



European Materials Research Society

2026 Spring Meeting

May 25 - 29
Strasbourg Convention Centre

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SYMPOSIUM D

Hybrid integration and multiphysics nanomaterials for photonic devices and circuits

Oral sessions : [LONDRES 1 - GROUND FLOOR](#)

Poster Sessions : [ETOILE - FIRST FLOOR](#)

Symposium Organizers:

[Béatrice DAGENS \(Main organizer\)](#), C2N –Center for Nanoscience and Nanotechnology France

[Lukas HALAGACKA](#), VSB – Technical University Ostrava, Czech Republic

[Yuliya DADOENKOVA](#), Jean Monnet University, France

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Wednesday May 27

D09 Topic 2.1: Hybrid integration and multiphysics materials

Chairperson(s): DAGENS Béatrice

ROYER François

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08:30	1019	Integration of colloidal nanocrystals on silicon nitride for on-chip light sources TANGHE Ivo (Invited)
09:00	1214	Optically Pumped Lasing from Planarized Silicon Nitride Photonic Crystal Cavities with Colloidal Nanocrystals DYREBY Mónica
09:15	1231	Plasmonic nanoantennas for enhanced localized modulation of the VO ₂ metal-insulator transition MUNOZ-NOVAL Alvaro
09:30	2333	Integrated Thermo-plasmonic Coupler Enabling Vanadium Dioxide Reconfiguration FILOGRANO Francesca
09:45	947	Magnetic field steering of the optical reflectance of VO ₂ film coated on sol-gel processed nanocomposite HOANG THI THANH Hai
10:00	786	All-van-der-Waals heterostructure of MoS ₂ grating and InSe flake for spectrally selective polarization-sensitive photodetection in NIR region CHU Yu-Te

Wednesday May 27

D10 Topic 1: Magneto-optical materials and devices

Chairperson(s): HALAGACKA Lukáš

LO Tsz wing

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10:45	829	Magneto-optical non-reciprocal devices in Si photonics SHOJI Yuya (Invited)
11:15	946	Magnetic nanocomposite with both high refractive index and magneto-optical activity for on chip nonreciprocal photonic devices TRUONG Vinh Phuoc
11:30	2803	Synthesis of Yttrium Iron Garnet (YIG) magnetic nanoparticles exhibiting magneto-optical response. ZAHARA Moussadjy (Invited)
12:00	2469	Enhanced non-reciprocal phase shift in asymmetric magneto-optic coupled waveguides FILOGRANO Francesca
12:15	515	Technological implementation of garnet based magneto-optical coupled-waveguide optical isolators DAGENS Béatrice

Wednesday May 27

DPO3 Poster session 1

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13:45	01_110	Strain-Engineered Monolithic Multi-Band LEDs for Simultaneous Short-Wavelength and Mid-Wavelength Infrared Emission CHUN Byong Sun
13:45	02_1279	Predict efficiency roll-off of TADF OLEDs through photoluminescence measurements GUO Kaiwen
13:45	03_1495	Unveiling the Molecular Orientation of Organic Cations in 2D Organic-Inorganic Perovskites via Angle-Dependent X-ray Absorption Spectroscopy CHO Sangwan
13:45	04_1507	High-Responsivity and Fast-Speed Vertical p-i-n Photodiode based on van der Waals Heterostructures for NIR Detection JO Jaejun
13:45	05_1601	Controllable fabrication of transparent photoactive garnet nanostructures by dry etching NGUYEN Thi Huyen Trang
13:45	06_1735	A Dual-functional Biosensing chip based on High Diffraction Order Grating-coupled Surface Plasmon Resonance and SERS CHEN Yan-Yu
13:45	07_1888	Key photophysical properties for high-performance organic light-emitting diodes LI Yungui Li
13:45	08_2083	Thermal information encryption based on composite metasurfaces comprising volatile and nonvolatile phase-change materials PYO Jungwoo
13:45	09_2196	Aggregation enhanced singlet emission in a purely organic emitter with thermally activated delayed fluorescence GONG Jiacheng
13:45	10_2197	Direct measurement of kinetic rates in efficient organic emitters with thermally activated delayed fluorescence ZHOU Xin
13:45	11_2224	Tracking of Magneto-Optical Plasmonic Guided Modes Using Near-Field Magneto-Optical Imaging MAKKI Zahraa
13:45	12_2254	High-Performance CMOS-Compatible Bulk-GeOI Photodiodes for Hybrid SWIR Photonic Integrated Circuits ZHAO Xuwei
13:45	13_2335	Performance Boost of Silicon Carbide Nanowire UV Photosensors through Gold Nanoparticle Functionalization TEKER Kasif
13:45	14_2383	High-sensitivity PD(Photodiode) Based on Metasurface-2D Hybrids for SWIR Spectroscopy KIM Seong-Hyeon

