis of Perovskite Nanocrystals for Advanced Optoelectronic Applications
10:30 - 11:15	**Coffee Break**
	G3-32 Chair: Sofia Masi
11:15 - 11:30 G3-32-O1	Azat Akbulatov *(Federal Research Center for Problems of Chemical Physics and Medicinal Chemistry of the Russian Academy of Sciences, Russia)* The Influence of ZnO Surface on the Stability of Perovskite Films and Solar Cells
11:30 - 11:45 G3-32-O2	Fernando Solorio Soto *(University of Ljubljana, Faculty of Electrical Engineering, Trzaska cesta 25, SI-1000 Ljubljana, Slovenia)* ALD ZnO Films for Stable Inverted Perovskite Solar Cells
11:45 - 12:15 G3-32-I1	Fengning Yang *(Department of Physics, Clarendon Laboratory, University of Oxford, Oxford OX1 3PU, U.K)* Interfacial Strategies to Maintain Charge Transport and Extraction under Thermal and Illumination Ageing Condition
12:15 - 12:30 G3-32-O3	Chao Liu *(Institute of Materials for Electronics and Energy Technology (i-MEET), Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Martensstr. 7, 91058 Erlangen, Germany)* A Simultaneous Synergistic Protection Mechanism in Hybrid Perovskite-Organic Multi-junctions Enables Long-Term Stable and Efficient Tandem Solar Cells
13:15 - 15:00	**Lunch Break**
	G3-33 Chair: Teresa S. Ripolles
15:00 - 15:30 G3-33-I1	Stefania Cacovich *(Institut Photovoltaïque d'Ile-de-France (IPVF), UMR 9006, CNRS, Ecole Polytechnique, IP Paris, Chimie Paristech, PSL, 91120 Palaiseau, France)* Multimodal Photoluminescence Imaging of Halide Perovskite Materials and Solar Cells
15:30 - 15:45 G3-33-O1	Vladimir Shilovskikh *(Professur für Neuartige Elektronik Technologien, Technische Universität Dresden, Nöthnitzer Str. 61, 01187, Dresden, Germany.)* Hidden Degradation Trigger for CsPbI3 Perovskite Solar Cells
15:45 - 16:00 G3-33-O2	Guillem Álvarez Pérez *(Institut Photovoltaïque d'Île de France (IPVF), UMR 9006, CNRS, Ecole Polytechnique – IP Paris, Chimie Paristech – PSL, 18 boulevard Thomas Gobert, 91120 Palaiseau, France)* Coupled Characterization and Modelling in Perovskite Solar Cells Under Dark and Light Conditions: Insights into Experimental Recovery
16:00 - 16:10	**G3 Closing**
20:00 - 22:00	**Social Dinner**

March 27th - Day 5 (Friday)

09:20 - 10:30 **Plenary Session - Auditorium**

MATSUS Spring 2026 Conference (MATSUSSpring26)

G5 In Situ and Operando Characterization Across Disciplines: Advanced Lab-Based Techniques for Energy Conversion Research

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Johanna Eichhorn and Verena Streibel

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
March 25th - Day 3 (Wednesday)	
20:00 - 22:00	**Social Dinner**
March 26th - Day 4 (Thursday)	
08:50 - 09:00	**Opening G5 - ROOM A4**
	G5-41 Chair: Verena Streibel
09:00 - 09:30 G5-41-I1	Gertjan Koster *(University of Twente)* In Situ and Operando Techniques during Fabrication and Usage of Transition Metal Oxide Thin Films
09:30 - 09:45 G5-41-O1	Katarina S. Flashar *(Walter Schottky Institute, Technical University of Munich, Am Coulombwall 4, 85748 Garching, Germany)* Lab-Based NAP-XPS for Probing Photoelectrochemical Interfaces: The Case of CuBi2O4
09:45 - 10:00 G5-41-O2	Gergely Samu *(ELI ALPS, ELI-HU Non-Profit Ltd., Wolfgang Sandner street 3., Szeged, H-6728 Hungary)* Spectroelectrochemical Insights on the Stability and Charge Transfer Kinetics of Metal-halide Perovskite Systems
10:00 - 10:30 G5-41-I2	Serhiy Cherevko *(Helmholtz-Institute Erlangen-Nuremberg for Renewable Energy (IET-2), Forschungszentrum Jülich GmbH, Cauerstr. 1, 91058, Erlangen, Germany)* Gas Diffusion Electrode Half-Cell Setups in Fuel Cells and Water Electrolysis Research
	G5-42 Chair: Johanna Eichhorn
11:15 - 11:45 G5-42-I4	Artem Bakulin *(Department of Chemistry, Imperial College London, UK)* Infrared Action Spectroscopy of Charge Transport and Trapping Dynamics in Operando Perovskite Solar Cells and Light-Emitting Diodes
11:45 - 12:15 G5-42-I1	Stefan Weber *(Institute for Photovoltaics(ipv), University of Stuttgart,70569 Stuttgart, Germany;)* Multimodal Microscopy of Nanoscale Photovoltaic Function in Hybrid Perovskites
12:15 - 12:45 G5-42-I2	CORINA ANDRONESCU *(Chemical Technology III, Faculty of Chemistry and CENIDE; University of Duisburg-Essen, Carl-Benz-Straße199, 47057 Duisburg/Germany)* Electrocatalyst Materials: What can we learn at the Nanoscale?
12:45 - 13:15 G5-42-I3	Thomas Lunkenbein *(Inorganic Chemistry and Bavarian Center for Battery Technology (BayBatt), University of Bayreuth, Universitätsstraße 30, 95447 Bayreuth, Germany.)* Materials for Energy Conversion: what Operando Electron Microscopy can Reveal
13:15 - 14:45	**Lunch Break**
	G5-43 Chair: Verena Streibel
15:00 - 15:30 G5-43-I1	María Escudero-Escribano *(Catalan Institution for Research and Advanced Studies (ICREA), Pg. Lluís Companys 23, 08010 Barcelona, Spain)* Unveiling Electrocatalytic Interfaces in Real Time Through in situ Investigations

15:30 - 15:45 G5-43-O1	Gabriel Floriano Costa *(Catalan Institute of Nanoscience and Nanotechnology (ICN2), CSIC and the Barcelona Institute of Science and Technology (BIST), Building ICN2, Campus UAB, E-08193 Bellaterra, Barcelona, Spain)* Unraveling the Dynamics of Nitrate Electroreduction on Silver with Time-resolved Surface Enhanced Raman Spectroscopy
15:45 - 16:15 G5-43-I2	Mónica Burriel *(Université Grenoble Alpes, CNRS, Grenoble-INP, LMGP, Grenoble, France)* A Universal Isotope Exchange Raman Spectroscopy (IERS) Method for In Situ Measurement of Oxygen Surface Exchange Kinetics Using a Probe Layer
16:15 - 16:25	**Closing G5**
17:30 - 19:00	**Poster Session**

March 27th - Day 5 (Friday)

09:20 - 10:30 **Plenary Session - Auditorium**

MATSUS Spring 2026 Conference (MATSUSSpring26)

A5 From halide perovskites to perovskite-inspired materials – Synthesis, Modelling and Application

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Gustavo de Miguel, Lorenzo Malavasi and Isabella Poli

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
11:15 - 11:25	**Opening A5 - Room Port Vell 3**
	A5-12 Chair: Lorenzo Malavasi
11:25 - 11:55 A5-12-I1	Saiful Islam *(University of Oxford, UK)* From Lead to Mixed Lead-Tin Perovskites: Exploring Transport and Passivation Mechanisms on the Atomic Scale.
11:55 - 12:10 A5-12-O1	Juan Alberto Gonzalez Cuevas *(Facultad de ingeniería, Universidad Nacional de Asunción, Paraguay)* Numerical Drift-Diffusion Analysis of Current Flow and Photoelectric Effect in Metal Halide Perovskite-Silicon Tandem Solar Cell Considering Temperature, Structure and Doping Effects for Device Optimization.
12:10 - 12:25 A5-12-O2	Dmitry Aldakov *(Univ. Grenoble Alpes, CEA, CNRS, IRIG-SyMMES, 38000 Grenoble, France.)* Bismuth-Based Halide Perovskites Confined in Mesoporous Matrices for CO2 Photoreduction
12:25 - 12:55 A5-12-I2	Edoardo Mosconi *(Computational Laboratory for Hybrid and Organic Photovoltaics - Istituto CNR di Scienze e Tecnologie Chimiche (SCITEC-CNR) c/o Department of Chemistry, Biology and Biotechnologies, University of Perugia Via Elce di Sotto 8, 06123 Perugia, Italy)* Computational Modeling of Perovskite for Photovoltaics and Catalysis
13:15 - 14:45	**Lunch Break**
	A5-13 Chair: Saiful Islam
15:00 - 15:30 A5-13-I1	Petra Cameron *(Department of Chemistry, University of Bath, Claverton Down, Bath BA2 7AY, United Kingdom)* Taking Advantage of Ion Migration: Can We Use Ions to Make Better Perovskite Devices ?
15:30 - 15:45 A5-13-O1	Wouter Van Gompel *(Hasselt University, Institute for Materials Research (imo-imomec), Hybrid Materials Design (HyMaD), Martelarenlaan 42, B-3500 Hasselt, Belgium.)* 2D Hybrid Perovskites with Tailored Organic Cations to Tune Optical and Electronic Properties
15:45 - 16:15 A5-13-I2	Andrea Listorti *(Department of Chemistry, University of Bari "Aldo Moro", via Orabona 4, 70126, Bari, Italy)* Plasma-Assisted Surface Engineering of Tin-Based Perovskites for Enhanced Photovoltaic Performance
16:15 - 16:45 A5-13-I3	Jovana Milić *(Department of Chemistry, University of Turku, 20500 Turku, Finland)* Supramolecular Engineering for Lead-Free Halide Perovskite Opto(electro)ionics
16:45 - 17:15 A5-13-I4	Iván Mora-Seró *(Institute of Advanced Materials (INAM), Univ. Jaume I, Av. Vicent Sos Baynat, 12071 Castelló, Spain.)* Halide Perovskites Nanocrystals, Powders, Films and Single Crystals for Different Applications

March 24th - Day 2 (Tuesday)

A5-21
Chair: Jovana Milic

09:00 - 09:30 A5-21-I1 Eline Hutter *(Institute for Sustainable and Circular Chemistry, Faculty of Science, Utrecht University, Universiteitsweg 99, 3584 CG Utrecht, The Netherlands)*
Mechanochemical Synthesis Kinetics and Exciton Dynamics of Perovskite-Inspired Materials

09:30 - 10:00 A5-21-I2 Sonia R. Raga *(Catalan Institute of Nanoscience and Nanotechnology (ICN2), CSIC and Barcelona Institute of Science and Technology, UAB Campus, 08193 Bellaterra, Barcelona, Spain)*
Mixed-Halide Cu_2AgBiI_6 with Improved Solar Cell Performance and Retained Structural Integrity and Device Stability under Indoor Operation

10:00 - 10:15 A5-21-O1 Krishnaiah Mokurala *(Faculty of Engineering and Natural Sciences, Tampere University, P.O. Box 541, FI-33014 Tampere, Finland)*
Perovskite-Inspired Cs2AgBi2I9 Photovoltaics: FBT Hole-Transport Layers for High-Efficiency Outdoor and Indoor Operation

10:15 - 10:30 A5-21-O2 Robert Hoye *(Inorganic Chemistry Department, University of Oxford, South Parks Road, Oxford)*
Evaluating the Potential of CsBiSCl2 as a Solar Absorber

10:30 - 11:15 **Coffee Break**

A5-22
Chair: Sonia R. Raga

11:15 - 11:45 A5-22-I1 Silvia Motti *(School of Physics & Astronomy, University of Southampton, SO17 1BJ, Southampton, United Kingdom)*
Charge Carrier Dynamics in Mixed-Phase and Low Dimensional Perovskites

11:45 - 12:00 A5-22-O1 Mauricio Calvo *(Multifunctional Optical Materials Group, Institute of Materials Science of Sevilla, Consejo Superior de Investigaciones Científicas – Universidad de Sevilla (CSIC-US), Américo Vespucio 49, 41092, Sevilla, Spain)*
Optical and Optoelectronic Applications Developed from Functionalization of ABX3 Nanocrystals Embedded in SiO2 Matrices

12:00 - 12:15 A5-22-O2 Jiaxing Du *(University of Oxford, GB)*
Inter-Layer Diffusion of Excitations in 2D Perovskites Revealed by Photoluminescence Reabsorption

12:15 - 12:30 A5-22-O3 Mohammad Reza Golobostanfard *(Department of Chemistry, University of Turku, 20500 Turku, Finland)*
Halide Layered Double Perovskites for Next Generation Optoelectronic Application

12:30 - 13:00 A5-22-I2 Janine George *(BAM Berlin (Bundesanstalt für Materialforschung und -prüfung))*
Robust Data Generation, Heuristics and Machine Learning for Materials Design

13:15 - 14:45 **Lunch Break**

A5-23
Chair: Gustavo de Miguel

15:00 - 15:30 A5-23-I1 Carlo Andrea Riccardo Perini *(Department of Materials Science and Engineering, Georgia Institute of Technology, Atlanta, Georgia, United States)*
Phase and Dimensionality Control in Metal Halide Semiconductors

15:30 - 15:45 A5-23-O1 Susan Rigter *(Vrije University (VU) Amsterdam)*
Metal Free Halide Perovskites: Scalable Synthesis and Thorough Characterization

15:45 - 16:00 A5-23-O2 Marco Moroni *(Department of Chemistry, University of Pavia, Italy)*
Functionality Modulation via Composition and Crystal Structure in Chiral Hybrid Metal Halides

16:00 - 16:15 A5-23-O3 Julia Kraft *(Zernike Institute for Advanced Materials, University of Groningen, Nijenborgh 3, Groningen, 9747AG, The Netherlands.)*
Molecular Inks for Solution Processable Tin Halide and Chalcogenide Perovskites

16:15 - 16:25 **Closing A5**

17:30 - 19:00 **Poster Session**

March 25th - Day 3 (Wednesday)
20:00 - 22:00 **Social Dinner**
March 27th - Day 5 (Friday)
09:20 - 10:30 **Plenary Session - Auditorium**

MATSUS Spring 2026 Conference (MATSUSSpring26)

F1 Safe Materials for Advanced Battery Systems

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Jingwen Weng, Anthony Chun Yin Yuen and Leiting Zhang

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
March 24th - Day 2 (Tuesday)	
08:50 - 09:00	**Opening F1 - Room A1**
	F1-21 Chair: Leiting Zhang
09:00 - 09:30 F1-21-I1	Nuria Tapia-Ruiz *(Department of Chemistry, Imperial College London Molecular Sciences Research Hub, White City Campus 80 Wood Lane, London W12 0BZ, UK)* Electron Paramagnetic Resonance as a Tool to Determine the Sodium Charge Storage Mechanism of Hard Carbon in Na-Ion Batteries
09:30 - 10:00 F1-21-I2	Leiting Zhang *(Department of Chemistry – Ångström Laboratory, Uppsala University, Sweden)* Data-Driven Electrolyte Discovery for Sustainable and Safe Aqueous Batteries
10:00 - 10:30 F1-21-I3	Minshen Zhu *(Chemnitz University of Technology, Germany)* Micro-Origami Meets Batteries: Pushing Energy Storage Boundary below 1 mm2
10:30 - 11:15	**Coffee Break**
	F1-22 Chair: Anthony Chun Yin Yuen
11:15 - 11:45 F1-22-I1	Maria Lukatskaya *(Department of Mechanical and Process Engineering, ETH Zürich, Sonneggstrasse 3, 8092 Zürich, Switzerland)* Tuning Local Chemical Environments for Efficient Aqueous Zn Batteries
11:45 - 12:00 F1-22-O1	Kevin Castelló Lux *(IREC, Catalonia Institute for Energy Research, C/ Jardins de les Dones de Negre 1, Barcelona 08930, Spain)* Li1.5Al0.5Ge1.5(PO4)3 Interface Stabilization via in-situ Formation of Lithium Titanate Layers
12:00 - 12:30 F1-22-I2	Svetlana Menkin *(Department of Chemistry, University of Cambridge, Lensfield Road, Cambridge CB2 1EW, UK)* Detecting Soft Shorts to Enhance Safety and Longevity in Lithium and Zinc Metal Batteries
12:30 - 13:00 F1-22-I3	Aigerim Omirkhan *(Department of Materials, Imperial College London, Exhibition Road, London, SW7 2AZ.)* Nanoscale Analysis of Delithiated NMC811 Cathode Materials: Understanding Battery Degradation using Cryogenic Workflow for Atom Probe Tomography
13:00 - 13:15 F1-22-O2	Rosa Maria González-Gil *(Catalan Institute of Nanoscience and Nanotechnology (ICN2), CSIC and BIST, Campus UAB, Bellaterra, 08193 Barcelona, Spain)* Development of Free-Standing Nanostructured Prussian Blue Electrodes for Zinc-Ion Supercapacitors
13:15 - 14:45	**Lunch Break**
	F1-23 Chair: Jingwen Weng
15:00 - 15:30 F1-23-I1	Jingwen Weng *(Materials, Imperial college London)* Multiscale Mechanisms of Battery Degradation, Gas Dynamics, and Thermal Safety
15:30 - 15:45 F1-23-O1	Irma Houmadi *(School of Metallurgy and Materials, University of Birmingham, Edgbaston B15 2TT, UK)* Characterisation of a High Power 21700 Silicon-Graphite Cell Using Electrochemical and Thermal Diagnosis for Low-Temperature and Long-Term Performance
15:45 - 16:15 F1-23-I2	Xu Hou *(Centre for Analysis and Synthesis, Department of Chemistry, Lund University, P.O. Box 124, Lund 221 00, Sweden)* Unraveling Metal Plating/Stripping Mechanism via Operando EQCM-D

16:15 - 16:45 F1-23-I3	Yang Xu *(Department of Chemistry, University College London, London, UK)* Building Sustainable Potassium Metal Batteries via Realizing Stable Potassium Plating/Stripping
16:45 - 17:00 F1-23-O2	Wenlong Zhang *(Center for Alloy Innovation and Design (CAID), State Key Laboratory for Mechanical Behavior of Materials, Xi'an Jiaotong University, Xi'an, Shaanxi 710049, P. R. China)* Researches of the Medium Temperature Metal Chlorides-Graphite Molten Salt Batteries with Low-cost and High Safety
17:00 - 17:15 F1-23-O3	Benjamin Dumoulin *(CEA, CEA Tech Nouvelle-Aquitaine, Pessac F-33600, France)* Atomic Layer Deposition Thin Film as an Artificial CEI in All-Solid-State Batteries
17:15 - 17:30 F1-23-O4	Leandro Nicolás Bengoa Abraham *(Catalan Institute of Nanoscience and Nanotechnology (ICN2), CSIC and Barcelona Institute of Science and Technology, UAB Campus, 08193 Bellaterra, Barcelona, Spain)* Electrolyte Engineering for Durable, Cheap and Safe Zn-based Technologies
17:30 - 19:00	**Poster Session**

March 25th - Day 3 (Wednesday)

	F1-21 Chair: Jingwen Weng
09:00 - 09:30 F1-21-I1	Simon Fleischmann *(Helmholtz Institute Ulm, Helmholtzstr. 11, 89081 Ulm, Germany)* Regulating Solvent Co-Intercalation Reactions for Safe and Sustainable Battery Chemistries
09:30 - 10:00 F1-21-I2	Qiong Cai *(University of Surrey, UK)* Designing Metal Anode-Electrolyte Interfaces for Safer Lithium Batteries
10:00 - 10:30 F1-21-I3	Francesco Ciucci *(Electrode Design, University of Bayreuth)* In Situ Polymerization Strategies for Interfacial Stability in Solid-State Batteries
10:30 - 10:40	**Closing F1**
10:30 - 11:15	**Coffee Break**
20:00 - 22:00	**Social Dinner**

March 27th - Day 5 (Friday)

09:20 - 10:30 **Plenary Session - Auditorium**

MATSUS Spring 2026 Conference (MATSUSSpring26)

A2 Progress in Narrow-Bandgap Perovskites: Fundamentals and Optoelectronic Applications

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Luis Lanzetta, Tom Macdonald and Monica Morales Masis

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
11:15 - 11:25	**Opening A2 - Room Port Vell 2**
	A2-12 Chair: Tom Macdonald
11:25 - 11:55 A2-12-I1	Laura Herz *(Clarendon Laboratory, Department of Physics, University of Oxford, Parks Road, Oxford OX1 3PU, UK)* Low-Bandgap Halide Perovskites: Optical Probes of Optoelectronic Properties and Stability
11:55 - 12:25 A2-12-I2	Dewei Zhao *(College of Materials Science and Engineering, Sichuan University)* All-Perovskite Tandem Solar Cells
12:25 - 12:40 A2-12-O1	Yueyao Dong *(University College London)* Crystal Growth Modulation of Tin-Lead Halide Perovskites via Chaotropic Agent
12:40 - 13:10 A2-12-I3	Hin-Lap Yip *(Department of Materials Science and Engineering, City University of Hong Kong, Hong Kong SAR, P.R. China)* Molecularly Tailored Interfaces and Additives for Low-Bandgap Sn–Pb Perovskites and Tandem Solar Cells
13:15 - 14:45	**Lunch Break**
	A2-13 Chair: Luis Lanzetta
15:00 - 15:30 A2-13-I1	Rene Janssen *(Department of Chemical Engineering and Chemistry / Applied Physics and Science Education, Eindhoven University of Technology, The Netherlands)* Engineering Compositions and Interfaces of Narrow Bandgap Perovskite Solar Cells
15:30 - 15:45 A2-13-O1	Isabella Taupitz *(Helmholtz-Zentrum für Materialen und Energie GmbH (HZB), 12489 Berlin, Germany)* Unintended Additive-Mediated Relocation of Self-Assembling Molecules Limits Charge Extraction in Sn–Pb based Perovskite Solar Cells
15:45 - 16:15 A2-13-I2	Shuaifeng Hu *(University of Oxford)* Interface and Perovskite Precursor Solution Chemistry Modifications of Narrow Bandgap Perovskites for Multi-Junction Photovoltaics
16:15 - 16:45 A2-13-I3	Robert Westbrook *(Department of Chemical Engineering & Biotechnology, University of Cambridge, Philippa Fawcett Dr, Cambridge CB3 0AS)* Drivers for Photophysical Heterogeneity in Tin-Containing Halide Perovskites
16:45 - 17:15 A2-13-I4	Chieh Ting Lin *(Department of Chemical Engineering, National Chung Hsing University, 145 Xingda Road, Taichung, 402-27, Taiwan)* Regulating Interfacial Recombination and Crystallization Dynamics to Enhance Photovoltage and Stability in Hybrid Sn–Pb Perovskites

March 24th - Day 2 (Tuesday)

	A2-21 Chair: Luis Lanzetta
09:00 - 09:30 A2-21-I1	Maria Antonietta Loi *(Photophysics and OptoElectronics, Zernike Institute for Advanced Materials, University of Groningen, Nijenborgh 3 Groningen, The Netherlands)* Sn/Pb Perovskites Challenges and Opportunities for Photovoltaics
09:30 - 09:45 A2-21-O1	Weidong Xu *(Department of Chemical Engineering and Biotechnology, University of Cambridge, Cambridge CB3 0AS, UK.)* Unveiling Local Inhomogeneities Governing Charge Extraction in Perovskite Solar Cells via Operando Photoluminescence Spectroscopy and Hyperspectral Photoluminescence Microscopy
09:45 - 10:00 A2-21-O2	Yutong Han *(Department of Chemical Engineering & Biotechnology, University of Cambridge, Philippa Fawcett Dr, Cambridge CB3 0AS)* Photonic-Boosted Lead-Tin Perovskite Absorber for All-Perovskite Tandem Solar Cells
10:00 - 10:30 A2-21-I2	Meng Li *(School of Nanoscience and Materials Engineering, Henan University, Kaifeng, 475004 P. R. China)* Environmentally Cycling-Resilient Perovskite Solar Cells via Crystal Surface/Interface Synergistic Engineering
10:30 - 11:15	**Coffee Break**
	A2-22 Chair: Luis Lanzetta
11:15 - 11:45 A2-22-I1	ANNALISA BRUNO *(Energy Research Institute @ Nanyang Technological University (ERI@N), Nanyang Technological University, Singapore, 637553 Singapore)* Vacuum-based Deposition Engineering for Tunable Perovskite
11:45 - 12:15 A2-22-I2	Silver Hamill Turren Cruz *(Instituto de Ciencia de los Materiales de la Universitat de València (ICMUV), Paterna 46980, Valencia, Spain)* Smart Interfaces and Multicomponent Designs for Narrow-bandgap Perovskite Solar Cells
12:15 - 12:45 A2-22-I3	Luis Huerta Hernandez *(Materials Science and Engineering Program (MSE), Physical Sciences and Engineering Division (PSE), King Abdullah University of Science and Technology (KAUST), Thuwal, 23955, Saudi Arabia)* Understanding the Limiting Factors Behind the Operational Stability of Tin-Lead Perovskite Solar Cells: Insights on Composition, Ion Migration, and Chloride Additives
12:45 - 12:55	**Closing A2**
13:15 - 14:45	**Lunch Break**
17:30 - 19:00	**Poster Session**

March 25th - Day 3 (Wednesday)
20:00 - 22:00 **Social Dinner**
March 27th - Day 5 (Friday)
09:20 - 10:30 **Plenary Session - Auditorium**

MATSUS Spring 2026 Conference (MATSUSSpring26)

E3 Photocatalysis for solar fuel and chemical synthesis

Barcelona, Spain, 2026 March 23rd - 27th

Conference Chairs: Demetra Achilleos, Virgil Andrei and Sixto Gimenez Julia

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
March 25th - Day 3 (Wednesday)	
20:00 - 22:00	**Social Dinner**
March 26th - Day 4 (Thursday)	
08:50 - 09:00	**Opening E3 - Room Auditorium**
	E3-11 Chair: Demetra Achilleos
09:00 - 09:30 E3-11-I1	Ludmilla Steier *(Univeristy of Oxford)* Understanding Defect Chemistry in Photo- and Electrocatalysis and the Importance of Surface Area Considerations
09:30 - 09:45 E3-11-O1	Setareh Orangpour *(Chemistry and Structure of novel Materials, University of Siegen, Germany)* Synergistic Enhancement of Photocatalytic Hydrogen Evolution via Phosphonic SAMs and Iridium Single-Atoms on TiO_2 Nanotubes
09:45 - 10:00 E3-11-O2	Beatriz de Sola *(Instituto de Ciencia de Materiales de Sevilla (CSIC-US), ES)* Resonant Cavity Enhanced Visible Light Photocatalysis
10:00 - 10:30 E3-11-I2	Markus Niederberger *(Swiss Federal Institute of Technology (ETH Zurich))* Gas-Phase Photocatalysis with Nanoparticle-Based Aerogels
10:30 - 11:15	**Coffe Break**
	E3-12 Chair: Demetra Achilleos
11:15 - 11:45 E3-12-I1	Katherine Villa *(ICIQ, Institute of Chemical Research of Catalonia, Tarragona, Spain.)* Visible-Light-Driven Photocatalysts for CO2 Conversion and Microplastic Removal
11:45 - 12:00 E3-12-O1	Andrea Rogolino *(University of Cambridge)* Floatable Photocatalysts for Solar Chemistry at the Liquid-Liquid Interface
12:00 - 12:15 E3-12-O2	Bob C. Schroeder *(UCL)* Controlling Electron Spin Polarisation in Organic Semiconductors for Photocatalytic Water Splitting
12:15 - 12:30 E3-12-O3	Muhammed Rishan *(Faculty of Health and Life Sciences, Department of Applied Sciences, Northumbria University, Newcastle, NE1 8ST, United Kingdom)* Engineering Microbe-Material Interface to produce Solar Chemicals and Fuels from CO2
13:15 - 14:45	**Lunch Break**
	E3-13 Chair: Virgil Andrei
15:00 - 15:15 E3-13-O1	Andres F. Gualdron-Reyes *(Facultad de Ciencias, Instituto de Ciencias Químicas, Isla Teja, Universidad Austral de Chile, 5090000, Valdivia, Chile.)* Stable 2D Sn and 3D Pb Halide Perovskites for Triggering Photo(electro)chemical Reactions in Polar Environments
15:15 - 15:45 E3-13-I1	Liberato Manna *(Nanochemistry, Istituto Italiano di Tecnologia, Genova 16163, Italy)* Halide Perovskite Nanocrystals Heterostructures
15:45 - 16:15 E3-13-I2	Iván Mora-Seró *(Institute of Advanced Materials (INAM), Univ. Jaume I, Av. Vicent Sos Baynat, 12071 Castelló, Spain.)* Halide perovskite for photocatalytic applications

16:15 - 16:45 E3-13-I3	Raquel Galian *(Department of Organic Chemistry, Institute of Molecular Science, University of Valencia.)* Semiconductor-Based Photocatalysts for Visible-Light Driven Organic Transformation
16:45 - 17:00 E3-13-O2	Zhifan Cheng *(School of Materials Science and Engineering, Nanyang Technological University)* Graphite-Encapsulated Perovskite Photoelectrodes for Durable Solar-Driven PEC Applications
17:00 - 17:15 E3-13-O3	Annalisa Polo *(Ricerca sul sistema energetico RSE SpA)* Earth-Abundant Photoelectrodes for Tandem Photoelectrochemical Water Splitting
17:30 - 19:00	**Poster Session**

March 27th - Day 5 (Friday)

09:20 - 10:30	**Plenary Session - Auditorium**
	E3-22 Chair: Sixto Gimenez Julia
11:15 - 11:45 E3-22-I1	Jingshan Luo *(Institute of Photoelectronic Thin Film Devices and Technology, Nankai University, Tianjin 300350, China)* Photo & Electro Catalysis for Sustainable Fuel Production
11:45 - 12:00 E3-22-O1	Antonio Barile *(Dipartimento di Fisica e Astronomia, Università di Bologna, Viale Berti Pichat 6/2, 40127 Bologna, Italy)* High-throughput Technique from Deposition to Products Characterization in CO2 Reduction Reaction
12:00 - 12:15 E3-22-O2	Irene Carrai *(Department of Physics and Astronomy. University of Bologna, 40127 Bologna (Italy).)* Stand-Alone Photoelectrochemical-Photovoltaic System with Dichroic Spectral Splitting
12:15 - 12:45 E3-22-I2	Maria Vittoria DOZZI *(Dipartimento di Chimica, Università degli Studi di Milano, Via Golgi 19, 20133 Milano, Italy)* BiVO4 and CuWO4-based Photoanodes for Solar Energy Conversion
12:45 - 13:00 E3-22-O3	Matyas Daboczi *(HUN-REN Centre for Energy Research)* Improving the Stability of Organic Tandem Photoanodes for Bias-Free Solar Water Oxidation
13:00 - 13:10	**Closing E3**

MATSUS Spring 2026 Conference (MATSUSSpring26)

D6 Emerging Low-Dimensional Perovskite Emitters- Synthesis, Photophysics and Application

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Krishanu Dey and Junzhi Ye

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
11:15 - 11:25	**Opening D6 - ROOM S11+12**
	D6-12 Chair: Robert Hoye
11:25 - 11:55 D6-12-I1	Simon Boehme *(ETH Zurich and Empa, CH)* The Quest for a Perfect Capping Ligand for Colloidal Lead-Halide Perovskite Nanocrystals
11:55 - 12:10 D6-12-O1	Thomas Haward *(Department of Physics, Clarendon Laboratory, University of Oxford, Oxford OX1 3PU, U.K)* Linking Surface Chemistry to Phonon and Carrier Dynamics in CsPbBr3 Nanocrystals
12:10 - 12:25 D6-12-O2	Luiz Bonato *(Automated Nanomaterials Engineering, Center for Convergent Technologies, Istituto Italiano di Tecnologia, Via Morego 30, 16163 Genova, Italy)* Organic Spacers as Switches for Perovskite-related Phases and Photoluminescence
12:25 - 12:55 D6-12-I2	Yitong Dong *(Department of Chemistry and Biochemistry, University of Oklahoma, Norman OK, 73019, USA)* Controlling Synthesis and Doping of Lead Halide Perovskite Quantum Dots
13:15 - 14:45	**Lunch Break**
	D6-13 Chair: Sascha Feldmann
15:00 - 15:30 D6-13-I1	Robert Hoye *(Inorganic Chemistry Laboratory, University of Oxford)* Controlling the Orientation of Low-Dimensional Perovskites for Polarised Light Emission
15:30 - 15:45 D6-13-O1	Pengbo Ding *(The Hong Kong University of Science and Technology,)* High-Entropy Alloying in Perovskite Nanocrystals Enables High-Purity Single-Photon Emission at Room Temperature
15:45 - 16:15 D6-13-I2	Alexander Urban *(Nanoinstitut, LMU Munich, Königinstraße 10, 80539 Munich, Germany)* Algorithms and Antisolvents: The Art of Building Perfect 2D Nanoplatelets
16:15 - 16:45 D6-13-I3	Dawei Di *(Zhejiang University)* Perovskite LEDs and Lasers

March 24th - Day 2 (Tuesday)

	D6 -21 Chair: Junzhi Ye
09:00 - 09:30 -21-I1	Yana Vaynzof *(Technical University of Dresden, Nöthnitzer Str. 61, 01187 Dresden, Germany)* Synthesis and Structuring of Low-Dimensional Perovskites for Photonic Applications
09:30 - 10:00 -21-I2	Sascha Feldmann *(Laboratory for Energy Materials, EPFL)* Light Emission & Localization Mechanisms in Halide Perovskites – Composition, Doping, Dimensionality
10:00 - 10:30 -21-I3	Lakshminarayana Polavarapu *(CINBIO, Department of Physical Chemistry, Centro de Investigacións Biomédicas)* Passivation of Halide Perovskite Nanocrystals: Boosting their Optical Properties
10:30 - 11:15	**Coffee Break**
	D6-22 Chair: Sascha Feldmann
11:15 - 11:45 D6-22-I1	Maria Chamarro *(Sorbonne Université, CNRS, Institut des NanoSciences de Paris, F-75005, Paris, France.)* Extreme Exciton Confinement and Anisotropic Emission Pathways in Single CsPbBr3 Nanoplatelets
11:45 - 12:15 D6-22-I2	Tze Chien Sum *(School of Physical and Mathematical Science, Nanyang Technological University, 21 Nanyang Link, Singapore 637371)* Engineering Perovskite Quantum Light
12:15 - 12:30 D6-22-O1	Alejandro Cortés-Villena *(Friedrich-Alexander-Universität Erlangen-Nürnberg, 91058 Erlangen, Germany)* Hybrid Interfaces as Platforms to Control Exciton and Charge Dynamics in Perovskite Nanocrystals
12:30 - 12:40	**Closing D6**
13:15 - 14:45	**Lunch Break**
17:30 - 19:00	**Poster Session**

March 25th - Day 3 (Wednesday)
20:00 - 22:00 **Social Dinner**
March 27th - Day 5 (Friday)
09:20 - 10:30 **Plenary Session - Auditorium**

MATSUS Spring 2026 Conference (MATSUSSpring26)

E4 Photo-assisted chemical reactions: materials, characterization and mechanisms

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Josep Albero Sancho, Nieves López Salas and Diego Mateo Mateo

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
11:15 - 11:25	**Opening E4 - Room Auditorium**
	E4-12 Chair: Josep Albero Sancho
11:25 - 11:55 E4-12-I1	Sergio Navalón *(Department of Chemistry, Universitat Politècnica de València)* Engineering Strategies in Metal-Organic Frameworks toward Efficient Solar-Driven Photocatalytic Water Splitting
11:55 - 12:25 E4-12-I2	Shoubhik Das *(University of Bayreuth)* Photocatalysis for Sustainability: Finding Applications of Single Atom Catalysis
12:25 - 12:40 E4-12-O1	Aibhe Boran *(University of Galway)* Achieving morphological control of Metalloligand Covalent Organic Frameworks: Advances towards CO2 reduction.
12:40 - 12:55 E4-12-O2	Behzad Mahmoudi *(Institute of Chemistry, Inorganic Chemistry, Martin Luther University Halle-Wittenberg)* Quantifying Interfacial Charge Transfer at Semiconductor/Liquid Interfaces via Gerischer Model
13:15 - 14:45	**Lunch Break**
	E4-13 Chair: Shoubhik Das
15:00 - 15:30 E4-13-I1	Horatiu Szalad *(Department of Colloid Chemistry, Max Planck Institute of Colloids and Interfaces, Am Mühlenberg 1, Potsdam 14476, Germany)* Ionic Carbon Nitrides: Structural, Electronic and Kinetic Implications for PCET driven Photocatalytic Applications.
15:30 - 16:00 E4-13-I2	Oleksandr Savatieiev *(Department of Chemistry, The Chinese University of Hong Kong, Sha Tin, New Territories, Hong Kong, China)* Photocharged Carbon Nitrides: from Insights into Light-Driven Electron Storage in 2D Materials to their Application in Chemical Synthesis
16:00 - 16:15 E4-13-O1	Roos Grote *(Institute for Sustainable and Circular Chemistry, Faculty of Science, Utrecht University, Universiteitsweg 99, 3584 CG Utrecht, The Netherlands)* In-Situ UV-Vis Spectroscopy Insights into Hole Scavenger Effects during the Photodeposition of Gold on Zinc Oxide
16:15 - 16:30 E4-13-O2	Silvio Osella *(University of warsaw)* Photocatalysis from Computation: Novel Perspectives
16:30 - 17:00 E4-13-I3	Mariam Barawi Moran *(Photoactivated Processes Unit, IMDEA Energy Institute. Avda. Ramón de la Sagra, 3, 28935 Móstoles (Madrid) Spain)* From Metal Oxides to Hybrid Architectures: New Routes for Next-Generation Photoelectrodes

March 24th - Day 2 (Tuesday)

E4-21
Chair: Diego Mateo Mateo

09:00 - 09:15 E4-21-O1 Paola Ragonese *(Center for Sustainable Future Technologies, Istituto Italiano di Tecnologia, Via Livorno 60, Torino, 10144 Italy)*
Insights into the Mechanisms of Earth-Abundant Photoanodes for Water Splitting and Alternative Oxidation Reactions

09:15 - 09:30 E4-21-O2 Biagio Di Vizio *(Department of Chemical Engineering, Institute of Energy Technologies, and Center for Research in Multiscale Science and Engineering. Universitat Politècnica de Catalunya Eduard Maristany 16, EEBE, Barcelona 08019, Spain)*
High-Entropy Oxide–$BiVO_4$ Heterojunctions for Enhanced Photoelectrochemical Water Splitting

09:30 - 09:45 E4-21-O3 Pragati Gondaliya *(Institute of Chemistry, Kurt-Mothes Straße 2, Martin Luther University Halle-Wittenberg, Halle (Saale), Germany)*
Effect of Ag Concentration and Surface Modification on the PEC Performance of ACIGSE Photoabsorbers

09:45 - 10:00 E4-21-O4 Virgil Andrei *(School of Materials Science and Engineering, Nanyang Technological University)*
Perovskite-based Photoelectrochemical Devices for Solar Fuel and Chemical Production

10:00 - 10:30 E4-21-I1 Rossella Greco *(Nano and Molecular Research Unit, University of Oulu)*
Transition Metal-Based Hydroxides for Photocatalytic Applications

10:30 - 11:15 **Coffee Break**

E4-22
Chair: Nieves Lopez Salas

11:15 - 11:30 E4-22-O1 Julian Hörndl *(University of Salzburg Jakob-Haringer-Str. 2a)*
Improving the Stability and Perfomance of LTON based Photoanodes by Tuning Cocatalyst Deposition

11:30 - 11:45 E4-22-O2 Peter Bogdanoff *(Helmholtz-Zentrum Berlin für Materialien und Energie, Hahn-Meitner-Platz 1, 14109 Berlin, Germany)*
Electrochemical Studies on CO2-Reduction to Carbon-Rich Products for the Removal of Carbon Dioxide in the Context of Negative Emission Technologies.

11:45 - 12:15 E4-22-I1 Carolina Gimbert *(Universitat Autònoma de Barcelona, Department of Chemistry and Centro de Innovación en Química Avanzada (ORFEO-CINQA), 08193 Cerdanyola del Vallès, Barcelona, Spain)*
Organic molecules and materials as photocatalysts in divergent chemical transformations: mechanistic insights

12:15 - 12:45 E4-22-I2 Valérie Keller *(CNRS, Université de Strasbourg)*
Nanostructured carbon-based photocatalysts for some solar fuels and depollution applications

12:45 - 13:00 E4-22-O3 Mateusz Odziomek *(Max Planck Institute of Colloids and Interfaces)*
"From Black Powder to Bright Future: Carbon Catalysts for Electrochemical Hydrogenations"

13:00 - 13:10 **Closing E4**

17:30 - 19:00 **Poster Session**

March 25th - Day 3 (Wednesday)
20:00 - 22:00 **Social Dinner**
March 27th - Day 5 (Friday)
09:20 - 10:30 **Plenary Session - Auditorium**

MATSUS Spring 2026 Conference (MATSUSSpring26)

I4 Digital Discovery: From Energy Materials to Devices

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Shoichi Matsuda and Magda Titirici

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
March 25th - Day 3 (Wednesday)	
20:00 - 22:00	**Social Dinner**
March 26th - Day 4 (Thursday)	
11:15 - 11:25	**Opening I4 - Room Marítima 1**
	I4-42 Chair: Shoichi Matsuda
11:25 - 11:55 I4-42-I1	Corsin Battaglia *(Empa - Swiss Federal Laboratories for Materials Science and Technology)* Towards Autonomous Battery Materials and Electrocatalyst Research Platforms
11:55 - 12:10 I4-42-O1	Leonard Ng Wei Tat *(School of Materials Science and Engineering, Nanyang Technological University)* Self-Driving Laboratories as Engines for Next-Generation Photovoltaic Innovation
12:10 - 12:40 I4-42-I2	Keisuke Nagato *(Department of Mechanical Engineering, School of Engineering, The University of Tokyo)* Scalable Powder-Film-Formation Process Informatics for PEMFC -Robotic Objective Process Exploration System (ROPES)
12:40 - 12:55 I4-42-O2	Serhiy Cherevko *(Helmholtz-Institute Erlangen-Nuremberg for Renewable Energy (IET-2), Forschungszentrum Jülich GmbH, Cauerstr. 1, 91058, Erlangen, Germany)* Accelerating Electrocatalyst Testing with Scanning Flow Cell Setups
12:55 - 13:10 I4-42-O3	Joanna Przybysz *(Forschungszentrum Jülich GmbH, Helmholtz Institute for Renewable Energy (IET-2), Erlangen 91058, Germany)* Gaussian-Process-Enhanced High-Throughput Workflows for Electrocatalyst Discovery
13:15 - 14:45	**Lunch Break**
	I4-43 Chair: Magda Titirici
15:00 - 15:30 I4-43-I1	Kim Jelfs *(Department of Chemistry, Molecular Sciences Research Hub, Imperial College London, London, W12 0BZ, UK)* Generative Artificial Intelligence and Molecular Simulation for Battery Materials
15:30 - 15:45 I4-43-O1	Arunraj Chidambaram *(Chemspeed Technologies AG)* Automated, Digital Solutions for Acceleration, Standardization of Design-Make-Test-Analyse (DMTA) of Power-to-X Technologies
15:45 - 16:15 I4-43-I2	Taro Hitosugi *(The University of Tokyo)* Autonomous Experiments for Thin Films and Bulk Synthesis
16:15 - 16:30 I4-43-O2	Mads Kastrup Plenge *(Department of Chemistry, Center for High Entropy Alloy Catalysis, University of Copenhagen)* Multi-Objective Catalyst Discovery in HEA Composition Spaces: Optimizing Activity, Stability, and Cost for ORR
16:30 - 17:00 I4-43-I3	Sebastian Risse *(Helmholtz)* From Operando Beamline Experiments to FAIR Data and AI: Accelerating Energy Materials Discovery at HZB
17:00 - 17:30 I4-43-I4	Vladislav Mints *(Department of Chemical Engineering, Imperial College London, Imperial College Rd, South Kensington, London SW7 2AZ, United Kingdom)* AI-Driven Electrocatalysis: Adaptive Control of the Glycerol Oxidation Reaction via Reinforcement Learning

17:30 - 19:00 **Poster Session**

March 27th - Day 5 (Friday)

09:20 - 10:30 **Plenary Session - Auditorium**

I4-52

Chair: Shoichi Matsuda

11:15 - 11:45 Jun Jiang *(University of Science and Technology of China)*
I4-52-I1 Building a Global Infrastructure for AI-Driven Innovation

11:45 - 12:00 Sushila Marlow *(Department of Chemical Engineering Imperial College London)*
I4-52-O1 Glycerol oxidation reaction with high throughput and bayesian optimisation

12:00 - 12:15 Adrián Pinilla-Sánchez *(ICFO - Institut de Ciencies Fotoniques, The Barcelona Institute of Science and Technology, Castelldefels (Barcelona) 08860, Spain)*
I4-52-O2 Autoammonia: A Decentralized Self Driving Platform for Catalyst-Electrolyte Co-Optimization in Nitrate-to-Ammonia Reduction

12:15 - 12:30 James Green *(Department of Chemistry, Molecular Sciences Research Hub, Imperial College London, London, W12 0BZ, UK)*
I4-52-O3 Computationally-Derived Design Rules for Organic Crystalline Materials for Photocatalytic Water Splitting

12:30 - 13:00 Benjamin Moss *(California Institute of Technology, Joint Center for Artificial Photosynthesis, Pasadena, USA)*
I4-52-I2 Towards Guided Electrocatalyst Discovery Using High throughput Operando Spectroscopy

13:00 - 13:15 Nadia Farag *(Department of Chemical Engineering, Imperial College London, London SW7 2AZ, UK)*
I4-52-O4 Automation of High Throughput Materials Synthesis and Cell Testing for Lithium and Sodium Ion Batteries

I4-53

Chair: Magda Titirici

15:00 - 15:15 Piotr Toka *(Department of Chemistry, Molecular Sciences Research Hub, Imperial College London, London, W12 0BZ, UK)*
I4-53-O1 Data-driven Development of Hard Carbon Materials for Sodium-ion Batteries

15:15 - 15:30 Dat Doan *(Department of Chemistry, Molecular Sciences Research Hub, Imperial College London, London, W12 0BZ, UK)*
I4-53-O2 Computation-Guided Design of Organic Redox-Active Molecules for Electrochemical Storage

15:30 - 16:00 Ali Shayesteh *(Acceleration Consortium, University of Toronto, 80 St. George St, Toronto, Ontario M5S 3H6, Canada)*
I4-53-I1 A Self-Driving Laboratory Framework for Aqueous Battery Interphases

16:00 - 16:30 Sam Cooper *(Dyson School of Design Engineering, Imperial College London, UK)*
I4-53-I2 Small Features; Big Impact - Designing at the Microscale with Generative AI and High-Throughput Simulation

16:30 - 17:00 Matthias Arenz *(University of Bern, Bern, Switzerland)*
I4-53-I3 Data-Driven Electrocatalyst Discovery: Medium-Throughput Exploration and Exploitation

17:00 - 17:30 Ryo Tamura *(National Institute for Materials Science (NIMS), Japan)*
I4-53-I4 Realization of Self-Driving Laboratories using NIMO

17:30 - 17:40 **Closing I4**

MATSUS Spring 2026 Conference (MATSUSSpring26)

I1 Novel materials and strategies for organic bioelectronics

Barcelona, Spain, 2026 March 23rd - 27th

Conference Chairs: Miryam Criado-Gonzalez, Alberto Scaccabarozzi and Gabriele Tullii