13:45	15_2417	Controllable p–n Junction Formation in TMDCs Using Split-Gate Electrostatic Doping Jang Sangmin
13:45	16_2472	A Tetrachromatic Sensor for Imaging Beyond the Visible Spectrum in Harsh Conditions QIU Xiao
13:45	17_2479	Pixelation of perovskite quantum wire thin films with 0.18- μm features and 63,500-ppi pixel density SUN Xiaofei
13:45	18_2504	Exploring the Polaron Landscape in Germanium Halide Perovskites: CsGeCl ₃ , CsGeBr ₃ , and CsGeI ₃ BASKURT Mehmet
13:45	19_2970	Lead Halide Perovskite Pixel Arrays Fabricated by Ultrathin Reusable Metal Mask ZHAO Sun
13:45	20_3018	Oxide CMP Material Removal Rate Performance based on a smart material properties study. BONNEVIALLE Aurore
13:45	21_3234	Report on Extended Infrared Absorption Spectrum in Cobalt Activated Erbium Aluminium Garnet Nanocrystals for Opto-thermal and Infrared Sensing Applications ARCHISHA Ms
13:45	22_347	Low-cost and efficient asymmetric non-fullerene electron acceptors (NFAs) for solar cells HARVEY Pierre D.
13:45	23_395	Thickness- and Aggregation-Dependent Charge Transport in a Graphene–Organic Hybrid Phototransistor RAINA Abhinav
13:45	24_405	Polarization-driven quantum confinement at ferroelectric twin boundaries in van der Waals TMDs LI Xue
13:45	25_590	Directly Synthesized, Nonlinear Graphene for Silicon Photonics Devices SONG Yong-Won
13:45	26_66	Enhanced red–NIR photoluminescence and energy–transfer dynamics in Er ³⁺ /Yb ³⁺ /Nd ³⁺ /Ce ³⁺ co-doped oxyfluorophosphate glass for photonic applications ALMULHEM Najla
13:45	27_68	Er ³⁺ -doped low-phonon oxyfluorophosphate glass as an active medium for 1.542 μm optical fibers ALMULHEM Najla

Thursday May 28

D12 Topic 2.2: Hybrid integration and multiphysics materials

Chairperson(s): JAMON Damien

VIVIEN Laurent

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08:30	3432	TFT array integration with novel sensing and emissive materials, a platform for high quality demonstration of capability OGIER Simon Dominic
08:45	691	Highly Sensitive MoS ₂ /PbS Photodetector Arrays on Flexible Substrates YAKAR Ozan

09:00	492	Towards on-chip spintronic-photonic integration KOOPMANS Bert (Invited)
09:30	1535	Active diffractive optical elements based on spin transition nanocomposites CAPO CHICHI Jesukpego Anorid
09:45	1379	Programmable Spatial Reconfiguration of Liquid Crystal Microdroplet Patterns CHOI Daeseop

Thursday May 28

D13 Topic 2.3: Hybrid integration and multiphysics materials

Chairperson(s): DADOENKOVA Yuliya

DAGENS Béatrice

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10:30	2804	Heterogenous integration of ferroelectric materials in silicon photonics platform VIVIEN Laurent (Invited)
11:00	1778	Waveguide Coupled Amplified Spontaneous Emission and Amplifiers with Colloidal Nanocrystals ADOLFS Veronika
11:15	2981	Germanium-tin photodetectors operating beyond 3 μm for an integrated CMOS-compatible photonic platform MACQUART Antonin
11:30	2108	Silicon carbide as a Multi-Physics material platform that bridges quantum and classical technologies WEBER Heiko B.
11:45	713	Elaboration of sol-gel layers with high concentrations of Chromium-doped nanocrystals for integrated optics applications PIZARRO Agustina

Thursday May 28

D14 Topic 3: Non-linear optics

Chairperson(s): HALAGACKA Lukáš

MAGNO Giovanni

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13:45	3301	Boosting nonlinear optical response in silicon metasurfaces at visible and UV spectrum COJOCARU Crina (Invited)
14:15	1988	Second Harmonic Generation from GaSe Integrated on a Si ₃ N ₄ Waveguide KUMAR Avinash
14:30	1377	Conformally Integrated Graphene onto Lensed Optical Fiber-Based Nonlinear Interfaces CHO Inhun
14:45	3371	Integrated quantum photonic, a multicolor silicon-based example BELABAS Nadia (Invited)

15:15	1572	Single-Photon Emitters in Doped Hexagonal Boron Nitride for Quantum Photonic Devices MOON Hyowon
15:30	1613	Direct growth of hBN single-photon emitters on SiO ₂ /Si LEE Yeunjeong
15:45	2074	UV-Responsive β -NaYF ₄ Nanoparticles for MIM and OFET Devices: Synthesis Optimization and Device Integration BANSAL Anshika

Thursday May 28

D15 Topic 2.4: Hybrid integration and multiphysics materials

Chairperson(s): BELABAS Nadia

DADOENKOVA Yuliya

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16:30	3060	Nano- and meta-materials for light generation and manipulation on the nanoscale ZAYATS Anatoly (Invited)
17:00	2242	Heterogeneous integration of perovskite oxide thin films with Silicon Photonics via Micro-Transfer Printing TALIB Faryal
17:15	2918	Freeform fabrication of layered halide perovskite nanowire heterojunctions CAO Sixi
17:30	3023	Pressure-Free Soft-Lithographic Growth of Single-Crystal Perovskite Micro-Optics ADISA Omolara
17:45	588	N-type Acceptors with Oxygen-Positioned Side Chains Deliver Record >90% NIR EQE in Perovskite–Organic Photodetectors PARK Jeewon
18:00	1684	Unveiling the intrinsic gain signature in perovskites LEE Ah-Young
18:15	1100	AlGaO-barrier-engineered β -Ga ₂ O ₃ photodetector for fast and high-contrast solar-blind deep-UV sensing KIM Heea