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
March 25th - Day 3 (Wednesday)	
08:50 - 09:00	**Opening I1 - Room Marítima 2**
	I1-31 Chair: Miryam Criado-Gonzalez
09:00 - 09:30 I1-31-I1	Luca Beverina *(Department of Materials Science, University of Milano-Bicocca, Milano, Italy)* Organic Probes all over the Electromagnetic Spectrum: X-ray Contrast Agents, Photodynamic Mediators and Optically Activated Nanoactuators
09:30 - 09:45 I1-31-O1	Martin Trapero Sempere *(POLYMAT – University of the Basque Country UPV/EHU, 20018 San Sebastián (Spain).)* Ionic Cross-linked Thiophene-based Copolymers for Application in Bioelectronics
09:45 - 10:00 I1-31-O2	Jessica I. Vasquez *(Department of Chemistry and Chemical Engineering, Chalmers University of Technology, Göteborg SE-412 96, Sweden)* Improving OECT Performance and Reproducibility via Aggregation-Assisted Purification of Conjugated Polymers
10:00 - 10:30 I1-31-I2	Vito Vurro *(Istituto Italiano di Tecnologia, Center for Nano Science and Technology, 20124, Milan, Italy)* Light-Controlled Biointerfaces for Muscular Tissue-Engineered Systems
10:30 - 11:15	**Coffee Break**
	I1 - 32 Chair: Alberto Scaccabarozzi
11:15 - 11:45 32-I1	Marta Mas Torrent *(Institut de Ciència de Materials de Barcelona (ICMAB-CSIC), Campus UAB, Bellaterra, 08193 Barcelona, Spain)* Electrolyte-gated organic field-effect transistors for point-of-care assays
11:45 - 12:15 32-I2	Esma Ismailova *(IMT/Mines St. Etienne)* Additive Manufacturing and Sustainable Development of Bioelectronic Devices for Health Monitoring
12:15 - 12:30 32-O1	Mamatimin Abbas *(Université de Bordeaux, CNRS, Bordeaux INP, IMS UMR5218, Pessac F-33607, France)* Organic Electrochemical Transistors with Electropolymerized Channel
12:30 - 13:00 32-I3	Adrica Kyndiah *(Center for Nano Science and Technology, Istituto Italiano di Tecnologia, Milano, Italy)* Organic Bioelectronics for Scalable and Non-Invasive Electrophysiology Drug Screening
13:15 - 15:00	**Lunch Break**
	I1-33 Chair: Gabriele Tullii
15:00 - 15:15 I1-33-O1	Damien Thuau *(Univ. Bordeaux, CNRS, Bordeaux INP, IMS, UMR 5218, F-33400 Talence, France)* Aloe Vera Gel as a High-Performance and Biodegradable OECT Electrolyte
15:15 - 15:45 I1-33-I1	Eleni Stavrinidou *(Linköping Uiversity)* Plant Bioelectronics
15:45 - 16:00 I1-33-O2	Matías Ignacio Ceballos Hernández *(Ecole des mines de saint Etienne)* Sustainable electrodes for electrophysiological acquision
16:00 - 16:15 I1-33-O3	Noemí Contreras-Pereda *(Institut de Ciència de Materials de Barcelona, ICMAB-CSIC, Campus UAB, 08193 Bellaterra, Spain)* Food-Safe Bioimpedance Monitoring via a Corn-based conductive adhesive

16:15 - 16:30 I1-33-O4	Peter Osazuwa *(Department of Materials Science and Engineering, University of Delaware, Newark, DE)* K^+-dependent n-Type Organic Electrochemical Transistors via In-Situ Crown Ether Functionalization of BBL
16:30 - 16:40	**Closing I1**
20:00 - 22:00	**Social Dinner**

March 26th - Day 4 (Thursday)
17:30 - 19:00 **Poster Session**
March 27th - Day 5 (Friday)
09:20 - 10:30 **Plenary Session - Auditorium**

MATSUS Spring 2026 Conference (MATSUSSpring26)

Optoelectronics based on solution-processed nanocrystals and emerging low-dimensional materials

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chair:

Conference Program

March 23rd - Day 1 (Monday)
09:00 - 10:30 **08.45h Plenary Session - Auditorium**
March 25th - Day 3 (Wednesday)
20:00 - 22:00 **Social Dinner**
March 27th - Day 5 (Friday)
09:20 - 10:30 **Plenary Session - Auditorium**

MATSUS Spring 2026 Conference (MATSUSSpring26)

F2 Electrochemical Energy Storage for a Green Future: Innovations in Materials, Manufacturing, and Recycling

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Taeseup Song and Kangli Wang

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
March 25th - Day 3 (Wednesday)	
11:15 - 11:25	**Opening F2 - Room A1**
	F2-32 Chair: Min-Sik Park
11:25 - 11:55 F2-32-I1	Ungyu Paik *(Department of Energy Engineering, Hanyang University, Seoul, Republic of Korea, 04763)* Mechanistic Insights into Polytetrafluoroethylene (PTFE)-based Roll-to-roll Dry Coating for Sustainable and Scalable Thick Electrode Manufacturing
11:55 - 12:10 F2-32-O1	Sharin Maria Thomas *(Catalan Institute of Nanoscience and Nanotechnology (ICN2), CSIC and Barcelona Institute of Science and Technology, UAB Campus, 08193 Bellaterra, Barcelona, Spain)* Influence of Mass Loading and Current Collector Choice on Self-Discharge in Sustainable Supercapacitors
12:10 - 12:25 F2-32-O2	Lipeng Wang *(Catalan Institute of Nanoscience and Nanotechnology (ICN2))* Nanostructural Design of Biomass-derived Porous Carbon for Advanced Supercapacitors
12:25 - 12:55 F2-32-I2	Xiaohui Ning *(State Key Laboratory for Mechanical Behavior of Materials, School of Materials Science and Engineering, Xi'an Jiaotong University, Xi'an, Shaanxi, China)* Interface Engineering Enhances the Electrochemical Performance of Liquid Metal Batteries
13:15 - 15:00	**Lunch Break**
	F2-33 Chair: Xiaohui Ning
15:00 - 15:30 F2-33-I1	Min-Sik Park *(Department of Materials Science & Engineering, Kyung Hee University)* Modulating Surface Reactions of Natural Graphite Toward Fast-Charging Lithium-ion Batteries
15:30 - 15:45 F2-33-O1	Mahrokh Mamizadeh Yengejeh *(Iran University of Science and Technology (IUST))* Ultrathin Needle-like NiMoO4/MoO3 Heterostructure for Supercapacitor and Overall Water Splitting Applications
15:45 - 16:15 F2-33-I2	Hansu Kim *(Department of Energy Engineering, Hanyang University, Seoul 04763, Republic of Korea)* Si/Li2SiO3 Nanocomposite Lithium Storage Materials by Li-Al Dual Doping Batteries
16:15 - 16:45 F2-33-I3	Haomiao Li *(Huazhong University of Science and Technology (HUST))* Low-Cost and Long-Lifespan Sodium-Based Liquid Metal Batteries
16:45 - 17:15 F2-33-I4	Roberto Sommerville *(School of Metallurgy and Materials, University of Birmingham, Edgbaston B15 2TT, UK)* Material Integrity Meets Scalability in Direct Battery Recycling
17:15 - 17:25	**Closing F2**
20:00 - 22:00	**Social Dinner**

March 26th - Day 4 (Thursday)
17:30 - 19:00 **Poster Session**
March 27th - Day 5 (Friday)
09:20 - 10:30 **Plenary Session - Auditorium**

MATSUS Spring 2026 Conference (MATSUSSpring26)

D3 Chalcogenide Quantum Dots: Materials and Devices for Infrared Light Harvesting, Sensing and Emission

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: javad Shamsi, Nima Taghipour and Yongjie Wang

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
11:15 - 11:25	**Opening D3 - ROOM S9+10**
	D3-12 Chair: Nima Taghipour
11:25 - 11:55 D3-12-I1	Gerasimos Konstantatos *(ICFO - Institut de Ciencies Fotoniques, The Barcelona Institute of Science and Technology, Castelldefels (Barcelona) 08860, Spain)* Infrared Photodectors and Bolometers based on Metal-Chalcogenide Colloidal Quantum Dots
11:55 - 12:25 D3-12-I2	Jung-Yong Lee *(Korea Advanced Institute of Science and Technology (KAIST))* Ultrahigh-Gain Colloidal Quantum Dot Infrared Avalanche Photodetectors
12:25 - 12:55 D3-12-I3	Se-Woong Baek *(Korea University)* Field-Modulated Quantum Dot Solids for Efficient Shortwave-Infrared Optoelectronics
13:15 - 14:45	**Lunch Break**
	D3-13 Chair: Yongjie Wang
15:00 - 15:15 D3-13-O1	Jacopo Pinna *(Zernike Institute for Advanced Materials, University of Groningen, Nijenborgh 3, Groningen, 9747AG, The Netherlands)* Langmuir-Schaefer Deposition of 2D PbS Quantum Dot Superlattices
15:15 - 15:30 D3-13-O2	haobo wu *(School of Physical Science and Technology, ShanghaiTech University, Shanghai 201210, P. R. China)* Organic Cation Lewis Acid Ligand Engineering for Low-Defect Colloidal Quantum Dot Superlattices and Record-High Performance Optoelectronics
15:30 - 16:00 D3-13-I1	Maria Antonnietta Loi *(Zernike Institute for Advanced Materials, University of Groningen, Groningen, The Netherlands)* Colloidal Quantum Dot Superlattices: Towards Optoelectronic Metamaterials
16:00 - 16:30 D3-13-I2	Emmanuel Ihuillier *(Sorbonne Université, CNRS, Institut des NanoSciences de Paris, 4 place Jussieu, 75005 Paris, France.)* Active Photonics Using Nanocrystals
16:30 - 17:00 D3-13-I3	Zeke Liu *(Institute of Functional Nano and Soft Materials (FUNSOM), Soochow University, Jiangsu 215123, P. R. China)* Infrared Quantum Dot Optoelectronic Materials and Devices

March 24th - Day 2 (Tuesday)

	D3-21 Chair: Nima Taghipour
09:00 - 09:30 D3-21-I1	Robert Hoye *(Inorganic Chemistry Laboratory, University of Oxford)* Bismuth-Based Ultrathin Near-Infrared Light Harvesters for Photovoltaics and Photodetectors
09:30 - 10:00 D3-21-I2	Kwang Seob Jeong *(Department of Chemistry, Korea University)* Tunable and Selectable MWIR-SWIR Electronic Transition of Silver Chalcogenide Colloidal Quantum Dot
10:00 - 10:30 D3-21-I3	Ayaskanta Sahu *(Department of Chemical and Biomolecular Engineering, Tandon School of Engineering, New York University, Brooklyn, New York 11201, United States)* Plenty of Room at the Bottom and the Top for Colloidal Quantum Dot Infrared Detectors
10:30 - 11:15	**Coffee Break**
	D3-22 Chair: Yongjie Wang
11:15 - 11:30 D3-22-O1	Álvaro De Armas Viera *(Instituto de Ciencia de los Materiales de la Universitat de València (ICMUV), Paterna 46980, Valencia, Spain)* Precision Placement of NIR Colloidal Nanocrystals and Analysis of Their Microluminescence
11:30 - 12:00 D3-22-I1	wanli Ma *(Institute of Functional Nano and Soft Materials (FUNSOM), Soochow University, Jiangsu 215123, P. R. China)* Quantum Dot Solar Cells
12:00 - 12:15 D3-22-O2	Alexander Arutunyan *(Physics and Chemistry of Nanostructures Group, Ghent University, 9000 Ghent, Belgium)* Stimulated Emission with Infrared Chalcogenide Nanocrystals
12:15 - 12:25	**Closing D3**
13:15 - 14:45	**Lunch Break**
17:30 - 19:00	**Poster Session**

March 25th - Day 3 (Wednesday)
20:00 - 22:00 **Social Dinner**
March 27th - Day 5 (Friday)
09:20 - 10:30 **Plenary Session - Auditorium**

MATSUS Spring 2026 Conference (MATSUSSpring26)

G2 Monitoring the degradation mechanisms of photovoltaic devices by optoelectronic characterization

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Enrique H. Balaguera and Emilio J. Juarez-Perez

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
March 25th - Day 3 (Wednesday)	
20:00 - 22:00	**Social Dinner**
March 26th - Day 4 (Thursday)	
08:50 - 09:00	**Opening G2 - Room A3**
	G2-41 Chair: Enrique H. Balaguera
09:00 - 09:30 G2-41-I1	Luis Ono *(Okinawa Institute of Science and Technology Graduate University (OIST))* Hole-Transporting Layers in Perovskite Solar Cells
09:30 - 10:00 G2-41-I2	Agustin O. Alvarez *(AMOLF, Science Park 104, Amsterdam, The Netherlands)* Revealing Photoconversion Mechanisms with Modulated Techniques
10:00 - 10:30 G2-41-I3	Juan Bisquert *(INSTITUTO DE TECNOLOGIA QUIMICA (UPV-CSIC), València, Spain)* Dynamic Signatures of Ionic–Electronic Coupling and Degradation in Perovskite Solar Cells: Insights from Impedance and Transient Analyses
10:30 - 11:15	**Coffe Break**
	G2-42 Chair: Emilio J. Juarez-Perez
11:15 - 11:45 G2-42-I1	Wolfgang Tress *(Institute of Computational Physics, Zurich University of Applied Sciences (ZHAW), 8401 Winterthur (Switzerland))* Ion-Induced Photocurrent Losses studied by Spectrally Resolved Measurements
11:45 - 12:15 G2-42-I2	Pilar Lopez Varo *(IPVF, Institut Photovoltaïque d'Ile-de-France (IPVF), 18 boulevard Thomas Gobert, 91120 Palaiseau, France)* Tracking ion migration in perovskite solar cells during degradation tests: improving performance or masking degradation?
12:15 - 12:45 G2-42-I3	Marko TOPIČ *(University of Ljubljana, Faculty of Electrical Engineering, Tržaška 25, 1000 Ljubljana, Slovenia)* In-Operando Photoluminescence Measurements for Evaluation of Perovskite-Silicon Tandem Operation Performance and Degradation
12:45 - 13:15 G2-42-I4	Martin Stolterfoht *(Electronic Engineering Department, The Chinese University of Hong Kong, Sha Tin N.T., Hong Kong SAR, China)* Minimizing Ionic Losses for Efficient and Stable Wide-Bandgap Perovskite Solar Cells
13:15 - 14:45	**Lunch Break**
	G2-43 Chair: Enrique H. Balaguera
15:00 - 15:30 G2-43-I1	Sandheep Ravishankar *(Institute of Energy Materials and Devices (IMD-3), Forschungszentrum Jülich GmbH, Wilhelm-Johnen-Straße 52428 Jülich, Germany)* The Influence of Energetic Depth of Defects on the Measured Optoelectronic Time Constants and Ideality Factors
15:30 - 16:00 G2-43-I2	Giles Richardson *(School of Mathematical Sciences, University of Southampton, Southampton, United Kingdom)* Understanding Perovskite Solar Cell Impedance Spectra with the Standard Drift-Diffusion Model and using them to monitor Degradation

16:00 - 16:15 G2-43-O1	Parmenio Boronat-Sevilla *(Institut de Ciència dels Materials (ICMUV), Universitat de València. Catedrático José Beltrán 2, 46980 Paterna, Valencia, Spain)* Unraveling Photopassivation of Ultrathin InSe-based Devices
16:15 - 16:25	**Closing G2**
17:30 - 19:00	**Poster Session**

March 27th - Day 5 (Friday)

09:20 - 10:30 **Plenary Session - Auditorium**

MATSUS Spring 2026 Conference (MATSUSSpring26)

A6 Future of Metal Halide Perovskites: Fundamental Approaches and Technological Challenges

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Annalisa Bruno, Sofia Masi and Pablo P. Boix

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
March 25th - Day 3 (Wednesday)	
20:00 - 22:00	**Social Dinner**
March 26th - Day 4 (Thursday)	
08:50 - 09:00	**Opening A6 - Room Port Vell 3**
	A6-41 Chair: Annalisa Bruno
09:00 - 09:30 A6-41-I1	Tom Macdonald *(Department of Electronic & Electrical Engineering, University College London)* Chaotropic Guanidinium Salts in Lead-Halide Perovskite Solar Cells
09:30 - 10:00 A6-41-I2	Daniele Cortecchia *(Department of Industrial Chemistry "Toso Montanari", University of Bologna, 40129, Bologna, Italy)* Structural engineering of low-dimensional perovskites for photonic applications
10:00 - 10:30 A6-41-I3	Artem Musiienko *(Helmholtz-Zentrum Berlin für Materialien und Energie GmbH, Institut für Silizium Photovoltaik)* Unlocking High Throughput Heterojunction Discovery
10:30 - 11:15	**Coffee Break**
	A6-42 Chair: Sofia Masi
11:15 - 11:45 A6-42-I1	Trystan Watson *(Swansea University, UK)* Manufacturing Perovskite Solar Cells in Dusty Environments
11:45 - 12:00 A6-42-O1	Elisa Fabbretti *(Department of Materials Science and Solar Energy Research Centre (MIB-SOLAR), University of Milano-Bicocca, Via Cozzi 55, 20126, Milan, Italy)* Improving Transparency and Efficiency in Semi-Transparent PSCs through ALD-TiO2 ETL
12:00 - 12:15 A6-42-O2	Chiara Mello *(Institut Photovoltaïque d'Ile-de-France (IPVF), UMR 9006, CNRS)* Influence of A-Site Cation on the Interface Formation Between Wide Band-Gap Perovskites and SnO_2 Deposited by Atomic Layer Deposition and Pulsed Laser Deposition
12:15 - 12:30 A6-42-O3	Niranjana Raj *(School of Physics and Astronomy, Faculty of Engineering and Physical Sciences, University of Southampton, University Road, Southampton, SO17 1BJ, UK)* Charge Carrier Dynamics in Quasi-2D/3D Perovskite Heterostructures
13:15 - 14:45	**Lunch Break**
	A6-43 Chair: Pablo P. Boix
15:00 - 15:30 A6-43-I1	Yana Vaynzof *(Technical University of Dresden, Nöthnitzer Str. 61, 01187 Dresden, Germany)* Towards Efficient All-Inorganic Perovskite Solar Cells
15:30 - 15:45 A6-43-O1	Charlie Nicholls *(School of Chemical, Materials and Biological Engineering, University of Sheffield, Sheffield, S1 3JD)* Novel surface passivation for wide-bandgap perovskites
15:45 - 16:15 A6-43-I2	Dimitra Georgiadou *(School of Electronics and Computer Science, University of Southampton, Southampton SO17 1BJ, UK)* Bismuth Perovskite-Based Devices for Optoelectronic Neuromorphic Computing
17:30 - 19:00	**Poster Session**

March 27th - Day 5 (Friday)

09:20 - 10:30 **Plenary Session - Auditorium**

A6-52

Chair: Annalisa Bruno

11:15 - 11:45 A6-52-I1 Nripan Mathews *(School of Materials Science and Engineering, Nanyang Technological University,)*
From Solar Cells to Neuromorphic Systems: Engineering Ionic Effects in Halide Perovskites

11:45 - 12:00 A6-52-O1 Konstantinos Brintakis *(Institute of Electronic Structure and Laser, Foundation for Research and Technology-Hellas, Heraklion, Greece)*
From Lab-Scale to Coin Cells: Addressing the Processing Challenges of High-Loading Perovskite Anodes

12:00 - 12:15 A6-52-O2 Raphael Neisius *(Italian Institute of Technology, Centre for Sustainabe Future Technology, Turin, 10144, Italy)*
Powder-to-Film Processing Employing Sustainable Milling and Coating Techniques

12:15 - 12:30 A6-52-O3 Arun Kumar *(Helmholtz-Zentrum Berlin für Materialien und Energie, Hahn-Meitner-Platz 1, 14109 Berlin, Germany)*
Upscaling Perovskite Photovoltaics via Slot-Die Coated Self-Assembled Monolayers

12:30 - 12:45 A6-52-O4 Athanasia Kostopoulou *(1 Institute of Electronic Structure and Laser, Foundation for Research and Technology-Hellas, Heraklion, Greece)*
Advancing Perovskite Gas Sensors: Balancing Sensitivity, Stability, and Toxicity

A6-53

Chair: Sofia Masi

15:00 - 15:30 A6-53-I1 Paola Delli Veneri *(ENEA - Italian National Agency for New Technologies, Energy and Sustainable Economic Development)*
Perovskite-Based Tandem Solar Cells: Materials for High-Efficiency Photovoltaics

15:30 - 15:45 A6-53-O5 Prasenjit Mandal *(Chemical Physics and NanoLund, Lund University, P.O. Box 124, 22100 Lund, Sweden)*
Chirality Transfer and Underlying Photo-physics in Lead Halide Perovskites

15:45 - 16:00 A6-53-O1 Robin Heumann *(IMD-3 Photovoltaics, Forschungszentrum Jülich, 52425 Jülich, Germany)*
PLPal: Your Friendly Web-Based Transient Photoluminescence Analysis Assistant

16:00 - 16:15 A6-53-O2 Victor Denaud *(Institut de Chimie et Procédés pour l'Energie, l'Environnement et la Santé (ICPEES), Université de Strasbourg)*
Mechanosynthesis of Hybrid Perovskite Composite as an Electromagnetic Wave Absorber

16:15 - 16:30 A6-53-O3 Cecilia Daniela Costa *(Center for Sustainable Future Technologies, Istituto Italiano di Tecnologia, Via Livorno 60, Torino, 10144 Italy)*
Porous and Magnetic Materials for Lead Capture in Perovskite Solar Cell Recycling

16:30 - 16:45 A6-53-O4 Jose Roberto Bautista-Quijano *(Leibniz Institute for Solid State and Materials Research Dresden (IFW Dresden))*
A Semiempricial Approach to Processing Perovskite Solar Cells from Green Solvents

16:45 - 17:15 A6-53-I2 Otto Lam *(Department of Physics, University of Exeter, Exeter EX4 4QL, United Kingdom)*
Trap Engineering and Scalable Processing of Lead-Free and Hybrid 2D Perovskites for Multifunctional Optoelectronic Devices

17:15 - 17:25 **Closing A6**

MATSUS Spring 2026 Conference (MATSUSSpring26)

H1 Quantum and Probabilistic Computation

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Pol Forn-Díaz and Jiyong Woo

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
March 25th - Day 3 (Wednesday)	
20:00 - 22:00	**Social Dinner**
March 26th - Day 4 (Thursday)	
08:50 - 09:00	**Opening H1 - Room Port Vell 2**
	H1-41 Chair: Pol Forn-Díaz
09:00 - 09:30 H1-41-I1	Elia Bertoldo *(Institut de Física d'Altes Energies - IFAE)* Superconducting Qubits and Ionizing Radiation: the Path to Tackle ongoing Challenges and Achieve Quantum Sensing
09:30 - 10:00 H1-41-I2	Joel Wang *(New York University)* When 2D Materials Meet Superconducting Qubits: From Current Progress to All-vdW Quantum Circuits
10:00 - 10:30 H1-41-I3	Moira Hocevar *(Grenoble Alpes University, CNRS, Grenoble INP, Institut Néel, F38042 Grenoble France.)* Development of Superconductor-Semiconductor Nanowires for Quantum Circuits
	H1-42 Chair: Jiyong Woo
11:15 - 11:30 H1-42-O1	Jiyong Woo *(Kyungpook National University)* Probabilistic Bits for Unconventional Computing Systems
11:30 - 12:00 H1-42-I1	Victor Lopez Dominguez *(Universitat Jaume I, Institute of Advanced Materials (INAM) - (ValER))* Magnetic Tunnel Junctions as Building Blocks for Probabilistic Computers
12:00 - 12:30 H1-42-I2	Wooseok Choi *(IBM Research Europe - Zurich, Säumerstrasse 4, 8803 Rüschlikon, Zürich, Switzerland)* A Scalable Oscillatory Neural Network Architecture Using Analog Resistive Memory for Coupling Elements
12:30 - 13:00 H1-42-I3	Ryoichi Ryoichi *(Delft University of Technology, QuTech, Faculty of Electrical Engineering, Mathematics and Computer Science Mekelweg 4, 2628CT Delft, The Netheralnds)* Cryo-Memristors for Energy-Efficient Quantum Computing
13:15 - 14:45	**Lunch Break**
	H1 - 43 Chair: Pol Forn-Díaz
15:00 - 15:30 43-I1	Adrian Bachtold *(ICFO – Institut de Ciències Fotòniques, The Barcelona Institute of Science and Technology, Castelldefels (Barcelona) 08860, Spain)* A Nonlinear Electromechanical System in the Quantum Regime
15:30 - 16:00 43-I2	Paloma Machain *(Qilimanjaro Quantum Tech)* Leveraging Mature Superconducting Materials for Scalable Quantum Analog Hardware
16:00 - 16:15 43-O1	Pol Forn-Díaz *(Institut de Física d'Altes Energies - IFAE)* Superinductor-Based Non-Perturbative Ultrastrong Coupling in a Superconducting Quantum Circuit
16:15 - 16:25	**Closing H1**

March 27th - Day 5 (Friday)

09:20 - 10:30 **Plenary Session - Auditorium**

MATSUS Spring 2026 Conference (MATSUSSpring26)

B3 Chemical and Electrochemical Doping of Organic Semiconductors

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Mariano Campoy Quiles and Christian Müller

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
March 25th - Day 3 (Wednesday)	
20:00 - 22:00	**Social Dinner**
March 26th - Day 4 (Thursday)	
11:15 - 11:25	**Opening B3 - Room A2**
	B3-42 Chair: Simone Fabiano
11:25 - 11:55 B3-42-I1	Martijn Kemerink *(Institute for Molecular Systems Engineering and Advanced Materials, Heidelberg University, Germany)* Probing and Removing Energy Barriers in Doped Organic Semiconductors
11:55 - 12:10 B3-42-O1	Tobias Krebs *(Institute for Molecular Systems Engineering and Advanced Materials, Heidelberg University, Germany)* Unveiling the Role of Disorder on Carrier Concentration Transients in Electrochemical Transistors
12:10 - 12:25 B3-42-O2	Judith Pons i Tarrés *(Department of Chemistry and Chemical Engineering, Chalmers University of Technology, SE-412 96 Gothenburg, Sweden)* Anomalous Stiffening of a Conjugated Polymer During Electrochemical Oxidation
12:25 - 12:55 B3-42-I2	Jenny Nelson *(Department of Physics, Imperial College London)* Factors Controlling Electrochemical Doping in Conjugated Polymer Mixed Ionic Electronic Conductors
13:15 - 14:45	**Lunch Break**
	B3-43 Chair: Martijn Kemerink
15:00 - 15:30 B3-43-I1	Simone Fabiano *(Laboratory of Organic Electronics, Department of Science and Technology, Linköping University, Norrköping SE-60174, Sweden)* Novel Doping Strategies for Organic Semiconductors
15:30 - 15:45 B3-43-O1	Said Oummouch *(Institute Charles Sadron CNRS)* Polymorphism Controls Thermoelectric Properties in Oriented PBTTT Films
15:45 - 16:15 B3-43-I2	Francisco Molina-Lopez *(KU Leuven, Department of Materials Engineering, Kasteelpark Arenberg 44, 3001, Leuven)* A Universal Dopant for Performing and Stable Conducting P-Type Polymers
16:15 - 16:45 B3-43-I3	Martin Brinkmann *(Institute Charles Sadron CNRS)* The Role of Side Chain Conformation on the Polymorphism, Doping and Thermoelectric Properties of Oriented PBTTT Films
17:30 - 19:00	**Poster Session**

March 27th - Day 5 (Friday)

09:20 - 10:30 **Plenary Session - Auditorium**

B3-52

Chair: Xiaodan Gu

11:15 - 11:45 B3-52-I1 Sabine Ludwigs *(IPOC-Functional Polymers, Institute of Polymer Chemistry, University of Stuttgart, Pfaffenwaldring 55, 70569 Stuttgart, Germany)*
Electrochemical Doping of Conducting Polymers – from 2D to 3D Architectures

11:45 - 12:15 B3-52-I2 Esther Barrena *(Materials Science Institute of Barcelona (ICMAB-CSIC), Barcelona, Spain)*
Microscopic Insights into Surface Molecular Doping of Small-Molecule OSCs for OFETs

12:15 - 12:45 B3-52-I3 Koen Vandewal *(Hasselt University, Institute for Materials Research (imo-imomec), Martelarenlaan 42, B-3500 Hasselt, Belgium.)*
Doped Organic Semiconductors for Infrared Detection

12:45 - 13:00 B3-52-O1 Marie Houot *(Department of Chemistry and Centre for Processable Electronics, Imperial College London, London, W12 0BZ, UK)*
The Dynamics of Interfacial Trap States in High-Detectivity Near-Infrared Photomultiplication Organic Photodetectors

B3-53

Chair: Koen Vandewal

15:00 - 15:30 B3-53-I1 Xiaodan Gu *(School of Polymer Science and Engineering, University of Southern Mississippi, USA)*
Thermal Stability of the Doped Film

15:30 - 16:00 B3-53-I2 Norbert Koch *(Institut für Physik & CSMB, Humboldt-Universität zu Berlin, Newtonstraße 15, 12489 Berlin)*
Organic Dopants for Tuning Charge Density and Energy Levels in 2D Semiconductors

16:00 - 16:15 B3-53-O1 Meghna Jha *(Chalmers University of Technology, Sweden)*
Counterion Dependent Side-Chain Relaxation Stiffens a Chemically Doped Thienothiophene Copolymer

16:15 - 16:30 B3-53-O2 Victor BOUYLOUT *(Institute Charles Sadron CNRS)*
Impact of Side Chain Conformation on Doping, Structure and Thermoelectric Properties of pBTTT with Oligo(ethylene-glycol) Side Chains.

16:30 - 16:40 **Closing B3**

MATSUS Spring 2026 Conference (MATSUSSpring26)

A4 Emerging Hybrid and Inorganic Solar Absorbers: Beyond ABX3

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Nakita Noel, Jay Patel and Marcello Righetto

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
March 25th - Day 3 (Wednesday)	
10:30 - 11:15	**Coffee Break**
11:15 - 11:25	**Opening A4 - Room Port Vell 3**
	A4-32 Chair: Nakita Noel
11:25 - 11:55 A4-32-I1	Laura Herz *(Clarendon Laboratory, Department of Physics, University of Oxford, Parks Road, Oxford OX1 3PU, UK)* Optical Probes of 2D Perovskites and Perovskite-Inspired Semiconductors
11:55 - 12:10 A4-32-O1	Nikhil Singh *(Indian Institute of Technology Delhi, Department of Chemistry)* High-Throughput and Data-Driven Search for Stable Optoelectronic AMSe3 Materials
12:10 - 12:25 A4-32-O2	Sophie Tucker *(School of Mathematical and Physical Sciences, University of Sheffield, Sheffield, S3 7RH, UK)* Ammonium Thiocyanate Enables in-situ Templating of MAPbI3 via Quasi-2D Perovskite scaffold
	A4-33 Chair: Jay Patel
15:00 - 15:30 A4-33-I1	Andrea Crovetto *(National Centre for Nano Fabrication and Characterization, Technical University of Denmark (DTU Nanolab))* Phosphosulfides and Sulfide Perovskites: Stable PV Absorbers with Rising Prospects
15:30 - 15:45 A4-33-O1	George Morgan *(Clarendon Laboratory, Department of Physics, University of Oxford, Parks Road, Oxford OX1 3PU, UK)* Low-bandgap Mixed Lead-tin Chalcogenide Thin Films for Photovoltaics
15:45 - 16:15 A4-33-I2	Claudio Cazorla *(Department of Chemical Engineering and Barcelona Research Center in Multiscale Science and Engineering, Universitat Politècnica de Catalunya, Eduard Maristany 16, EEBE, Barcelona 08019, Spain)* Dynamic Band-Gap Control in Perovskite-Inspired Materials via Polar Electron-Phonon Coupling
16:15 - 16:45 A4-33-I3	G. Krishnamurthy Grandhi *(Hybrid Solar Cells, Faculty of Engineering and Natural Sciences, Tampere University, P.O. Box 541, FI-33014 Tampere University, Finland)* Pnictogen Based Perovskite Inspired Photovoltaics and Emerging Applications
16:45 - 17:00 A4-33-O2	Bembe C. Mackintosh *(Department of Physics, University of Oxford, Clarendon Laboratory, Parks Road, Oxford, OX1 3PU, United Kingdom)* Overcoming Charge-Carrier Localisation in Metal Chalcohalides
20:00 - 22:00	**Social Dinner**

March 26th - Day 4 (Thursday)

A4-41 (ROOM S11+12)
Chair: Marcello Righetto

09:00 - 09:30 (S11+12)-I1
Matthew Rosseinsky *(Materials Innovation Factory, L3 7NY, Liverpool, United Kingdom)*
Discovery Synthesis of Inorganic Functional Materials in the Digital Age

09:30 - 10:00 (S11+12)-I2
Marina Filip *(Oxford University, Department of Physics)*
Excitons in Chemically Heterogeneous Semiconductors from First Principles Computational Modeling

10:00 - 10:30 (S11+12)-I3
Jakob Möbs *(Institute of Inorganic and Analytical Chemistry, Justus Liebig University, Heinrich-Buff-Ring 17, 35392 Giessen, Germany)*
Bismuth Halide Coordination Compounds: From Structures to Properties

10:30 - 10:40 **Closing A4 - ROOM S11+12**

March 27th - Day 5 (Friday)

09:20 - 10:30 **Plenary Session - Auditorium**

MATSUS Spring 2026 Conference (MATSUSSpring26)

D5 2D Layered Materials for Sustainable Energy Conversion and Storage

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Teresa Gatti, Paolo Giusto and Oleksandr Savatieiev

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
11:15 - 11:25	**Opening D5 - ROOM S5+6**
	D5-12 Chair: Oleksandr Savatieiev
11:25 - 11:55 D5-12-I1	mengjiao wang *(Department of Applied Science and Technology (DISAT), Politecnico di Torino, 10129 Torino, Italy)* Surface Chemistry and Electrode Engineering of BiOI for Photoelectrocatalytic Oxygen Evolution
11:55 - 12:10 D5-12-O1	Luca Cartabia *(Center for Materials Research, Justus Liebig University, Heinrich−Buff−Ring 17, 35392 Giessen, Germany)* P-doped Carbon Nitride from Fertilizer Sources as a Versatile Solution for Environmental Remediation
12:10 - 12:25 D5-12-O2	Gabriel Ali Diab *(Chemistry Department, Federal University of São Carlos, Rod. Washington Luís, 13565-905, São Carlos, Brazil.)* Extending the Visible-Light Response of Poly(heptazine imide) via Controlled Sulfur Incorporation
12:25 - 12:55 D5-12-I2	Menny Shalom *(Department of Chemistry, Ben Gurion University, Beer-Sheva, 8410501 Israel)* Photocatalytic Panels Development for Catalytic Oxidation and Reduc-tion Reactions
13:15 - 14:45	**Lunch Break**
	D5-13 Chair: Paolo Giusto
15:00 - 15:30 D5-13-I1	Filip Podjaski *(Royal Society University Research Fellow, University of Oxford.)* Characterizing Phototactically Relevant Optoelectronic Properties in 2D Carbon Nitrides
15:30 - 16:00 D5-13-I2	Giacomo Filippini *(Università degli Studi di Trieste, Via L. Giorgieri 1 - 34127, Trieste)* New Catalytic Approaches Towards the Synthesis of Organic Compounds
16:00 - 16:15 D5-13-O1	Pedro Venezuela *(Universidade Federal Fluminense)* First-Principles Investigations of Few-Layer and Bulk Orthorhombic B2N2: Exploring Structural and Optoelectronic Properties for Photovoltaic Applications
16:15 - 16:45 D5-13-I3	Ivo Teixeira *(Department of Chemistry, Federal University of São Carlos, Rod. Washington Luís km 235 – SP, São Carlos, SP, 13565-905 Brazil)* Carbon Nitrides, Single-Atoms and Photocatalysis: A Route for a Solar Based Chemical Industry

March 24th - Day 2 (Tuesday)

	D5-21 Chair: Teresa Gatti
09:00 - 09:30 D5-21-I1	Minghao Yu *(Technische Universität Dresden, Germany)* Chemical Tailoring of MXene Terminations: Impacts on Charge Transport and Charge Storage
09:30 - 10:00 D5-21-I2	Martin Oschatz *(Friedrich Schiller University of Jena)* About the Role of Pore Architecture and Atomic Construction of Porous Carbon and Carbon Nitride Materials in Energy Applications
10:00 - 10:30 D5-21-I3	Simon Fleischmann *(Helmholtz Institute Ulm, Helmholtzstr. 11, 89081 Ulm, Germany)* Tuning Interlayer Chemistry of MoS2-based Electrode Materials via Covalent and Non-Covalent Pillaring
10:30 - 11:15	**Coffee Break**
	D5-22 Chair: Silvio Osella
11:15 - 11:30 D5-22-O1	Enis Oguzhan Eren *(Max Planck Institute of Colloids and Interfaces, Potsdam, Germany)* CVD-Grown Carbon Films Enable Ultra-High Plateau Capacity in Sodium-Ion Battery Anodes
11:30 - 11:45 D5-22-O2	Samaneh Vaez *(Politecnico di Torino)* Investigation of Ionic Radius Effects on Aqueous Electrolyte Performance in Mo2C-based MXene Supercapacitors
11:45 - 12:00 D5-22-O3	Qing Su *(SANKEN, The University of Osaka)* Chloride-Assisted Mechanism in Layered δ-MnO2 Enhances Oxygen Evolution Reaction
12:00 - 12:30 D5-22-I1	Silvio Osella *(University of warsaw)* Photoinduced Effects in Flatland
12:30 - 13:00 D5-22-I2	Dirk Guldi *(Friedrich-Alexander-Universität)* Modulating Light-Induced Interactions with 2D materials
13:00 - 13:10	**Closing D5**
13:15 - 14:45	**Lunch Break**
17:30 - 19:00	**Poster Session**

March 25th - Day 3 (Wednesday)
20:00 - 22:00 **Social Dinner**
March 27th - Day 5 (Friday)
09:20 - 10:30 **Plenary Session - Auditorium**

MATSUS Spring 2026 Conference (MATSUSSpring26)

D4 Synthesis and Integration of 2D Materials for Electronics, Photonics, and Functional Devices

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Nikolas Antonatos and Filipa M. Oliveira

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
March 25th - Day 3 (Wednesday)	
20:00 - 22:00	**Social Dinner**
March 26th - Day 4 (Thursday)	
08:50 - 09:00	**Opening D4 - ROOM S5+6**
	D4-41 Chair: Nikolas Antonatos
09:00 - 09:30 D4-41-I1	Evgeniya Kovalska *(University of Exeter)* 2D Materials for Wearable and Flexible TENG-Driven Sensing Technologies
09:30 - 09:45 D4-41-O1	Anastasios Papavasileiou *(Department of Inorganic Chemistry, University of Chemistry and Technology, Prague)* Electrochemical Sensing Driven by Layered Transition-Metal Diselenides
09:45 - 10:00 D4-41-O2	Muthumalai Karuppasmay *(Department of Inorganic chemistry, University chemistry and Technology, Prague)* Advanced Metal-Oxide and Molybdenum-Based Nanostructures for Wearable Breath Monitoring and Selective Gas Sensing
10:00 - 10:30 D4-41-I2	Andreia Pereira *(i3S - Instituto de Investigação e Inovação em Saúde, University of Porto)* Integration of Graphene-Based 2D Materials in pHEMA Hydrogels for Human-Body Triboelectric Energy Harvesting
10:30 - 11:15	**Coffe Break**
	D4-42 Chair: Filipa M. Oliveira
11:15 - 11:45 D4-42-I1	Jesus Gonzalez-Julian *(Laboratory of Thermo-Structural Composites (LCTS), 3 Allée La Boétie, F 33600, Pessac (France))* Synthesis of a New 2D Compounds: AlN
11:45 - 12:00 D4-42-O1	Devabharathi Nehru *(Aarhus University, Department of Electrical and Computer Engineering)* High Mobility Low Temperature Processed Inkjet Printed Flexible MoS2 Transistors on Sustainable Flexible Substrate
12:00 - 12:30 D4-42-I2	Alessandro Molle *(CNR-IMM Unit of Agrate Brianza)* Configuring Two-Dimensional Elemental and Compound Nanosheets for Electronic and Optoelectronic Devices
12:30 - 13:00 D4-42-I3	Robert Kudrawiec *(Department of Semiconductor Materials Engineering, Wrocław University of Science and Technology, Wybrzeże Wyspiańskiego 27, 50-370 Wrocław, Poland)* Contactless Electreflectance Studies of Fermi Level Position at Van Der Waals/AlGaN Interface – Engineering of Electric Contacts to AlGaN via Van Der Waals Crystals
13:15 - 14:45	**Lunch Break**
	D4-43 Chair: Evgeniya Kovalska
15:00 - 15:30 D4-43-I1	Zdeněk Sofer *(Department of Inorganic Chemistry, University of Chemistry and Technology, Prague)* MXene from MAX Phase Crystal Growth to MXene Energy Conversion Applications

15:30 - 15:45 D4-43-O1	Dario Mastrippolito *(Sorbonne Université, CNRS, Institut des NanoSciences de Paris, 4 place Jussieu, 75005 Paris, France.)* Visualizing the Electric Fields of 2D Materials-Based Devices by Operando X-ray Photoemission Spectromicroscopy
15:45 - 16:15 D4-43-I3	Vojtech Kundrat *(Masaryk University)* Core-Shell Inorganic Nanotubes - Epitaxial Synthesis and Microscopy Study
16:15 - 16:45 D4-43-I2	Andrés Castellanos Gómez *(Instituto de Ciencia de Materiales de Madrid (ICMM-CSIC), Madrid, E-28049 Spain)* Rolling Out 2D Materials: Scalable Exfoliation for Low-Cost Nanosheet Production
16:45 - 17:00 D4-43-O2	Bing Wu *(Department of Inorganic Chemistry, University of Chemistry and Technology Prague, Technická 5, Prague 6, 16628 Czech Republic)* Flux-Grown Large Ti3AlC2 Single Crystals with Well-Defined Structural and Electronic Properties Toward Millimetre-Scale MXenes
17:00 - 17:30 D4-43-I4	B. Layla Mehdi *(Department of Materials, Design and Manufacturing Engineering, University of Liverpool, Liverpool, L693GH, UK)* In-situ (S)TEM Study of Degradation Processes of Ti-based MXenes
17:30 - 19:00	**Poster Session**

March 27th - Day 5 (Friday)

09:20 - 10:30 **Plenary Session - Auditorium**

D4-52

Chair: Filipa M. Oliveira

11:15 - 11:30 D4-52-O1 Ewelina Zdanowicz *(Department of Semiconductor Materials Engineering, Wrocław University of Science and Technology, Wybrzeże Wyspiańskiego 27, 50-370 Wrocław, Poland)*
Unveiling the Optical Properties and Band Structure of Ambient-Stable 2D Tin-Based Perovskites

11:30 - 11:45 D4-52-O2 Martina Borreani *(Istituto Italiano di Tecnologia, Via Morego 30, 16163, Genova, Italy)*
Micro- and Nanosctructuring of 2D Perovskites Microcrystals for On-Chip Photonic Circuits

11:45 - 12:00 D4-52-O3 Filipe Rocha O. *(Department of Inorganic Chemistry, University of Chemistry and Technology, Prague)*
Germanane electrodes for GeH-Mg-ion batteries: synthesis, characterisation and performance

12:00 - 12:15 D4-52-O4 Joyce Matsoso *(Department of Inorganic Chemistry, University of Chemistry and Technology Prague, Technická 5, 166 28, Prague 6, Czech Republic)*
Flexible MoS_2/WS_2–rGO Electrocatalyst for Nitrate-to-Ammonia Conversion

D4-53

Chair: Robert Kudrawiec

15:00 - 15:30 D4-53-I1 Christoph Gadermaier *(politecnico di milano)*
Modulation of Ultrafast Quasiparticle Dynamics in TwoDimensional Transition Metal Dichalcogenide Semiconductors

15:30 - 15:45 D4-53-O1 Marianna Sledzinska *(Catalan Institute of Nanoscience and Nanotechnology (ICN2), CSIC and Barcelona Institute of Science and Technology, UAB Campus, 08193 Bellaterra, Barcelona, Spain)*
Phonon Engineering in 2D Transition Metal Dichalcogenides For Heat Management Applications

15:45 - 16:15 D4-53-I2 Silvio Osella *(University of Warsaw, Centre of New Technologies, Poland)*
Optoelectronic Properties of 2D Assemblies from a Computational Perspective

16:15 - 16:30 D4-53-O2 Kalaiarasan Meganathan *(Department of Inorganic Chemistry, University of Chemistry and Technology Prague, Technická 5, 166 28, Prague 6, Czech Republic)*
Scaling Trend, Critical Length and Thickness Strain Dependence of Elastic Properties of Atomically Thin 2H-MoS2 Films

16:30 - 16:40 **Closing D4**

MATSUS Spring 2026 Conference (MATSUSSpring26)

B1 Future of Organic solar cells: What is next?

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Vida Engmann, Karen Forberich and Pascal Kaienburg

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
11:15 - 11:25	**Opening B1 - Room A2**
	B1-12 Chair: Karen Forberich
11:25 - 11:55 B1-12-I1	Jie Min *(The Institute for Advanced Studies, Wuhan University)* Recent Advances and Future Prospects of All-Polymer Solar Cells
11:55 - 12:25 B1-12-I2	Alberto Privitera *(Department of Industrial Engineering, University of Florence, Italy)* Spin Photophysics of Chiral Donor-Acceptor Dyads
12:25 - 12:55 B1-12-I3	Sri Harish Kumar Paleti *(The Organic Photonics and Electronics Group, Department of Physics, Umeå University, 90736 Umeå, Sweden.)* The Influence of the Molecular Weight of the Ion Transporter on the Operation of Light-Emitting Electrochemical Cells
13:15 - 14:45	**Lunch Break**
	B1-13 Chair: Karen Forberich
15:00 - 15:30 B1-13-I1	Bryon W. Larson *(National Laboratory of the Rockies (NLR))* Durable and Low-Cost Multi-use Organic Photovoltaics
15:30 - 16:00 B1-13-I2	David Beljonne *(University of Mons)* On the Design of Steep Optical Absorbers for Organic Solar Cells
16:00 - 16:30 B1-13-I3	Cleber Marchiori *(Department of Engineering and Physics, Karlstad University, Sweden.)* Multi-Edge X-ray Spectroscopy for Probing Electronic Structure and Photostability in Organic Photovoltaic Materials
16:30 - 17:00 B1-13-I4	Larry Lüer *(Forschungszentrum Jülich GmbH, Helmholtz Institute for Renewable Energy (IET-2), Erlangen 91058, Germany)* Artificial Intelligence Driven Workflows for Materials Discovery in Emerging PV

March 24th - Day 2 (Tuesday)

B1-21
Chair: Vida Engmann

09:00 - 09:30 Antoine Bousquet *(IPREM, CNRS, University of Pau & Pays Adour, E2S UPPA, 64000, Pau, France)*
B1-21-I1 Water-Based Inks for Processing OPV Active Layers

09:30 - 10:00 Mariano Campoy-Quiles *(Institut de Ciència de Materials de Barcelona (ICMAB-CSIC), Campus UAB)*
B1-21-I2 A Menu of Organic Photovoltaic Subtechnologies Crafted for Specific Applications

10:00 - 10:30 Jenny Nelson *(Department of Physics and Centre for Processable Electronics, Imperial College London, London SW7 2AZ, UK)*
B1-21-I3 Factors Controlling Charge Pair Generation in Molecular Semiconductors for Photovoltaics

10:30 - 11:15 **Coffee Break**

B1-22
Chair: Vida Engmann

11:15 - 11:45 Wouter Maes *(Universiteit Hasselt / IMEC)*
B1-22-I1 Continuous (Droplet) Flow Chemistry for Polymer-Based Organic Photovoltaics

11:45 - 12:15 Hin-Lap Yip *(Department of Materials Science and Engineering, City University of Hong Kong, Hong Kong SAR, P.R. China)*
B1-22-I2 Self-Assembled Monolayer Engineering of Charge-Selective Contacts in Organic Solar Cells

12:15 - 12:30 Katherine Trinkaus *(Department of Physics, University of Oxford, Clarendon Laboratory, Parks Road, Oxford, OX1 3PU, United Kingdom)*
B1-22-O1 Tuning Built-In Voltage with Carbazole Self-Assembled Monolayers in Vacuum-Processed Organic Solar Cells

12:30 - 12:45 Hua Tang *(Friedrich-Alexander-Universität Erlangen Nürnberg (FAU))*
B1-22-O2 Ink-State Preaggregation Control Enables Scalable and Automated Fabrication of Highly Efficient and Stable Organic Photovoltaics

12:45 - 13:15 Pavel Troshin *(Federal Research Center for Problems of Chemical Physics and Medicinal Chemistry of the Russian Academy of Sciences, Chernogolovka, Russian Federation)*
B1-22-I3 Modelling Intrinsic Photostability and Radiation Hardness of Organic Semiconductors Based on Structure Descriptors

13:15 - 13:25 **Closing B1**

13:15 - 14:45 **Lunch Break**

17:30 - 19:00 **Poster Session**

March 25th - Day 3 (Wednesday)
20:00 - 22:00 **Social Dinner**
March 27th - Day 5 (Friday)
09:20 - 10:30 **Plenary Session - Auditorium**

MATSUS Spring 2026 Conference (MATSUSSpring26)

D2 Quantum dots from III-V semiconductors – from synthesis to applications

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Zeger Hens and Ivan Infante

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
March 24th - Day 2 (Tuesday)	
14:50 - 15:00	**Opening D2 - ROOM S9+10**
	D2-23 Chair: Zeger Hens
15:00 - 15:30 D2-23-I1	Jong-Soo Lee *(Daegu Gyeongbuk Institute of Science and Technology (DGIST))* Advances and Challenges Toward High-Efficient Colloidal Quantum Dots
15:30 - 16:00 D2-23-I2	Loredana Protesescu *(Zernike Institute for Advanced Materials, University of Groningen, Nijenborgh 3, Groningen, 9747AG, The Netherlands.)* InSb Quantum Dots
16:00 - 16:15 D2-23-O1	Luca De Trizio *(Chemistry Facility, Istituto Italiano di Tecnologia, Via Morego 30, Genova, 16163 Italy)* Advancing SWIR-Emissive InAs Quantum Dots Synthesized from Amino-As Precursor
16:15 - 16:30 D2-23-O2	Pepijn Verscheure *(Department of Chemistry, Physics and Chemistry of Nanostructures, Ghent University, 9000 Ghent, Belgium)* Synthesis Development of Luminescent & Narrow In(As,P)/InP/ZnSe for SWIR Applications
17:30 - 19:00	**Poster Session**

March 25th - Day 3 (Wednesday)

D2-31
Chair: Ivan Infante

09:00 - 09:30 D2-31-I1 Juliette Zito *(Electron Microscopy for Materials Science (EMAT) and NANOlab Center of Excellence, University of Antwerp, Antwerp, Belgium)*
From 2D Projections to Atomistically Precise 3D Reconstructions of InP Quantum Dots

09:30 - 09:45 D2-31-O1 Elisa García-Tabarés *(Department of Physics, Universidad Carlos III de Madrid, Leganés (Madrid), Spain.)*
Correlating Strain and Composition in InAsP Quantum Dots within InP Nanowires via Advanced STEM Techniques

09:45 - 10:00 D2-31-O2 Norick De Vlamynck *(Physics and Chemistry of Nanostructures group (PCN), Ghent University, Krijgslaan 281, Gent 9000, Belgium)*
Impact of Dangling Bonds on the Electronic Structure of III-V Quantum Dots

10:00 - 10:30 D2-31-I2 Arjan Houtepen *(Optoelectronics Materials Section, Faculty of Applied Sciences, Delft University of Technology, The Netherlands)*
The Role of Fluorine and Oxygen on III-V Quantum Dot Surfaces and Core-Shell Interfaces

10:30 - 11:15 **Coffee Break**

D2-32
Chair: Zeger Hens

11:15 - 11:45 D2-32-I1 Wenya Song *(imec, vzw, Kapeldreef 75, 3001, Leuven, Belgium)*
RoHS-Compliant InAs CQD Photodiodes for SWIR Imaging

11:45 - 12:00 D2-32-O1 Boram Kim *(School of Chemical Engineering, Sungkyunkwan University (SKKU), Suwon 16419, Republic of Korea)*
Photolithographic Patterning of Quantum Dots via Argon Plasma-Induced Ligand Polymerization

12:00 - 12:30 D2-32-I2 Nayoun Won *(Samsung Advanced Institute of Technology, Samsung Electronics)*
High-Quality Cd-free Quantum Dots for Advanced Display Applications

13:15 - 15:00 **Lunch Break**

D2-33
Chair: Ivan Infante

15:00 - 15:30 D2-33-I1 Francesco Di Stasio *(Photonic Nanomaterials, Istituto Italiano di Tecnologia, 16163 Genova, Italy)*
Short-Wave Infrared Light-Sources based on Colloidal InAs Quantum Dots

15:30 - 15:45 D2-33-O1 Robin R. Petit *(Department of Solid State Sciences, LumiLab, Ghent University, 9000 Ghent, Belgium)*
Photoquenching-by-Photocharging, a Single Process-of-Failure of Oxygen-Exposed InP/ZnSe Quantum Dots

15:45 - 16:00 D2-33-O2 Sushant Ghimire *(Chair for Photonics and Optoelectronics, Nano-Institute Munich and Department of Physics, Ludwig-Maximilians-Universität (LMU), Königinstr. 10, 80539 Munich, Germany)*
Inter-Valence-Band Hole Relaxation Governs Exciton and Biexciton Dynamics in Bright AgInS2 Quantum Dots

16:00 - 16:30 D2-33-I2 Pieter Geiregat *(Department of Chemistry, Physics and Chemistry of Nanostructures Group, Ghent University, Belgium)*
Scrutinizing III/V Nanocrystals via Advanced Ultrafast Optical Spectroscopy

16:30 - 16:40 **Closing D2**

20:00 - 22:00 **Social Dinner**

March 27th - Day 5 (Friday)

09:20 - 10:30 **Plenary Session - Auditorium**

MATSUS Spring 2026 Conference (MATSUSSpring26)

G6 Operando and Correlative Characterization of Sustainable Materials and Interfaces

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Florian Hausen and Svetlana Menkin

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
March 24th - Day 2 (Tuesday)	
13:15 - 14:45	**Lunch Break**
14:50 - 15:00	**Opening G6 - ROOM A4**
	G6-23 Chair: Krishnaveni Palanisamy
15:00 - 15:30 G6-23-I1	Daniel Martín-Yerga *(Department of Chemistry and Materials Science, School of Chemical Engineering, Aalto University, FI-00076 Aalto, Finland)* Correlative Scanning Electrochemical Cell Microscopy for Local Probing of Electrode Materials and Interfaces
15:30 - 15:45 G6-23-O1	Zhiyu Zhu *(Institute for Molecules and Materials, Radboud University, Heyendaalseweg 135, 6525 AJ Nijmegen, The Netherlands.)* Coupled Operando NMR and EPR Reveals Reaction Mechanism of TEMPO-Mediated Electrochemical Lignin Oxidation
15:45 - 16:15 G6-23-I2	Evan Wenbo Zhao *(Institute for Molecules and Materials, Radboud University, Heyendaalseweg 135, 6525 AJ Nijmegen, The Netherlands.)* Operando Magnetic Resonance for Redox Flow Battery and Ammonia Synthesis
16:15 - 16:30 G6-23-O2	Aparna M Das *(ICFO-The Institute of Photonic Sciences)* Unravelling OH^- and HCO3- Interfacial Dynamics in Electrolyzers Using Operando Raman Spectroscopy and EIS
16:30 - 16:45 G6-23-O3	Anku Guha *(ICFO – Institut de Ciències Fotòniques, The Barcelona Institute of Science and Technology, Castelldefels (Barcelona) 08860, Spain)* Operando Probing of Interfacial Reorganization in CO_2 Electrolysis up to 1 A·cm-2
16:45 - 17:15 G6-23-I3	Krishnaveni Palanisamy *(Yusuf Hamied Department of Chemistry, University of Cambridge, Cambridge, Lensfield road, CB2 1EW, United Kingdom)* Correlative Microscopic and Spectroscopic Characterization of Sustainable Electrode Materials and Interfaces
17:15 - 17:45	Discussion

March 25th - Day 3 (Wednesday)

	G6 -31 Chair: Svetlana Menkin
09:15 - 09:45 -31-I1	Esther Alarcon-Llado *(AMOLF, Science Park 104, 1098 XG Amsterdam, The Netherlands)* Operando Interfacial Energy Imaging with Electrochemical AFM
09:45 - 10:15 -31-I2	Stacy Moore *(University of Bristol)* Untapped Potential: Exploring Adaptations of Contact-Mode High-Speed AFM
10:15 - 10:30 -31-O1	Marinos Dimitropoulos *(ICFO - Institut de Ciències Fotòniques, The Barcelona Institute of Science and Technology, Castelldefels (Barcelona), 08860, Spain)* Multiscale Morphological Evolution of Gas-Diffusion Electrodes Under CO2RR Conditions
10:30 - 11:15	**Coffee Break**
	G6-32 Chair: Florian Hausen
11:15 - 11:45 G6-32-I1	Johanna Eichhorn *(Physics Department, TUM School of Natural Sciences, Technical University of Munich, Germany)* Understanding Degradation of Catalyst–Semiconductor Interfaces via In-Situ Nanoscale Characterization
11:45 - 12:00 G6-32-O1	Sven Doll *(Physics Department, TUM School of Natural Sciences, Technical University of Munich, Am Coulombwall 4, 85748 Garching, Germany)* Correlative Atomic Force Microscopy to Understanding Local Charge Transport in Photoanodes
12:00 - 12:30 G6-32-I2	Edgar Ventosa *(universidad de burgos)* In-situ X-Ray - based Techniques for Investigating Key Electrochemical Processes in Redox-Mediated Flow Battery
12:30 - 13:00 G6-32-I3	Valeria Blanco *(Institut de Ciència de Materials de Barcelona (ICMAB), CSIC, Carrer dels Til·lers sn, Bellaterra, 08193, Spain)* Operando 3D Visualization of MgTR-Derived SiO_x–Graphite Li-ion Battery Andes Using Synchrotron X-ray Tomography
	G6-33 Chair: Florian Hausen
15:00 - 15:30 G6-33-I1	Shibabrata Basak *(Institute of Energy Technologies, IET-1: Fundamental Electrochemistry, Forschungszentrum Jülich GmbH, 52425 Jülich, Germany)* Visualizing Electrochemical Processes Using in-situ Electron Microscopy
15:30 - 16:00 G6-33-I2	Felix Gunkel *(Forschungszentrum Jülich GmbH, Peter Grünberg Institute, Electronic Materials (PGI-7), 52425 Jülich, Germany)* Free-Standing Oxide Catalysts for Operando Studies of Transient Processes
16:00 - 16:30 G6-33-I3	Hans-Georg Steinrück *(Forschungszentrum Jülich & RWTH Aachen)* Quantitative and Correlative Cross-Scale Insights into Electrochemical Systems
16:30 - 16:40	**Closing G6**
20:00 - 22:00	**Social Dinner**

March 26th - Day 4 (Thursday)
17:30 - 19:00 **Poster Session**
March 27th - Day 5 (Friday)
09:20 - 10:30 **Plenary Session - Auditorium**

MATSUS Spring 2026 Conference (MATSUSSpring26)

B4 Photophysics of organic semiconductors

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Safakath Karuthedath and Jafar Khan

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
March 25th - Day 3 (Wednesday)	
20:00 - 22:00	**Social Dinner**
March 26th - Day 4 (Thursday)	
13:15 - 14:45	**Lunch Break**
16:35 - 16:45	**Opening B4 - Room A3**
	B4-43 Chair: Morten Madsen
16:45 - 17:15 B4-43-I1	Carsten Deibel *(Institut für Physik, Technische Universität Chemnitz, 09126 Chemnitz, Germany)* The Different Contributions to Nongeminate Recombination in Organic Solar Cells
17:15 - 17:30 B4-43-O1	Chen Wang *(Institut für Physik, Technische Universität Chemnitz, 09126 Chemnitz, Germany)* Effective Conductivity in Organic Solar Cells is Governed by the Harmonic Mean
17:30 - 19:00	**Poster Session**

March 27th - Day 5 (Friday)

09:20 - 10:30 **Plenary Session - Auditorium**

B4-52

Chair: Carsten Deibel

11:15 - 11:45 B4-52-I1
Chun Yuen Ho *(University of Southern Denmark, SDU CAPE, MCI)*
Stability of Scalable Organic Photovoltaics for Indoor and Transparent Applications

11:45 - 12:00 B4-52-O1
Jonathan Langentepe-Kong *(Paul-Drude-Institut für Festkörperelektronik, Leibniz-Institut im Forschungsverbund Berlin e.V. Hausvogteiplatz 5-7, 10117 Berlin, Germany)*
Tracing the Lifecycle of Charges in Organic Solar Cells: How Triplet Excitons Shape Recombination and Efficiency Limits

12:00 - 12:30 B4-52-I2
Xinhui Lu *(Department of Physics, the Chinese University of Hong Kong)*
Understanding the Crystalline and Amorphous Morphology of Organic Solar Cells Using Grazing-Incidence Scattering

12:30 - 13:00 B4-52-I3
Hyojung Cha *(Kyungpook National University)*
Study on Photoinduced Charge Generation in Organic Photovoltaics and Organic Photocatalysts

B4-53

Chair: Hyojung Cha

15:00 - 15:30 B4-53-I1
Harald Hoppe *(Laboratory of Organic and Macromolecular Chemistry (IOMC), Friedrich Schiller University Jena, Humboldtstr. 10, D-07743 Jena, Germany)*
Donor-Acceptor Energy Level Alignment and the Impact of Fluorination on Organic Semiconductors

15:30 - 16:00 B4-53-I2
Chen Sun *(Great Bay University)*
Conformational Control of Polydiarylfluorene: Linking Molecular Order to Exciton Dynamics and Light Amplification

16:00 - 16:15 B4-53-O1
Mohamed Elhabib Bouajhine *(Laboratory for Chemistry of Novel Materials, Materials Research Institute, University of Mons, Mons, Belgium)*
Solid-State Aggregation of Dipyrrolonaphthyridinediones: a Key Role of Side-Chain Geometry.

16:15 - 16:25 **Closing**

MATSUS Spring 2026 Conference (MATSUSSpring26)

C1 Structural Foundations of Nanomaterials Properties

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Nicola Dengo, Nadine Schrenker and Stefano Toso

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
March 25th - Day 3 (Wednesday)	
20:00 - 22:00	**Social Dinner**
March 26th - Day 4 (Thursday)	
11:15 - 11:25	**Opening C1 - ROOM S2+3+4**
	C1-42 Chair: Irina Skvortsova
11:25 - 11:55 C1-42-I1	Mathieu Kociak *(Laboratoire de Physique des Solides (LPS), Université Paris-Saclay, CNRS, Orsay, France)* Nanoscale Spectroscopy of Optical Materials with Combined Free Electrons and Photons
11:55 - 12:25 C1-42-I3	Wiebke Albrecht *(AMOLF, Science Park 104, 1098 XG Amsterdam, The Netherlands)* The Best of Both Worlds: Merging Light and Electron Microscopy for Structure-Property Relations of Plasmonic Nanoparticles
12:25 - 12:40 C1-42-O1	Giorgio Divitini *(Electron Spectroscopy and Nanoscopy, Istituto Italiano di Tecnologia, Genova 16163, Italy)* Scanning Electron Diffraction and Unsupervised Methods: a Study on Photovoltaic Absorbers
12:40 - 13:10 C1-42-I2	Philipp Pelz *(Friedrich-Alexander Universität Erlangen-Nürnberg)* Atomic-Scale 3D Structure of Complex Nanomaterials via Electron Ptychography
13:15 - 14:45	**Lunch Break**
	C1-43 Chair: Stefano Toso
15:00 - 15:30 C1-43-I1	Simon Billinge *(Columbia University)* Real Materials in Action: Everything, Everywhere, All at Once
15:30 - 16:00 C1-43-I2	Raymond Schaak *(Penn State University)* From Routine to Advanced: The Importance of Structural Characterization in Nanomaterials Development
16:00 - 16:15 C1-43-O1	Frederik L. Johansen *(Department of Computer Science, University of Copenhagen, Denmark)* Understanding How PXRD Conditioning Influences Accuracy and Uncertainty in Generative Crystal Structure Prediction
16:15 - 16:45 C1-43-I3	Ivan Zaluzhnyy *(Institute of Applied Physics, Eberhard Karls University of Tübingen, Auf der Morgenstelle 10, D-72076 Tübingen, Germany)* X-Ray Nanodiffraction Studies of Lead-Halide Perovskite Supercrystals
17:30 - 19:00	**Poster Session**

March 27th - Day 5 (Friday)

09:20 - 10:30	**Plenary Session - Auditorium**
	C1-52 Chair: Nicola Dengo
11:15 - 11:45 C1-52-I1	Emil Bozin *(Institute of Physics Belgrade, University of Belgrade, Serbia)* Ultrafast Pair Distribution Function as a Probe of Hidden States in Quantum Materials
11:45 - 12:15 C1-52-I2	Sean Collins *(Department of Materials, Imperial College London, Exhibition Road, London, SW7 2AZ.)* Small Features Pack a Punch: Linking Nanoscale Disorder and Exciton Properties
12:15 - 12:30 C1-52-O1	Anam Afaq *(Indian Institute of Technology Ropar)* Hierarchical Zn-MOF Nanoarchitectures for Efficient Removal of Endocrine Disruptors from Aqueous Systems
12:30 - 13:00 C1-52-I3	Yaşar Krysiak *(Institute of Inorganic Chemistry, Leibniz University Hannover, Callinstraße 9, 30167 Hannover, Germany)* Electron Crystallography in the Spotlight of Materials Science
	C1-53 Chair: Stefano Toso
15:00 - 15:30 C1-53-I1	Claudia Schrama *(Laboratory for Ultrafast X-ray and Electron Microscopy (LUXEM), Department of Physics, University of Pavia, I-27100 Pavia, Italy.)* Imaging Functionality of Nanomaterials with Ultrafast EUV/soft X-Ray Microscopy
15:30 - 16:00 C1-53-I2	Carlos Escudero *(ALBA Synchrotron Light Source, Cerdanyola del Vallès, Barcelona, Spain)* XAFS: From Fundamentals to Operando Research on Advanced Materials
16:00 - 16:10	**Closing C1**

MATSUS Spring 2026 Conference (MATSUSSpring26)

F4 Discovery and Engineering of Energy Nanomaterials: From Robotics to Digital Twin

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Milena Arciniegas, Gabriella Pizzuto and Eva Unger

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
11:15 - 11:25	**Opening F4 - Room A1**
	F4-12 Chair: Milena Arciniegas
11:25 - 11:55 F4-12-I1	Andy Anker *(Technical University of Denmark (DTU), Denmark)* Autonomous Inorganic Nanomaterials Synthesis on Demand
11:55 - 12:25 F4-12-I2	Shijing Sun *(Materials Science and Metallurgy Department, University of Cambridge - UK)* Accelerating the Discovery of Energy Materials via Autonomous Labs
13:15 - 14:45	**Lunch Break**
	F4-13 Chair: Eva Unger
15:00 - 15:30 F4-13-I1	Lorenzo Natale *(Istituto Italiano di tecnologia)* Towards Embodied Intelligence in Humanoid Robots
15:30 - 15:45 F4-13-O1	Quentin Evrard *(Automated Nanomaterials Engineering, Center for Convergent Technologies, Istituto Italiano di Tecnologia, Via Morego 30, 16163 Genova, Italy)* Automation-Assisted Exploration of Chemical Space for the Synthesis of Novel 2D Layered Perovskites
15:45 - 16:15 F4-13-I2	Kourosh Darvish *(University of Toronto)* Matterix: Advancing Digital Twins for Robotics-Assisted Chemistry Labs
16:15 - 16:45 F4-13-I3	Angelo Cangelosi *(University of Manchester and Alan Turing Institute, UK)* Cognitive Robotics: From Babies to Robots and AI
16:45 - 16:55	**Closing F4**

March 25th - Day 3 (Wednesday)
20:00 - 22:00 **Social Dinner**
March 27th - Day 5 (Friday)
09:20 - 10:30 **Plenary Session - Auditorium**

MATSUS Spring 2026 Conference (MATSUSSpring26)

G4 In situ/operando characterization of energy-related materials with synchrotron X-ray techniques

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Carlos Escudero and Juan Jesús Velasco Vélez

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
11:15 - 11:25	**Opening G4 - ROOM A4**
	G4-12 Chair: Carlos Escudero
11:25 - 11:55 G4-12-I1	Jordi Llorca *(Department of Chemical Engineering and Barcelona Research Center in Multiscale Science and Engineering, Universitat Politècnica de Catalunya, EEBE, Eduard Maristany, 10-14, 08019 Barcelona, Spain)* When CO2 Meets H2 and CH4: Real-Time Discovery of Active Sites on Co/CeO2 Catalysts
11:55 - 12:25 G4-12-I2	Axel Knop-Gericke *(Fritz-Haber-Institut der Max-Planck-Gesellschft, Department of Inorganic Chemistry, Berlin, Germany)* Local Solid-State Processes Adjust the Selectivity in Catalytic Oxidation Reactions on Cobalt Oxides
12:25 - 12:40 G4-12-O1	Luis Cardenas *(IRCELYON, CNRS, Université Claude Bernard Lyon 1, France)* Probing the Persistence of Ce3+ Species on Ceria during Redox Cycling by Modulation-Excitation and Resonant Photoelectron Spectroscopy (MES–RPES)
12:40 - 12:55 G4-12-O2	Dario Mastrippolito *(Sorbonne Université, CNRS, Institut des NanoSciences de Paris, 4 place Jussieu, 75005 Paris, France.)* Scanning X-ray Photoemission Microscopy: a Tool to Probe the Local Electronic Structure of Devices Under Operando Conditions
12:55 - 13:10 G4-12-O3	Alicia Gonzalo *(Department of Physics, Universidad Carlos III de Madrid, Leganés (Madrid), Spain.)* Study of Local Electronic Structure of NaYGdF4:Yb,Er up-converting Nanocrystals via Synchrotron X-ray Absorption Spectroscopy (XAS) to Optimize the Up-Conversion Process
13:15 - 14:45	**Lunch Break**
	G4-13 Chair: Montse Casas Cabanas
15:00 - 15:30 G4-13-I1	Simone Raoux *(Helmholtz-Zentrum Berlin für Materialien und Energie, Hahn-Meitner Platz 1, 14109 Berlin , Germany)* In situ/operando Scanning Transmission X-ray Microscopy for the Study of Energy-related Materials
15:30 - 16:00 G4-13-I3	Elena Magnano *(CNR-IOM – Istituto Officina dei Materiali Trieste, Italy)* Soft X-ray Operando Spectroscopy for Energy Materials: Techniques and Applications at the BACH Beamline
16:00 - 16:15 G4-13-O4	Silvia Nappini *(CNR-IOM – Istituto Officina dei Materiali Trieste, Italy)* A Next-Generation High-Flow Electrochemical Cell for Operando Soft X-ray Spectroscopy Under Relevant Catalytic Conditions and High Current Densities
16:15 - 16:30 G4-13-O1	Raffaello Mazzaro *(Department of Physics and Astronomy, University of Bologna, Via Berti Pichat 6/2, 40127 Bologna (IT))* Tracking Interfacial Redox Dynamics of Photoanodes by Operando X-ray Absorption Spectroscopy
16:30 - 16:45 G4-13-O2	Ilargi Napal Azcona *(IOM-CNR, Istituto Officina dei Materiali, AREA Science Park Basovizza, 34149 Trieste, Italy)* Nafion-Induced Alteration of Copper Catalysts for CO_2 Electroreduction Activity Revealed in situ Cu L-edge and ex situ Cu K-edge XAS
16:45 - 17:15 G4-13-I2	Eduardo Villalobos *(ALBA Synchrotron - CELLS)* Decoding Structure–Function Relationships in Energy Materials Using Operando XAS–XRD

17:15 - 17:30 G4-13-O3	Lu Xia *(ICFO - Institut de Ciències Fotòniques, The Barcelona Institute of Science and Technology, Castelldefels (Barcelona), 08860, Spain)* Directed Precatalyst Reconstruction for Reliable High-Current-Density Electrolysis
17:30 - 17:45 G4-13-O5	Palash Jyoti Gogoi *(Academy of Scientific and Innovative Research (AcSIR), Ghaziabad 201002, India)* Dynamic Surface Reconstruction Governs Hydrogen Evolution Activity of Mo2C Electrocatalysts in Alkaline Media: An XAS study

March 24th - Day 2 (Tuesday)

G4-21
Chair: Elena Magnano

09:00 - 09:30 Montse Casas Cabanas *(CIC energiGUNE, Basque Research and Technology Alliance (BRTA), Alava Technology Park, Albert Einstein 48, 01510 Vitoria-Gasteiz, Spain)*
G4-21-I1 Advancing Battery Materials through Operando and High Throughput X-ray Diffraction techniques

09:30 - 10:00 Laura Simonelli *(ALBA Synchrotron - CELLS)*
G4-21-I2 Fostering Battery Innovations by Advanced Synchrotron Techniques: Challenges and Opportunities

10:00 - 10:15 Alfred Larsson *(Leiden Institute of Chemistry, Leiden University, the Netherlands)*
G4-21-O1 Probing Ions at the Platinum-Electrolyte Interface using Soft XAS

10:15 - 10:30 Ignacio José Villar García *(CEU San Pablo University, Chemistry Department, Faculty of Farmacy, Urbanización Montepríncipe, 28668, Boadilla del Monte, Madrid, Spain)*
G4-21-O2 Operando Studies of Vanadium Oxide based Electrodes for Metal Ion Bateries

10:30 - 11:15 **Coffee Break**

G4-22
Chair: Juan Jesús Velasco Vélez

11:15 - 11:30 Rik Mom *(Leiden Institute of Chemistry, Leiden University, the Netherlands)*
G4-22-O1 Resolving the Structural Dynamics of Oxygen Reduction Catalysts using Electrochemical XPS

11:30 - 12:00 Zhi Liu *(Center for Transformative Science, ShanghaiTech University)*
G4-22-I1 Recent APXPS development in Shanghai

12:00 - 12:15 Ida Mønge *(Department of Chemistry, Center for High Entropy Alloy Catalysis, University of Copenhagen)*
G4-22-O2 Cation-Size Effects and Structural Dynamics in NiFe Layered Double Hydroxides During the Oxygen Evolution Reaction: Insights from Operando X-ray Diffraction and Total Scattering

12:15 - 12:45 Kelsey Stoerzinger *(Department of Chemical Engineering and Materials Science, University of Minnesota, Minneapolis, MN 55455, United States)*
G4-22-I2 Linking Electronic Structure to Selectivity in the Electroreduction of Nitrate and Interrogating the Catalyst's Active State

12:45 - 13:00 Andrea Resta *(Synchrotron SOLEIL, L'Orme des Merisiers, Départementale 128, 91190 Saint-Aubin, France.)*
G4-22-O3 Multi Technique Approach for Catalysis: Ammonia Oxidation as Case Study

13:00 - 13:10 **Closing G4**

17:30 - 19:00 **Poster Session**

March 25th - Day 3 (Wednesday)
20:00 - 22:00 **Social Dinner**
March 27th - Day 5 (Friday)
09:20 - 10:30 **Plenary Session - Auditorium**

MATSUS Spring 2026 Conference (MATSUSSpring26)

B2 Strategies to push the efficiency and stability limits of organic photovoltaics at a multiscale

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Ignasi Burgués, clément cabanetos and Maria Saladina

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
March 25th - Day 3 (Wednesday)	
08:50 - 09:00	**Opening B2 - Room A2**
	B2-31 Chair: Ignasi Burgués
09:00 - 09:30 B2-31-I1	Eva M. Herzig *(Dynamics and Structure Formation - Herzig Group, University of Bayreuth, Germany)* Structure Formation Pathways Governing Stability in Organic Solar Cells
09:30 - 10:00 B2-31-I2	Chang-Qi Ma *(Suzhou Institute of Nano-Tech and Nano-Bionics Chinese academy of sciences, China)* Intrinsic Thermal Stability of Organic Solar Cells
10:00 - 10:30 B2-31-I3	Gregory Welch *(Department of Chemistry, University of Calgary)* New Molecular Materials for Large Area Roll-Coated Organic Photovoltaics
10:30 - 11:15	**Coffee Break**
	B2-32 Chair: Koen Vandewal
11:15 - 11:45 B2-32-I1	Andreas Distler *(Friedrich-Alexander-Universität Erlangen-Nürnberg, Faculty of Engineering, Department of Material Science, Materials for Electronics and Energy Technology (i-MEET), Martensstraße 7, 91058 Erlangen, Germany)* Upscaling, Characterization and Lifetime of Organic Photovoltaic Modules
11:45 - 12:00 B2-32-O1	Xiaohei Wu *(The Institute for Advanced Studies, Wuhan University)* Turning Waste into Treasure: A Platform-Driven High-Throughput Strategy for Stable All-Small-Molecule Solar Cells
12:00 - 12:15 B2-32-O2	Paula Pinyol-Castillo *(EURECAT, Centre Tecnològic de Catalunya, Functional Printing and Embedded Devices Unit, Parc Científic TecnoCampus, Av. Ernest Lluch 36, 08302 Mataró, Spain)* Challenges in Upscaling Organic Photovoltaics for Agrivoltaics Applications
13:15 - 15:00	**Lunch Break**
	B2-33 Chair: Andreas Distler
15:00 - 15:30 B2-33-I3	Thomas Kirchartz *(IMD3-Photovoltaics, Forschungszentrum Jülich GmbH, 52425 Jülich, Germany)* Material Parameter Inference in Organic Photovoltaics Using Machine Learning
15:30 - 15:45 B2-33-O1	Dieter Neher *(Soft Matter Physics and Optoelectronics, Institute of Physics and Astronomy, University of Potsdam, Karl-Liebknecht-Str. 24–25, 14476 Potsdam-Golm, Germany.)* Poor Exciton Dissociation Limits Photocurrents in Organic Solar Cells with Small Energy Offset – Which Is Why Low Offset Blends Can't Be Efficient
15:45 - 16:15 B2-33-I1	Carsten Deibel *(Chemnitz University of Technology, Germany)* How Does the Nanomorphology Affect Charge Generation, Recombination, and Transport in Organic Solar Cells?
16:15 - 16:30 B2-33-O2	Maxime Siber *(Helmholtz-Institute Erlangen-Nürnberg for Renewable Energies (HI-ERN), Forschungszentrum Jülich GmbH, Fürther Straße 248, 90429 Nürnberg, Germany)* Simulation of Morphology Formation in Solution-Processed Organic Photoactive Films
16:30 - 17:00 B2-33-I2	Koen Vandewal *(Hasselt University, Institute for Materials Research (imo-imomec), Martelarenlaan 42, B-3500 Hasselt, Belgium.)* Organic Up-Conversion Devices

17:00 - 17:15 B2-33-O3	Rong Wang *(Helmholtz Institute Erlangen-Nürnberg for Renewable Energy (HIERN), Forschungszentrum Jülich, 90429 Nürnberg, Germany)* Decoding Photophysical Processes via Bayesian Optimization to Unravel Efficiency Losses in Organic Solar Cells
20:00 - 22:00	**Social Dinner**

March 26th - Day 4 (Thursday)

	B2-41 Chair: Maria Saladina
09:00 - 09:30 B2-41-I1	Moritz Riede *(Department of Physics, Clarendon Laboratory, University of Oxford, Oxford OX1 3PU, U.K)* Vacuum-processed Organic Photovoltaics - Challenges and Opportunities
09:30 - 09:45 B2-41-O1	Olivier Ronsin *(Helmholtz Institute Erlangen-Nürnberg for Renewable Energy (HI ERN), Forschungszentrum Jülich GmbH (FZJ))* Predicting Efficiency and Stability of Organic Solar Cells from Phase-Field Simulations and Morphology-Aware Device-Physics Modelling
09:45 - 10:15 B2-41-I2	Jie Min *(Wuhan University)* Research on Phase Evolution Resistance of OPV Active Layer
10:15 - 10:30 B2-41-O2	Harald Hoppe *(Laboratory of Organic and Macromolecular Chemistry (IOMC), Friedrich Schiller University Jena, Humboldtstr. 10, D-07743 Jena, Germany)* Additives to Enhance Efficiency and Stability of PPDT2FBT-based Organic Solar Cells
10:30 - 10:40	**Closing B2**
17:30 - 19:00	**Poster Session**

March 27th - Day 5 (Friday)

09:20 - 10:30 **Plenary Session - Auditorium**

MATSUS Spring 2026 Conference (MATSUSSpring26)

A3 Flexible Perovskite Solar Cells: Materials, Interfaces, and Stability

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Yue Hu and Ji-Youn Seo

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
March 25th - Day 3 (Wednesday)	
20:00 - 22:00	**Social Dinner**
March 26th - Day 4 (Thursday)	
11:15 - 11:25	**Opening A3 - Room S11+12**
	A3-42 Chair: Yaoguang Rong
11:25 - 11:55 A3-42-I1	Luigi Angelo Castriotta *(CHOSE- Centre for Hybrid and Organic Solar Energy, Department of Electronics Engineering, University of Rome "Tor Vergata", Via del Politecnico 1- 00133 Roma, Italy.)* Roll-Coating One-Meter Perovskite Films: From Tailored Inks to Mechanically Robust Flexible Solar Cells
11:55 - 12:10 A3-42-O1	Biruk Seid *(Physik und Optoelektronik weicher Materie, Institut für Physik und Astronomie, Universität Potsdam, Germany)* Additive-Mediated Mechanical Robustness for High-Performance Flexible Perovskite Solar Cells
12:10 - 12:25 A3-42-O2	Sun-Ju Kim *(Department of Nano Convergence Technology, Pusan National University, Busan, Republic of Korea)* Seed-Primed and Vacuum-Assisted Crystallization of Scalable Perovskite Solar Modules
12:25 - 12:55 A3-42-I2	Jangwon Seo *(Department of Chemical and Biomolecular Engineering, Korea Advanced Institute of Science and Technology (KAIST), Daejeon, South Korea)* Efficient Perovskite Solar Cells with Hole-Selective Bilayer and Free-Standing Carbon Electrode
12:55 - 13:00 A3-42-S1	Jeffrey Lee *(KOREA KIYON)* Integrated Perovskite PV Solutions: R&D to Scale-Up
13:15 - 14:45	**Lunch Break**
	A3-43 Chair: Sandy Sanchez
15:00 - 15:30 A3-43-I1	Vanira Trifiletti *(Department of Materials Science and Solar Energy Research Centre (MIB-SOLAR), University of Milano-Bicocca, Via Cozzi 55, 20126, Milan, Italy)* Flexible and Rigid Kesterite/Perovskite Solar Cells Beyond 20% Efficiency
15:30 - 15:45 A3-43-O1	Mussakhan Aryslan *(Department of Physics, School of Sciences and Humanities, Nazarbayev University, Astana 010000, Kazakhstan)* Rapid Photonic Processing of Flexible Printed Perovskite Solar Cells for Space Applications
15:45 - 16:15 A3-43-I2	Nathan Hill *(Power Roll Ltd)* Large-Area, Roll-to-Roll Fabricated Flexible Microgroove Modules
17:30 - 19:00	**Poster Session**

March 27th - Day 5 (Friday)

09:20 - 10:30	**Plenary Session - Auditorium**
	A3-52 Chair: Ji-Youn Seo
11:15 - 11:45 A3-52-I1	Yaoguang Rong *(1Wuhan University of Technology, No. 122 Luoshi Road, Wuhan, China 430070)* Interface engineering of flexible perovskite solar cells and modules
11:45 - 12:15 A3-52-I2	Sandy Sánchez *(Ecole Polytechnique Federale de Lausanne (EPFL))* Flash Infrared Annealing for Flexible Perovskite Solar Cells: Coupling Strain Engineering, Interfaces and Stability
12:15 - 12:45 A3-52-I3	Soyeon Kim *(Korea Institute of Materials Science(KIMS))* Scalable Ambient-Air Fabrication of Flexible Perovskite Solar Cells through Dual 2D Interface Passivation
	A3-53 Chair: Yaoguang Rong
15:00 - 15:30 A3-53-I1	Jiantao Wang *(Phenosolar)* Interface Ordering and Strain Engineering Enable Efficient and Durable Flexible Carbon-Electrode Perovskite Solar Cells
15:30 - 16:00 A3-53-I2	Trystan Watson *(Swansea University)* Continuous manufacturing of perovskite solar cells via roll to roll - module design and in-line control
16:00 - 16:10	**Closing A3**

MATSUS Spring 2026 Conference (MATSUSSpring26)

C2 Advances in low-dimensional Nanocrystals: Fundamental approaches and technological perspectives

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Zhuoying Chen, Fabian Paulus, Carmelita Rodà and Matteo Zaffalon

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
March 25th - Day 3 (Wednesday)	
08:50 - 09:00	**C2 Opening - ROOM S5+6**
	C2-31 Chair: Fabian Paulus
09:00 - 09:30 C2-31-I1	sohee jeong *(Department of Energy Science (DOES) and Center for Artificial Atoms, Sungkyunkwan University (SKKU))* Chemistry of InAs Nanocrystals For Infrared Harvesting
09:30 - 10:00 C2-31-I2	Maksym Kovalenko *(Swiss Federal Institute of Technology Zurich (ETH Zurich), 8093 Zurich, Switzerland)* Novel Synthesis Approaches to InP and InAs Quantum Dots
10:00 - 10:30 C2-31-I3	Gerasimos Konstantatos *(ICFO, ICREA)* Infrared III-V Colloidal Quantum Dots: Synthesis, Properties and Optoelectronic Devices
10:30 - 11:15	**Coffee Break**
	C2-32 Chair: Zhuoying Chen
11:15 - 11:45 C2-32-I1	Emmanuel Ihuillier *(Sorbonne Université, CNRS, Institut des NanoSciences de Paris, 4 place Jussieu, 75005 Paris, France.)* Mapping the Energy Landscape from Nanocrystal Based Device using Operando Photoemission
11:45 - 12:00 C2-32-O1	Apurba Mahpatra *(Leibniz-Institute for Solid State and Materials Research Dresden, Helmholtzstraße 20, 01069 Dresden, Germany)* Heavy Metal Free Ag2S Nanocrystal Inks for Directly Deposited, Self-Powered Near-Infrared Flexible Photodetectors
12:00 - 12:30 C2-32-I2	Emmanuelle Deleporte *(Lumière, Matière et Interfaces (LuMIn) Laboratory, Université Paris-Saclay, ENS Paris-Saclay, CNRS, CentraleSupelec, 91190 Gif-sur-Yvette, France.)* Low-Dimensional Perovskites as Protection and Passivation Layers for Stable Solar Cells
12:30 - 13:00 C2-32-I3	Qing Shen *(The University of Electro-Communications)* Defect Engineering and Photophysical Properties of Metal Halide Perovskite Nanocrystals
13:00 - 13:15 C2-32-O2	Andrea Fratelli *(Dipartimento di Scienza dei Materiali, Università degli Studi di Milano-Bicocca, Via R. Cozzi 55, 20125, Milano, Italy)* Synergistic Compatibilization of CsPbBr3 Perovskites and HfO2 Nanocrystals for Hybrid Sensitized Nanoscintillators
	C2-33 Chair: Carmelita Rodà
15:00 - 15:30 C2-33-I1	Sascha Feldmann *(Tenure-Track Assistant Professor in Physical Chemistry & Head of the Laboratory for Energy Materials at EPFL SCR Member, Winthrop House, Harvard University)* Room Temperature Synthesis and Photophysics of the Smallest Doped Halide Perovskite Nanocrystals
15:30 - 15:45 C2-33-O1	Richard Robinson *(Cornell University Materials Science and Engineering Department)* Emergent Optical Nonreciprocity in Colloidal Semiconductor Magic-Size Clusters
15:45 - 16:15 C2-33-I2	Mark W.B. Wilson *(Department of Chemistry, University of Toronto, Lash Miller Chemical Laboratories, 80 St. George Street, ON M5S 3H6, Toronto, Canada)* Trap Emission from Individual CdSe Quantum Dots is Dynamic

16:15 - 16:45 C2-33-I3	Francesco Di Stasio *(Photonic Nanomaterials, Istituto Italiano di Tecnologia, 16163 Genova, Italy)* Increasing the Size of Colloidal Quantum Dots via Large Oxide Shells: a Venue to Improve Single Particle Manipulation and Control Optical Properties
16:45 - 17:00 C2-33-O2	Jonah Horowitz *(Department of Chemistry, Massachusetts Institute of Technology (MIT))* Single-Nanocrystal Emission Spectra from an Ensemble
17:00 - 17:15 C2-33-O3	Varvara Alabusheva *(Physical Chemistry, TU Dresden, Zellescher Weg 19, 01069 Dresden, Germany)* CuS Nanoparticle Grating for Directional Photoluminescence Enhancement of NIR Quantum Dots
17:15 - 17:45 C2-33-I4	ZEGER HENS *(Department of Chemistry, Physics and Chemistry of Nanostructures, Ghent University, 9000 Ghent, Belgium)* Excitons in Low-Dimensional Systems, from Photophysics to Lasing
17:45 - 17:55	**Closing C2**
20:00 - 22:00	**Social Dinner**

March 26th - Day 4 (Thursday)
17:30 - 19:00 **Poster Session**
March 27th - Day 5 (Friday)
09:20 - 10:30 **Plenary Session - Auditorium**

MATSUS Spring 2026 Conference (MATSUSSpring26)

C4 Precision synthesis of nanocrystals and nanochemistry

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Zhanzhao Li, Baowei Zhang and Juliette Zito

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
11:15 - 11:25	**C4 Opening - ROOM S2+3+4**
	C4-12 Chair: Loredana Protesescu
11:25 - 11:55 C4-12-I1	Liberato Manna *(Nanochemistry, Istituto Italiano di Tecnologia, Genova 16163, Italy)* Halide Perovskite Nanocrystals: Synthesis, Growth Mechanisms, Superstructures
11:55 - 12:10 C4-12-O1	Stefano Toso *(Chemical Physics, Department of Chemistry, Lund University, Kemicentrum Naturvetarevägen 16, Lund 223 62, Sweden)* Perovskite Quantum-dot Superlattices share Structural Signatures of Protein Crystals
12:10 - 12:40 C4-12-I2	Jianyu Yuan *(Institute of Functional Nano and Soft Materials (FUNSOM), Soochow University, Jiangsu 215123, P. R. China)* Halide Perovskite Quantum Dot: From Synthesis to Photovoltaic Application
13:15 - 14:45	**Lunch Break**
	C4-13 Chair: Loredana Protesescu
15:00 - 15:15 C4-13-O2	Zhanzhao Li *(Nanochemistry, Istituto Italiano di Tecnologia, Genova 16163, Italy)* Synthesis of Hollow CsPbX3 (X = Cl, Br, I) Nanocubes and Their Heterostructures
15:15 - 15:30 C4-13-O3	Alessandro Ciccone *(Instituto de Ciencia Molecular (ICMol), Universidad de Valencia, Paterna, Spain)* Dual Carbon-Based Nanomaterials via Ultrarapid Microwave-Assisted Synthesis: Insights into Structure and Applications
15:30 - 15:45 C4-13-O1	Dezhang Chen *(Nanochemistry, Istituto Italiano di Tecnologia, Via Morego 30, 16163, Genova, Italy)* Eliminating Amines: Toward Highly Stable Perovskite Nanoplatelets

March 24th - Day 2 (Tuesday)

	C4-21 Chair: Liberato Manna
09:00 - 09:30 C4-21-I1	Loredana Protesescu *(Zernike Institute for Advanced Materials, University of Groningen, Nijenborgh 3, Groningen, 9747AG, The Netherlands.)* Metal Boride Nanocrystals and their Chemistry
09:30 - 10:00 C4-21-I2	Janet Macdonald *(Vanderbilt University - Department of Chemistry)* Hypothesis Driven Control of Transition Metal Sulfide Phase in Colloidal Synthesis
10:00 - 10:30 C4-21-I3	Toshiharu Teranishi *(Kyoto University, Institute for Chemical Research, Kyoto, Japan)* Transformation of Inorganic Nanocrystals by Element Substitution Reactions
10:30 - 11:15	**Coffee Break**
	C4-22 Chair: Liberato Manna
11:15 - 11:30 C4-22-O1	Jonathan Quinson *(CICA-Centro Interdisciplinar de Química e Bioloxía, Facultade de Ciencias, Universidade da Coruña, Campus de Elviña, 15008 A Coruña, Spain)* Surfactant-Free Colloidal Syntheses of Metal Nanoparticles: Model Systems for Fundamental Applied Catalysis and Beyond
11:30 - 11:45 C4-22-O2	Urvi Parekh *(Institute of Physics, University of Rostock, Albert-Einstein-Straße 23, 18059 Rostock, Germany)* Formation of Colloidal 2D CuSe Nanocrystals and Photo-Physical Properties Arising from Crystal Anisotropy
11:45 - 12:15 C4-22-I1	ZEGER HENS *(Department of Chemistry, Physics and Chemistry of Nanostructures, Ghent University, 9000 Ghent, Belgium)* Synthesis, Surface Chemistry and Trap States in III-V Quantum Dots
12:15 - 12:30 C4-22-O3	Xavier Kirchherr *(Zernike Institute for Advanced Materials, University of Groningen, Nijenborgh 3, Groningen, 9747AG, The Netherlands.)* Direct Synthesis of Conductive CdSe Quantum Dots Inks
12:30 - 13:00 C4-22-I2	Haiyan Qin *(Department of Chemistry, Zhejiang University, China)* Environmental Effects on the Emission Properties and Underlying Mechanisms of Colloidal Semiconductor Nanocrystals
13:15 - 14:45	**Lunch Break**
	C4-23 Chair: Janet Macdonald
15:00 - 15:15 C4-23-O3	Philippe Green *(Department of Chemistry, Physics and Chemistry of Nanostructures, Ghent University, 9000 Ghent, Belgium)* Superfocusing Growth Caps the Range of Available Nanocrystal Sizes
15:15 - 15:30 C4-23-O4	Baowei Zhang *(Zhengzhou University)* From Magic-Size Nanomaterials to Macroscopic Chiral Structures
15:30 - 15:45 C4-23-O1	Robinson Richard *(Cornell University Materials Science and Engineering Department)* Colloidal Nanocrystal Engineering for Tunable Circular Birefringence
15:45 - 16:00 C4-23-O2	Yoann Prado *(Institut des Nanosciences de Paris (INSP), Sorbonne Université, CNRS)* Thermally Stable HgTe@CdS Core Shell Nanocrystals
16:00 - 16:10	**Closing C4**
17:30 - 19:00	**Poster Session**

March 25th - Day 3 (Wednesday)
20:00 - 22:00 **Social Dinner**
March 27th - Day 5 (Friday)
09:20 - 10:30 **Plenary Session - Auditorium**

MATSUS Spring 2026 Conference (MATSUSSpring26)

G1 Advanced characterisation of perovskites: electrons and photons

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Stefania Cacovich and Giorgio Divitini

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
11:15 - 11:25	**Opening G1 - Room A3**
	G1-12 Chair: Giorgio Divitini
11:25 - 11:55 G1-12-I1	Philip Schulz *(Institut Photovoltaïque d'Ile-de-France (IPVF), UMR 9006, CNRS, Ecole Polytechnique, IP Paris, Chimie Paristech, PSL, 91120 Palaiseau, France)* Photoemission-Based Analysis of Energy Levels and Interfacial Reactions in Perovskite Solar Cells
11:55 - 12:10 G1-12-O1	Herman Heffner *(Chair for Emerging Electronic Technologies, Technische Universität Dresden, Nöthnitzer Straße 61, 01187 Dresden, Germany)* Revealing Interfacial Charge-Collection Losses in Perovskite Solar Cells Through Spectral Linearization of the Internal Quantum Efficiency
12:10 - 12:25 G1-12-O2	Pierre Lottigier *(Université Grenoble Alpes, CEA, LITEN, INES, Le Bourget-du-Lac, France)* Machine-Learning - Assisted Calibration of a PK-Si Solar Cell 2D-TCAD Model by using TRPL
12:25 - 12:55 G1-12-I2	Ute Cappel *(Division of X-ray Photon Science, Department of Physics and Astronomy, Uppsala University, Sweden)* Insight into the Interfaces in p-i-n Perovskite Solar Cells from in-situ Photoelectron Spectroscopy
13:15 - 14:45	**Lunch Break**
	G1-13 Chair: Stefania Cacovich
15:00 - 15:30 G1-13-I1	Thomas Kirchartz *(IMD-3 Photovoltaics, Forschungszentrum Jülich, 52425 Jülich, Germany)* Power-Law Decays and Photodoping in Halide Perovskite Solar Cells
15:30 - 15:45 G1-13-O1	Tommaso Raimondi *(Institut Photovoltaïque d'Île de France (IPVF), UMR 9006, CNRS, Ecole Polytechnique – IP Paris, Chimie Paristech – PSL, 18 boulevard Thomas Gobert, 91120 Palaiseau, France)* Correlate Spectral and Time-resolved Fluorescence Imaging of Perovskite Half-cells and Record their Degradation with Self-supervised Learning
15:45 - 16:15 G1-13-I2	Rene Janssen *(Department of Chemical Engineering and Chemistry / Applied Physics and Science Education, Eindhoven University of Technology, The Netherlands)* Effects of Temperature on the Absolute and Transient Photoluminescence of Metal-Halide Perovskites
16:15 - 16:30 G1-13-O2	Damien Garrot *(Université Paris-Saclay, UVSQ, CNRS, GEMaC, 78000, Versailles, France.)* Ultra-sharp Luminescence from Defect States in CH3NH3PbI3 Single Crystals
16:30 - 17:00 G1-13-I3	Dmitry Baranov *(Division of Chemical Physics and NanoLund, Lund University, Sweden)* Rich Photophysics of Perovskite Thin Films Revealed by Ultrafast Spectroscopy and Diffraction
17:00 - 17:15 G1-13-O3	Cintia Hajdu *(University of Szeged, HU)* Band Structure Mapping of Pseudo-Perovskites by Spectroelectrochemical and Optical Techniques
17:15 - 17:30 G1-13-O4	Xuemeng Yu *(Institute of Materials Research, Tsinghua Shenzhen International Graduate School, Tsinghua University, Shenzhen, 518055 China.)* Hot Carrier Behavior and Electron-Phonon Coupling Regulation in A-site Cation High-Entropy Perovskites

March 24th - Day 2 (Tuesday)

G1-21
Chair: Philip Schulz

09:00 - 09:15 G1-21-O1 Milos Dubajic *(Department of Chemical Engineering and Biotechnology, University of Cambridge, United Kingdom)*
How to Control Dynamic Nanodomains in Lead Halide Perovskites

09:15 - 09:30 G1-21-O2 Rehmat Sood-Goodwin *(University of Sheffield)*
Surface Potential Mapping at the Nanoscale: Using Kelvin Probe Force Microscopy to Examine the Impact of Molecular Passivation on Surface Photovoltage in Perovskite Semiconductors.

09:30 - 10:00 G1-21-I1 David Fenning *(University of California San Diego, California 92093-0021, United States of America)*
Shining (X-ray) Light on Structural Distortions in Perovskites toward Improved Photovoltaic Stability

10:00 - 10:30 G1-21-I2 Angelica Simbula *(Dipartimento di Fisica, Università degli Studi di Cagliari, Monserrato, CA, 09042 Italy)*
Polaritons without Excitons: the Mechanism of Lasing in Lead Halide Perovskites

10:30 - 11:15 **Coffee Break**

G1-21
Chair: Miguel Anaya

11:15 - 11:45 G1-21-I1 Irina Skvortsova *(Electron Microscopy for Materials Science (EMAT) and NANOlab Center of Excellence, University of Antwerp, Antwerp, Belgium)*
Transmission Electron Microscopy-Enabled Elucidation of the 3D Structure and Investigation of Environmental Degradathion Pathways for All-Inorganic Metal Halide Perovskites

11:45 - 12:15 G1-21-I2 Salvatore Valastro *(Istituto per la Microelettronica e Microsistemi (IMM), Consiglio nazionale delle Ricerche (CNR), Ottava Strada 5, Zona Industriale, 95121, Catania, Italy)*
In-Situ and In-Operando Characterization of Dynamic Processes in Halide Perovskites

12:15 - 12:45 G1-21-I3 Frédéric Sauvage *(Laboratoire de Réactivité et de Chimie des Solides, CNRS UMR7314, Université de Picardie Jules Verne, Hub de l'énergie, 15 Rue Baudelocque, 80039 Amiens Cedex, France)*
Decoding degradation in hybrid halide perovskite solar cells through advanced in situ characterization techniques

12:45 - 12:55 **Closing G1**

13:15 - 14:45 **Lunch Break**

17:30 - 19:00 **Poster Session**

March 25th - Day 3 (Wednesday)
20:00 - 22:00 **Social Dinner**
March 27th - Day 5 (Friday)
09:20 - 10:30 **Plenary Session - Auditorium**

MATSUS Spring 2026 Conference (MATSUSSpring26)

F5 Lithium Batteries and Beyond: From Fundamentals to Materials Discovery

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Chia-Chin Chen and Gints Kucinskis

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
March 25th - Day 3 (Wednesday)	
20:00 - 22:00	**Social Dinner**
March 26th - Day 4 (Thursday)	
11:15 - 11:25	**Opening F5 - Room A1**
	F5-42 Chair: Chia-Chin Chen
11:25 - 11:55 F5-42-I1	Jinhua Sun *(Chalmers University of Technology, Sweden)* Development of Sustainable Active/Inactive Material and Electrode Processing Methods for Batteries
11:55 - 12:10 F5-42-O1	Sylvain REY *(Univ. Grenoble Alpes, CEA, LITEN, DEHT, 38000 Grenoble, France)* Exploring the Reference Electrode: Operating Mechanisms, Previously Unreported Artifacts, and Practical Ways to Reduce Their Impact
12:10 - 12:25 F5-42-O2	Haesun Park *(School of Integrative Engineering, Chung-Ang University, Seoul, South Korea)* Homogeneous Li Plating Governed by the Intrinsic Li Diffusion Kinetics of the Li–Ag Alloy
12:25 - 12:55 F5-42-I2	Juan Carlos González Rosillo *(IREC, Catalonia Institute for Energy Research, C/ Jardins de les Dones de Negre 1, Barcelona 08930, Spain)* Engineering Cathode and Anode Interfaces in Li-based Thin Film Solid-State Batteries via Pulsed Laser Deposition
13:15 - 14:45	**Lunch Break**
	F5-43 Chair: Gints Kucinskis
15:00 - 15:30 F5-43-I1	Maria Lukatskaya *(Department of Mechanical and Process Engineering, ETH Zürich, Sonneggstrasse 3, 8092 Zürich, Switzerland)* Robust Battery Interphases from Dilute Fluorinated Cations
15:30 - 15:45 F5-43-O1	Chirag Chotai *(Institut de Recerca en Energia de Catalunya (IREC), Jardins de les Dones de Negre, 1, 2ª pl., 08930, Sant Adrià del Besòs, Barcelona, Spain)* Engineering Proton-Compatible MIEC Oxide Thin Films for Solid State Electrochemical Systems
15:45 - 16:15 F5-43-I2	Jedrzej Morzy *(Laboratory of Thin Films and Photovoltaics, Empa – Swiss Federal Laboratories for Materials Science and Technology, 8600 Dübendorf, Switzerland.)* Conversion and Interfacial Storage in Thin-Film Transition Metal Fluoride Cathodes
16:15 - 16:45 F5-43-I3	Matthias T. Elm *(Institute of Experimental Physics I, Justus Liebig University, Heinrich-Buff-Ring 16, 35392 Giessen, Germany)* Stabilizing the Cathode-Electrolyte Interface in Next Generation Batteries by Surface Engineering
16:45 - 17:15 F5-43-I4	Federico Baiutti *(IREC, Catalonia Institute for Energy Research, C/ Jardins de les Dones de Negre 1, Barcelona 08930, Spain)* Engineering Oxygen Stoichiometry in Mixed Conductors for Next-Generation Energy Devices
17:30 - 19:00	**Poster Session**

March 27th - Day 5 (Friday)

09:20 - 10:30 **Plenary Session - Auditorium**

F5-52

Chair: Chia-Chin Chen

11:15 - 11:45 F5-52-I1 Francesco Ciucci *(University of Bayreuth)*
From Antiperovskite Ion Transport to High-Throughput Interlayer Design for Solid-State Batteries

11:45 - 12:15 F5-52-I2 Alexey Koposov *(University of Oslo (UiO))*
Chemical Transformation in Battery Materials – What Can we Learn?

12:15 - 12:45 F5-52-I3 Jože Moškon *(National Institute of Chemistry, Hajdrihova 19, 1001 Ljubljana, Slovenia)*
Scaling Relations and Physically Grounded Analysis of Impedance Parameters in Li-Ion Insertion Electrodes

12:45 - 13:00 F5-52-O1 Azmat Hussain *(School of Engineering and Natural Sciences, University of Iceland, Reykjavík, Iceland)*
Tuning Fe_2TiO_5 Through Sn Substitution for Superior Lithium Storage and Cycling Stability.

F5-53

Chair: Gints Kucinskis

15:00 - 15:30 F5-53-I1 Mario Marinaro *(ZSW - Zentrum für Sonnenenergie-und Wasserstoff-Forschung Baden-Württemberg Helmholtzstraße 8 89081 Ulm / Germany)*
Advances and Considerations in Polyanionic Cathodes: The Case of $Na_4Fe_3(PO_4)_2(P_2O_7)$

15:30 - 16:00 F5-53-I2 Linas Vilčiauskas *(Center for Physical Sciences and Technology (FTMC), Saulėtekio al. 3, LT-10257 Vilnius, Lithuania)*
Design and Operando Analysis of Aqueous Na- and Zn-Ion Battery Materials

16:00 - 16:30 F5-53-I3 Katja Lahtinen *(Department of Chemistry – Ångström Laboratory, Uppsala University, Box 538, SE-751 21 Uppsala, Sweden)*
Synergy or Interference? The Effect of Additives and Formation Protocols Combined in Fluorine-free Electrolytes for Sodium-ion Batteries

16:30 - 16:45 F5-53-O1 Dino Tonti *(Institut de Ciència de Materials de Barcelona (ICMAB), CSIC, Carrer dels Til·lers sn, Bellaterra, 08193, Spain)*
Electrolytic Processes in Rechargeable Aqueous Zn-MnO2 Batteries: Mechanisms and Applications

16:45 - 17:00 F5-53-O2 Estibaliz Garcia-Gaitan *(Centre for Cooperative Research on Alternative Energies (CIC energiGUNE), Basque Research and Technology Alliance (BRTA), Alava Technology Park, Albert Einstein 48, Vitoria-Gasteiz 01510, Spain)*
Enhancing the Stability and Performance of Agarose-Based Gel Electrolytes for Zinc-Air Batteries

17:00 - 17:10 **Closing F4 - A1**

MATSUS Spring 2026 Conference (MATSUSSpring26)

F3 Processing and manufacturing of next generation batteries

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Valeria Nicolosi, Sergio Pinilla and Juan J Vilatela

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
March 25th - Day 3 (Wednesday)	
20:00 - 22:00	**Social Dinner**
March 26th - Day 4 (Thursday)	
17:30 - 19:00	**Poster Session**
March 27th - Day 5 (Friday)	
09:20 - 10:30	**Plenary Session - Auditorium**
11:15 - 11:25	**Opening F3 - Room A4**
	F3-52 Chair: Sergio Pinilla
11:25 - 11:55 F3-52-I1	Andrea Balducci *(Friedrich Schiller University Jena, Germany)* Development of Sustainable and Recyclable Electrolytes for Metal-Ion Batteries
11:55 - 12:25 F3-52-I2	Israel Temprano *(Yusuf Hamied Department of Chemistry, University of Cambridge, Cambridge, Lensfield road, CB2 1EW, United Kingdom)* Accelerating Battery Innovation through Operando Gas Analysis
12:25 - 12:40 F3-52-O1	David Muñoz-Torrero *(Electrochemical Processes Unit, IMDEA Energy, Avda. Ramón de la Sagra 3, 28935, Móstoles, Madrid, Spain)* Redox-Mediated Electrochemical Recycling of Spent LiFePO4 Cathodes
12:40 - 12:55 F3-52-O2	Ousmane Camara *(Bio-Logic Science Instruments España S.L.U.)* Electrochemical Impedance Spectroscopy: a powerful tool for understanding electrochemical systems
12:55 - 13:25 F3-52-I3	Mohammed Alabdali *(Université de Picardie Jules Verne)* From Digital Models to Digital Twins: Battery Manufacturing Optimization in the Digital Era
13:30 - 15:00	**Lunch Break**
	F3-53 Chair: Sergio Pinilla
15:00 - 15:30 F3-53-I1	Jon Ajuria *(CIC Energigune)* Dry Processing of Sodium Ion Batteries
15:30 - 16:00 F3-53-I2	Daniel Rettenwander *(AIT Austrian Institute of Technology GmbH, Center for Low-Emission Transport, Battery Technologies, Giefinggasse 2, 1210 Vienna, Austria)* From Lab to Pouch Cell: Processing Challenges in Scaling Sulfidic Solid-State Batteries
16:00 - 16:30 F3-53-I3	Hugh Geaney *(School of Chemical Sciences and Chemical Engineering, Bernal Institute, University of Limerick, Limerick, V94 T9PX Ireland)* Group 14 Materials for Li-ion Batteries and Beyond
16:30 - 16:45 F3-53-O1	Tomás García Rodríguez *(IMDEA Energy Institute, Electrochemical Processes Unit, Spain)* Impact of 3D-Printed Electrode Architectures on Rate Performance: Extending the Master-Curve Model to Structured Geometries
16:45 - 17:00 F3-53-O2	Jadra Mosa *(Instituto de Cerámica y Vidrio ICV-CSIC, Madrid, España)* Bifunctional Catalysts Derived from Iron Chlorides via Sol-Gel Synthesis for Long-Lasting Aqueous Zinc-Air Battery Electrodes
17:00 - 17:15 F3-53-O3	Rafael Tomey *(IMDEA Materials Institute, Spain)* Decoupling Degradation Mechanisms in 100% Silicon Nanowire Anodes for High-Energy Lithium-Ion Batteries

17:15 - 17:45 F3-53-I4	Andreas Pfrang *(European Commission, Joint Research Centre (JRC), Petten, The Netherlands)* Batteries from a Policy Perspective with a Focus on Durability and Safety aspects
17:45 - 17:55	**Closing F3**

MATSUS Spring 2026 Conference (MATSUSSpring26)

H4 Neuromorphic devices and systems

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Francesca Borghi and Erika Covi

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
March 25th - Day 3 (Wednesday)	
20:00 - 22:00	**Social Dinner**
March 26th - Day 4 (Thursday)	
11:15 - 11:25	**Opening H4 - Room Port Vell 1**
	H4-42 Chair: Juan Bisquert
11:25 - 11:55 H4-42-I1	Gianluca Milano *(Advanced Materials Metrology and Life Science Division, INRiM (Istituto Nazionale di Ricerca Metrologica), Strada delle Cacce 91, Italy)* In Materia Computing with Self-Organizing Neuromorphic Networks
11:55 - 12:25 H4-42-I2	Susanne Hoffmann-Eifert *(Peter-Grünberg-Institute for Electronic Materials (PGI-7), Forschungszentrum Jülich GmbH, Jülich 52425, Germany)* Volatile Switching Electrochemical Metallization Cells for Use in Neural Circuits
12:25 - 12:40 H4-42-O1	Davide Decastri *(CIMAINA and Dipartimento di Fisica "A. Pontremoli", Università degli Studi di Milano)* Programmability of the Functional Connectivity in Metal Cluster-Assembled Films for Neuromorphic Computing Applications
12:40 - 12:55 H4-42-O2	Heyi Zhang *(Instituto de Tecnología Química (Universitat Politècnica de València-Consejo Superior de Investigaciones Científicas), Camino de Vera s/n, 46022, València, Spain)* Emergent Neuromorphic Dynamics in Organic Electrochemical Transistors
12:55 - 13:10 H4-42-O3	Gonzalo Rivera-Sierra *(Instituto de Tecnología Química (ITQ), Universitat Politècnica de València-Consejo Superior de Investigaciones Científicas (UPV-CSIC), València, 46022 Spain)* Opening the Complex Encyclopedia of Artificial Synapses
13:15 - 14:45	**Lunch Break**
	H4-43 Chair: Gianluca Milano
15:00 - 15:30 H4-43-I1	Hongrong Hu *(Institute of Nanotechnology, Karlsruhe Institute of Technology (KIT), Hermann-von-Helmholtz-Platz 1, 76344 Eggenstein-Leopoldshafen, Germany)* Experimental Demonstration of Memristor Stateful Logics for In-Memory Sorting
15:30 - 16:00 H4-43-I2	Takashi Tsuchiya *(Research Center for Materials Nanoarchitectonics (MANA), National Institute for Materials Science (NIMS))* In-Materio Reservoir Computing Utilizing Spatiotemporal Dynamics of Ion, Electron, and Spin
16:00 - 16:15 H4-43-O1	Stefano Radice *(CIMAINA and Dipartimento di Fisica "A. Pontremoli", Università degli Studi di Milano)* Platinum Cluster-Assembled Thin Films for Neuromorphic Hardware
16:15 - 16:45 H4-43-I3	Haizheng Zhong *(Beijing Institute of Technology)* Looking at QLED Devices from Microscopic and Macroscopic Viewpoints
16:45 - 17:00 H4-43-O2	Roberto Fenollosa *(Instituto de Tecnología Química, Universitat Politècnica de València-Consejo Superior de Investigaciones Científicas, Av. de los Naranjos s/n, 46022 Valencia, Spain.)* Determination of Oscillation Conditions by Bifurcation Analysis and by Impedance Spectroscopy in a Neural System
17:00 - 17:15 H4-43-O3	Silvia Bressan *(CIMAINA and Dipartimento di Fisica "A. Pontremoli", Università degli Studi di Milano)* A Polymorphic Reconfigurable Multi-Electrode Device based on Electrically Bistable Nanostructured Metallic Films
17:30 - 19:00	**Poster Session**

March 27th - Day 5 (Friday)

09:20 - 10:30	**Plenary Session - Auditorium**
	H4-52 Chair: Francesca Borghi
11:15 - 11:45 H4-52-I1	Juan Bisquert *(Instituto de Tecnología Química, Universitat Politècnica de València-Consejo Superior de Investigaciones Científicas, Av. de los Naranjos s/n, 46022 Valencia, Spain.)* Universal Dynamical Principles for Neuromorphic Oscillators: From Solid-State Devices to Organic and Fluidic Neurons
11:45 - 12:15 H4-52-I2	Michele Giugliano *(University of Modena and Reggio Emilia)* 'Broadband' Cortical Neuronal Ensembles
12:15 - 12:45 H4-52-I3	Paolo Milani *(University of Milano)* Receptron Hardware Platform for Real Time Learning and Classification
12:45 - 13:15 H4-52-I4	Luisa Petti *(Free university of Bozen-Bolzan)* Electrochemically-assembled Polymeric Architectures for Adaptive Bioelectronic Interfaces
13:15 - 13:25	**Closing H4**

MATSUS Spring 2026 Conference (MATSUSSpring26)

H5 Neuromorphic Photonics and light-responsive Synaptic devices

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Jung-Yao Chen and Zacharie Jehl

Conference Program

March 23rd - Day 1 (Monday)
09:00 - 10:30 **08.45h Plenary Session - Auditorium**
March 25th - Day 3 (Wednesday)
20:00 - 22:00 **Social Dinner**
March 27th - Day 5 (Friday)
09:20 - 10:30 **Plenary Session - Auditorium**

MATSUS Spring 2026 Conference (MATSUSSpring26)

E1 Breaking New Bonds: Electrocatalysis for Emerging Transformations

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: María Escudero-Escribano and Ifan Stephens

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
March 24th - Day 2 (Tuesday)	
08:50 - 09:00	**Opening E1 - Room Aqua**
	E1-11 Chair: María Escudero-Escribano
09:00 - 09:30 E1-11-I1	Ifan Stephens *(Imperial College London, United Kingdom)* Design rules for N_2 reduction through electrolyte chemical potentials
09:30 - 09:45 E1-11-O3	Mathilde Luneau *(Department of Chemistry and Chemical Engineering, Chalmers University of Technology, Sweden)* Dilute Alloy Electrocatalysts for CO2 Electroreduction
09:45 - 10:00 E1-11-O4	Muhammad Usman *(Sustainable Electrochemical Processes - IN2UB, Departament de Ciència deMaterials i Química Física, Universitat de Barcelona, Barcelona, Spain.)* Efficient Carbon Dioxide Electrolysis to Ethylene
10:00 - 10:15 E1-11-O1	Pablo Arévalo-Cid *(Instituto de Catálisis y Petroleoquímica, CSIC, Madrid)* On the Selectivity Control of N, P-Doped Carbon-Cu Nanocomposites as Electrocatalysts for CO2 Electroreduction: Little Changes, Big Effects
10:15 - 10:30 E1-11-O2	Jon Bjarke Valbaek Mygind *(Catalan Institute of Nanoscience and Nanotechnology, Campus UAB, Bellaterra, 08193 Barcelona, Spain)* Normalization in Electrocatalysis: Distinguishing Real, and Electrochemically Active Surface Areas
10:30 - 11:15	**Coffee Break**
	E1-12 Chair: Ifan Stephens
11:15 - 11:45 E1-12-I1	Federico Calle-Vallejo *(Nano-Bio Spectroscopy Group and European Theoretical Spectroscopy Facility (ETSF), Department of Advanced Materials and Polymers: Physics, Chemistry and Technology, University of the Basque Country UPV/EHU, Av. Tolosa 72, 20018 San Sebastián, Spain.)* Computational Tools to Study the Electrocatalytic Making of C-N, C-H and C-C Bonds
11:45 - 12:00 E1-12-O1	Barbara Polesso *(ICFO – Institut de Ciències Fotòniques, The Barcelona Institute of Science and Technology, 08860 Castelldefels, Barcelona, Spain.)* Hybrid Electrosynthesis of Value-Added chemicals
12:00 - 12:15 E1-12-O2	Shahid Ullah Khan *(Delft University of Technology, The Netherlands)* Electrochemical Dicarboxylation of 1,3-Butadiene with CO2: A Pathway to Adipic Acid Precursors Using Non-Sacrificial Anodes
12:15 - 12:30 E1-12-O3	Michele Ferri *(Italian Institute of Technology (IIT))* Electrochemical Urea Synthesis: Approaches, Analytics, and Open Questions
12:30 - 13:00 E1-12-I2	Amanda Garcia *(University of Amsterdam, Science Park 904, Amsterdam, 1098XH, The Netherlands)* Unraveling C–N Bond Formation Pathways in Electrosynthesis: Mechanistic Insights Enabled by in situ Infrared Spectroscopy
13:15 - 14:45	**Lunch Break**
	E1-13 Chair: María Escudero-Escribano
15:00 - 15:15 E1-13-O5	Vigneshraaj A S *(Centre for Nano and Soft Matter Sciences)* "Mechanistic Analysis of NiFe-LDH Catalyst for Efficient Biomass Valorization to Value-Added Chemicals"

15:15 - 15:45 E1-13-I2	Alexander Bagger *(Technical University of Denmark (DTU), Denmark)* Computations for Electrochemical Production of Bulk and Specialty Chemicals
15:45 - 16:00 E1-13-O4	Hesam Rabiee *(Department of Chemistry and Biochemistry, University of Bern - Switzerland)* Electrocatalytic CO_2 Reduction Coupled with PET Waste Oxidation toward Efficient and Sustainable Formate Production
16:00 - 16:15 E1-13-O2	Clément Spadetto *(IRCELYON, CNRS-Univ. Lyon, Université Claude Bernard Lyon 1, 69100 Villeurbanne, France)* Enhancing 2-Methylfuran Selectivity in Furfural Electrocatalytic Hydrogenation: The Role of Phosphate Anions
16:15 - 16:30 E1-13-O1	Francisco Fabregat-Santiago *(Institute of Advanced Materials (INAM), Universitat Jaume I, Castelló, Spain)* Identification of Charge Transfer Centers in Biomass Transformations
16:30 - 17:00 E1-13-I1	Hui Luo *(University of Surrey, UK)* Sustainable Co-production of Hydrogen and Value-added Chemicals with Waste Electrolysis
17:00 - 17:15 E1-13-O3	Carmen Mejuto Nieblas *(Institute of Advanced Materials (INAM), Universitat Jaume I, Castelló, 12006 Spain)* Electrosynthesis of High Added-Value Products: From HMF to FDCA/BHMF
17:30 - 19:00	**Poster Session**

March 25th - Day 3 (Wednesday)

E1-21
Chair: Ifan Stephens

09:00 - 09:30 E1-21-I1 Marta Hatzell *(School of Mechanical Engineering and School of Chemical and Biomolecular Engineering, Georgia Institute of Technology)*
Assessing Conversion Pathways for Nitrogen and Carbon Waste–Derived Fuels

09:30 - 10:00 E1-21-I2 Ruud Kortlever *(Department of Process & Energy, Faculty of Mechanical Engineering, Delft University of Technology)*
Electrochemical Ammonia and Urea Synthesis: Progress and Perspectives

10:00 - 10:15 E1-21-O1 Viktoria Golovanova *(ICFO-The Institute of Photonic Sciences)*
Advancing Urea Quantification at Trace Levels: Overcoming Analytical Challenges through Method Optimization and IC-MS

10:15 - 10:30 E1-21-O2 Thomas Hamann *(Chemistry Department, Michigan State University)*
Homogeneous Electrocatalytic Ammonia Splitting

10:30 - 11:15 **Coffee Break**

E1-22
Chair: María Escudero-Escribano

11:15 - 11:45 E1-22-I1 F. Pelayo García de Arquer *(ICFO – Institut de Ciències Fotòniques, The Barcelona Institute of Science and Technology, 08860 Castelldefels, Barcelona, Spain.)*
Crossing Reactive Carbon and Nitrogen Pathways with Electrolysis

11:45 - 12:00 E1-22-O1 Elena Mas-Marzá *(Institute of Advanced Materials (INAM), Universitat Jaume I (UJI), Castellón de la Plana, 12006, Spain)*
Electrocatalysis of Amine-Nitrile Systems: A Sustainable Path to Reversible Liquid Organic Hydrogen Storage

12:00 - 12:15 E1-22-O2 Farzaneh Farzinpour *(University of Bonn, Germany)*
Molecular Cages Accelerate Electrocatalytic NO3– Reduction to NH3

12:15 - 12:45 E1-22-I2 Yu Katayama *(Osaka University, SANKEN (The Institute of Scientific and Industrial Research), -0047, Osaka, Japan)*
In situ Spectroscopy of the Lithium-Mediated Nitrogen Reduction Reaction

12:45 - 13:00 E1-22-O3 Dongmin Park *(School of Chemical and Biological Engineering, Seoul National University)*
Steric Hindrance of Proton Donor to Modulate Electrochemical Reactions

13:00 - 13:15 E1-22-O4 Morgan McKee *(University of Bonn, Germany)*
Molecular Electrocatalysis Coupled with a Palladium Membrane Reactor Affords Selective Nitrogen Reduction

E1-23
Chair: Ifan Stephens

15:00 - 15:15 E1-23-O4 Jaxiry Barroso-Martínez *(Catalan Institute of Nanoscience and Nanotechnology (ICN2), CSIC and the Barcelona Institute of Science and Technology (BIST), Building ICN2, Campus UAB, E-08193 Bellaterra, Barcelona, Spain)*
Insights into the Mechanism of Electrochemical Nitrate Reduction on Silver

15:15 - 15:30 E1-23-O1 Silvia Favero *(Catalan Institute of Nanoscience and Nanotechnology (ICN2), CSIC and Barcelona Institute of Science and Technology, UAB Campus, 08193 Bellaterra, Barcelona, Spain)*
Why Testing Protocols Matter in Electrochemical Methane Oxidation

15:30 - 15:45 E1-23-O2 Gabriele Cioli *(Catalan Institute of Nanoscience and Nanotechnology (ICN2), CSIC and Barcelona Institute of Science and Technology, UAB Campus, 08193 Bellaterra, Barcelona, Spain)*
Electrochemical Methane Activation and Oxidation on Pt(100)

15:45 - 16:15 E1-23-I1 Samira Siahrostami *(Department of Chemistry, Simon Fraser University, 8888 University Drive, Burnaby, British Columbia, V5A 1S6 Canada)*
Electrochemical Valorization of NOx: Converting Pollutants into Value-Added Chemicals

16:15 - 16:30 E1-23-O3 Lucas Nortmeyer *(Friedrich Schiller University Jena, Germany)*
How Ionomers Influence Electrochemical Nitrate Reduction

16:30 - 17:00 E1-23-I2 Kelsey Stoerzinger *(Department of Chemical Engineering and Materials Science, University of Minnesota, Minneapolis, MN 55455, United States)*
Implications of Competitive Adsorption and Cation Effects in Electrocatalytic Reduction of Nitrate

17:00 - 17:10 **Closing E1**
20:00 - 22:00 **Social Dinner**

March 27th - Day 5 (Friday)

09:20 - 10:30 **Plenary Session - Auditorium**

MATSUS Spring 2026 Conference (MATSUSSpring26)

E2 Critical Raw Material (CRM) Substitution in Electrochemical Technology

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Tim-Patrick Fellinger and Robin White

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
March 25th - Day 3 (Wednesday)	
20:00 - 22:00	**Social Dinner**
March 26th - Day 4 (Thursday)	
08:50 - 09:00	**Opening E2 - Room Aqua**
	E2-11 Chair: Robin White
09:00 - 09:30 E2-11-I1	Özlem Özcan Sandikcioglu *(German Federal Institute for Materials Research and Testing (BAM))* Multi-objective Material Discovery using Material Acceleration Platforms (MAPs)
09:30 - 10:00 E2-11-I2	Olga Kasian *(Helmholtz-Zentrum Berlin für Materialien und Energie, Hahn-Meitner-Platz 1, 14109 Berlin, Germany)* Towards Durable and Affordable Electrocatalysts: Strategies for Reducing PGM Loading
10:00 - 10:30 E2-11-I3	Montse Casas Cabanas *(CIC energiGUNE, Basque Research and Technology Alliance (BRTA), Alava Technology Park, Albert Einstein 48, 01510 Vitoria-Gasteiz, Spain)* Cobalt-Free Cathodes and High-Throughput Strategies for Sustainable Lithium-Ion Batteries
10:30 - 11:15	**Coffe Break**
	E2-12 Chair: Tim-Patrick Fellinger
11:15 - 11:30 E2-12-O1	Gonzalo Escobar *(Multifunctional Inorganic Materials Group, Universidad Politécnica de Cartagena, 30202 Cartagena, Spain)* Enhancing Zn–Air Batteries through the Application of Medium-Entropy Perovskite Electrocatalysts
11:30 - 12:00 E2-12-I1	Chang Hyuck Choi *(Department of Chemistry, Pohang University of Science and Technology (POSTECH))* Comparative Study on Online Degradation Monitoring of Fuel Cell Cathodes at Solid-Liquid and Solid-Liquid-Gas Interfaces
12:00 - 12:15 E2-12-O2	Siyu Chen *(Institut Català de Nanociència i Nanotecnologia (ICN2))* Cellulose Nanocrystal / Co-Doped ZIF-8 Derived Nanocarbon for Highly Efficient Oxygen catalysis
12:15 - 12:45 E2-12-I2	Yi-Hsuan Wu *(Helmholtz-Institute Erlangen-Nuremberg for Renewable Energy (IET-2), Forschungszentrum Jülich GmbH, Cauerstr. 1, 91058, Erlangen, Germany)* Stability of Noble-Metal-Free Electrocatalysts in Fuel Cells and Electrolysis
12:45 - 13:00 E2-12-O3	Salbin Sediqi *(Bundesanstalt für Materialforschung und -prüfung (BAM))* Electrodeposited CuNiZn and CuNiCo Ternary Alloy Films as High-Performance Electrocatalysts for the Hydrogen Evolution Reaction
13:15 - 14:45	**Lunch Break**
	E2-13 Chair: Robin White
15:00 - 15:30 E2-13-I1	Paul Poodt *(SparkNano)* Spatial Atomic Layer Deposition for Critical Raw Material Reduction in Electrochemical Energy Systems
15:30 - 16:00 E2-13-I2	Soren Scott *(Department of Chemistry, University of Copenhagen, Universitetsparken 5, 2100 Copenhagen (Denmark))* Protective Layers as a Strategy for Non-Precious Acid-Stable OER Catalysts

16:00 - 16:15 E2-13-O1	Bas van Dijk *(TNO Energy and Materials Transition, Sustainable Technologies for Industrial Processes, Westerduinweg 3, 1755 LE Petten, The Netherlands.)* Paving the Way to Ultra-Low Iridium loadings in Proton Exchange Membrane Water Electrolysis
16:15 - 16:30 E2-13-O2	Julia Witt *(German Federal Institute for Materials Research and Testing (BAM))* Distinguishing Oxygen Evolution Reaction from Transpassive Metal Release in Multi-Principal Element Alloys
16:30 - 16:45 E2-13-O3	Kaiqi Zhao *(ICFO – Institut de Ciències Fotòniques, The Barcelona Institute of Science and Technology, 08860 Castelldefels, Barcelona, Spain.)* Fluorine-Free Membranes for Stable PEMWE
16:45 - 17:00 E2-13-O4	András Iván Kozák *(Nano-Science Center & Department of Chemistry, University of Copenhagen, Universitetsparken 5, KøbenhavnØ 2100, Denmark)* Mixed Non-Noble Metal Oxide Stabilisation for Acidic Water Splitting Electrocatalysis
17:00 - 17:10	**Closing E2**
17:30 - 19:00	**Poster Session**

March 27th - Day 5 (Friday)

09:20 - 10:30 **Plenary Session - Auditorium**

MATSUS Spring 2026 Conference (MATSUSSpring26)

I2 Organic materials and devices for sustainable and transient electronics

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Noemí Contreras-Pereda and Micaela Matta

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
March 25th - Day 3 (Wednesday)	
20:00 - 22:00	**Social Dinner**
March 26th - Day 4 (Thursday)	
08:50 - 09:00	**Opening I2 - Room Marítima 2**
	I2-41 Chair: Micaela Matta
09:00 - 09:30 I2-41-I1	Danick Briand *(Ecole Polytechnique Fédérale de Lausanne)* Designing Sustainable and Transient Printed Electronics: Challenges from Research and Market Perspectives
09:30 - 09:45 I2-41-O1	Marine Batista *(Department of Chemistry, Stockholm University, Stockholm, SE-10691, Sweden)* Enzymatic Degradation of Conjugated Polymer Semiconductor for Organic Electrochemical Transistors
09:45 - 10:00 I2-41-O2	Tristan Stephens-Jones *(King's College London)* Computational Design of Bioinspired Materials for Organic Bioelectronics
10:00 - 10:30 I2-41-I2	Bob C. Schroeder *(UCL)* Material Design Considerations when Interfacing Organic Electronics with Biology
10:30 - 11:15	**Coffe Break**
	I2-42 Chair: Noemí Contreras-Pereda
11:15 - 11:30 I2-42-O1	Miryam Criado-Gonzalez *(Institute of Polymer Science and Technology CSIC)* 4D printing of ROS-Sensitive Optoelectronic Scaffolds for Biomedical Integration
11:30 - 11:45 I2-42-O2	Ramesh Adhikari *(Colgate University)* Leaves as a Sustainable Bio-Based Material for High-Power-Density Hydrovoltaic Generators
11:45 - 12:15 I2-42-I1	Valerio Francesco Annese *(Istituto Italiano di tecnologia)* Edible Biosensing Platform for Real-Time Monitoring of Gastrointestinal Metabolites
12:15 - 12:45 I2-42-I2	Eleni Stavrinidou *(Linköping Uiversity)* Biohybrid Photosynthetic Living Materials and Devices
12:45 - 13:15 I2-42-I3	Vivian Feig *(Department of Mechanical Engineering, Stanford University)* Biomolecular Piezoelectric Materials for Transient Bioelectronics
13:15 - 14:45	**Lunch Break**
	I2-43 Chair: Valerio Francesco Annese
15:00 - 15:30 I2-43-I1	Luisa Petti *(Free University of Bolzano)* From Lab to Orchard: Sustainable Sensor Technologies for Plant and Fruit Monitoring
15:30 - 15:45 I2-43-O1	Nitheesh M. Nair *(Institute for Automation and Applied Informatics, Karlsruhe Institute of Technology, Hermann-von-Helmholtz-Platz 1, 76344 Eggenstein-Leopoldshafen, Germany)* Cellulose-based Eco-Friendly Temperature Sensor
15:45 - 16:00 I2-43-O2	Feng Zhao *(Micro/Nanoelectronics and Energy Laboratory, Electrical and Computer Engineering, Missouri University of Science and Technology, USA)* Natural Organic Fructose-CNT Resistive Switching Random Access Memory (ReRAM) For Sustainable Neuromorphic Computing

16:00 - 16:15 I2-43-O3	Luca De Pamphilis *(Center for Nano Science and Technology, Istituto Italiano di Tecnologia, Via R. Rubattino, 81, Milan, 20134 Italy)* From Green Materials to Intelligent Devices: Fully Printed Synaptic OECT Arrays for Sustainable Neuromorphic Processing
16:15 - 16:45 I2-43-I2	Gerardo Hernandez-Sosa *(Karlsruhe Institute of Technology (KIT), P.O. Box 3640, 76021 Karlsruhe, Germany)* Printed Optoelectronic Devices and Sensors from Ecofriendly Materials.
17:30 - 19:00	**Poster Session**

March 27th - Day 5 (Friday)

09:20 - 10:30 **Plenary Session - Auditorium**

I2-52
Chair: Micaela Matta

11:15 - 11:45 Laure Kayser *(University of Delaware)*
I2-52-I2 Switching the Solubility of n-type Mixed Conductors for Degradable Transistors

11:45 - 12:00 Veronica Michel *(Laboratory for Multifunctional Materials, Department of Materials, ETH Zurich, Switzerland)*
I2-52-O1 Waste-Derived Materials for Circular Transient Batteries: The Hidden Power of Coffee and Shrimps

12:00 - 12:30 Jadranka Travas-Sejdic *(Centre for Innovative Materials for Health, School of Chemical Sciences, The University of Auckland, Auckland 1010, New Zealand)*
I2-52-I1 Towards Biomimetic and Transient Polymer Bioelectronics

12:30 - 13:00 Almudena Rivadeneyra *(Dept. Electronics and Computer Technology, University of Granada)*
I2-52-I3 Exploring Unconventional Materials and Fabrication Technologies for Sustainable Electronic Systems

13:00 - 13:10 **Closing I2**

MATSUS Spring 2026 Conference (MATSUSSpring26)

D1 Colloidal QDs in visible optoelectronics: focusing on non III-V nanocrystals

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Se-Woong Baek, Jiwan Kim and Soong Ju Oh

Conference Program

March 23rd - Day 1 (Monday)

09:00 - 10:30 **08.45h Plenary Session - Auditorium**

March 25th - Day 3 (Wednesday)

20:00 - 22:00 **Social Dinner**

March 26th - Day 4 (Thursday)

08:50 - 09:00 **Opening D1 - ROOM S9+10**

D1-41
Chair: Soong Ju Oh

09:00 - 09:30 Mengxia Liu *(Yale University)*
D1-41-I1 Halide Perovskite Nanocrystals for Chiral Light Generation

09:30 - 10:00 Hilmi Volkan Demir *(Bilkent University UNAM, Department of Electrical and Electronics Engineering, Department of Physics, Institute of Materials Science and Nanotechnology, Ankara, Turkey)*
D1-41-I2 Semiconductor Nanocrystal Optoelectronics: from Wavefunction Engineering to Quantum Purity

10:00 - 10:30 Jiwoong Yang *(Department of Energy Science and Engineering, Daegu Gyeongbuk Institute of Science and Technology (DGIST), Daegu, 42988 Republic of Korea)*
D1-41-I3 Mechanistic Insights into Semiconductor Nanocrystal Transformations Revealed by In-Situ Transmission Electron Microscopy

D1-42
Chair: Se-Woong Baek

11:15 - 11:45 Himchan Cho *(Department of Materials Science and Engineering, KAIST)*
D1-42-I1 Bright Colloidal Europium Perovskite Nanocrystals and Their Derivatives

11:45 - 12:15 Jong Kyu Kim *(Department of Materials Science and Engineering, Pohang University of Science and Technology (POSTECH), Pohang 37673, Republic of Korea)*
D1-42-I2 Hexagonal Boron Nitrides Grown by MOCVD for Photonics and Electronics Applications

12:15 - 12:30 Saranya Subramanian *(Dipartimento di Fisica e Chimica – Emilio Segrè, University of Palermo, Palermo, Italy)*
D1-42-O1 Optically Active Superparticle Based Non-Toxic Colloidal Nanocrystal

12:30 - 13:00 Young-Hoon Kim *(Department of Energy Engineering, Hanyang University, Seoul 04763, Korea)*
D1-42-I3 High Color-Purity Blue Light-Emitting Diodes based on Covalently Bonded Metal-Organic Chalcogenide Light Emitters

13:00 - 13:15 Nivedita Pan *(Chair for Photonics and Optoelectronics, Nano Institute Munich and Physics Department, Ludwig-Maximilians-University (LMU), Königinstr. 10, 80539 München, Germany)*
D1-42-O2 High Quantum Yield I-III-VI Quantum-Dots Show Amplified Spontaneous Emission

13:15 - 14:45 **Lunch Break**

D1-43
Chair: Jiwan Kim

15:00 - 15:30 Zhijun Ning *(School of Physical Science and Technology, ShanghaiTech University, Shanghai 201210, P. R. China)*
D1-43-I1 Upconversion Infrared Imaging Based on Colloidal Quantum Dots

15:30 - 15:45 Yongnam Ahn *(Department of Chemical and Biological Engineering, Korea University, Seoul 02841, Republic of Korea)*
D1-43-O1 Silver Telluride Colloidal Quantum Dot Solids for Fast Extended Shortwave Infrared Photodetection

15:45 - 16:15 Moon Kee Choi *(Ulsan National Institute of Science and Technology (UNIST), KR)*
D1-43-I2 High-Definition Quantum Dot Light Emitting Diodes via Intaglio Transfer Printing

16:15 - 16:45 D1-43-I3	Seong-Yong CHO *(Hanyang University, Ansan, Korea)* Towards High-Resolution Quantum Dot Electroluminescence Displays via Advanced Patterning and ALD Engineering
16:45 - 17:15 D1-43-I4	Yohan Kim *(Fraunhofer Institute for Applied Polymer Research IAP)* Printing Strategies for High-Resolution QD-EL for Optoelectronic Applications
17:15 - 17:25	**Closing D1**
17:30 - 19:00	**Poster Session**

March 27th - Day 5 (Friday)

09:20 - 10:30 **Plenary Session - Auditorium**

MATSUS Spring 2026 Conference (MATSUSSpring26)

C3 Compositionally Complex Nanocrystals: Synthesis and Application

Barcelona, Spain, 2026 March 23rd - 27th
Conference Chairs: Ankita Bora, Kevin Rossi and Suvodeep Sen

Conference Program

March 23rd - Day 1 (Monday)	
09:00 - 10:30	**08.45h Plenary Session - Auditorium**
March 25th - Day 3 (Wednesday)	
08:50 - 09:00	**Opening C3 - ROOM S2+3+4**
	C3-31 Chair: Ankita Bora
09:00 - 09:30 C3-31-I1	Richard Robinson *(Cornell University Materials Science and Engineering Department)* Scalable Colloidal Synthesis of High-Entropy Nanocrystals for Energy Conversion
09:30 - 09:45 C3-31-O1	Julie Bojesen Koefoed *(Department of Chemistry & Nano-Science Center, University of Copenhagen, Denmark)* Formic Acid Oxidation on Tuneable High-Entropy Alloy Electrodes
09:45 - 10:00 C3-31-O2	Krishnendu Roy *(NanoSYD, Mads Clausen Institute, University of Southern Denmark, Alsion 2, DK-6400 Sønderborg, Denmark)* Strain-Induced Magnetic Modulation of NiCo2O4 for Magneto-Electrochemical Oxygen Evolution
10:00 - 10:30 C3-31-I2	Verena Streibel *(Walter Schottky Institute, Technical University of Munich, Am Coulombwall 4, 85748 Garching, Germany)* Transition Metal Nitride Semiconductors for Photoelectrochemical Energy Conversion
10:30 - 11:15	**Coffee Break**
	C3-32 Chair: Shalini Singh
11:15 - 11:45 C3-32-I1	Rebecca Pittkowski *(Department of Chemistry, University of Copenhagen, Universitetsparken 5, 2100 Copenhagen, Denmark)* Tracking Structure and Stability in High-Entropy Nanomaterials for Electrocatalysis through Synchtron X-ray Techniques
11:45 - 12:00 C3-32-O1	Apinya Ngoipala *(Department of Physics, Chalmers University of Technology, SE-41296 Gothenburg, Sweden)* Predicting Phase Diagrams and Local Symmetry Breaking in Mixed B-Site Halide Perovskites via a Neuroevolution Machine Learning Potential
12:00 - 12:30 C3-32-I2	Andreu Cabot *(Institut de Recerca en Energia de Catalunya (IREC))* High Entropy Alloy Nanoparticles as Oxygen Electrocatalysts for Metal-Air Batteries
13:15 - 15:00	**Lunch Break**
	C3-33 Chair: Ankita Bora
15:00 - 15:30 C3-33-I1	Raymond Schaak *(Penn State University)* Synthesis and Catalytic Properties of High Entropy Nanoparticles
15:30 - 15:45 C3-33-O1	Niraj Patil *(Department of Chemical Sciences and Bernal Institute, University of Limerick, V94 T9PX Limerick, Ireland)* Generalized Synthetic Strategy for Cs-based Metal Chalcogenides
15:45 - 16:15 C3-33-I2	SHALINI SINGH *(Department of Chemical Sciences and Bernal Institute, University of Limerick, Limerick, Ireland V94T9PX.)* Engineering High Entropy Cu based Chalcogenide Nanocrystals via Sequential Cation Exchange as Efficient Catalysts for Hydrogen Evolution Reactions
16:15 - 16:45 C3-33-I3	Ifan Stephens *(.....)* Unveiling the Factors Controlling the Performance of Mixed Oxides for O2 Evolution with Spectroelectrochemistry

16:45 - 17:15	Julia Wiktor *(Department of Physics, Chalmers University of Technology, Sweden)*
C3-33-I4	Modeling Global and Local Complexity in Energy Materials: Phase Landscapes and Localized States
20:00 - 22:00	**Social Dinner**

March 26th - Day 4 (Thursday)

	C3-41 Chair: Kevin Rossi
09:00 - 09:30 C3-41-I1	Mirabbos Hojamberdiev *(University of Southern Denmark)* (Oxy)nitride Crystals: Understanding Structure-Property Relationships
09:30 - 10:00 C3-41-I2	Daniel Prochowicz *(Institute of Physical Chemistry Polish Academy of Sciences)* Perovskite Photodetectors: From Single Crystals to Nanocrystals
10:00 - 10:10	**Closing C3**
17:30 - 19:00	**Poster Session**

March 27th - Day 5 (Friday)

09:20 - 10:30 **Plenary Session - Auditorium**