



INSTITUT
POLYTECHNIQUE
DE PARIS



IPVF



GDR HPERO

Programme JPH2021

FOM
TECHNOLOGIES



BRAUN
Clean. Engineering. Expertise.

MERCREDI 31 MARS – APRES-MIDI

Avec le support de :



13h30 – 14h00	Ouverture des JPH2021	
Session TUTORIELS		
Président de session : Yvan Bonnassieux		
14h00 – 15h00	Sufal SWARAJ Soleil	Soft X-ray Microscopy for Photovoltaics
15h00 – 15h15	Pause e-café	
15h15 – 16h15	Toby MEYER Solaronix	Bloom, boom or doom in Perovskite PV
16h15 – 16h30	Pause e-café	
16h30 – 17h30	Ahmed NEJIM Silvaco	Cancelled

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JEUDI 01 AVRIL – MATINEE – SESSION 1 : Synthèses et propriétés fondamentales.

Président de session : Nicolas Mercier		
8h30 – 9h00 Conférence invitée	Damien Garrot GEMaC	Exciton dynamics and trapping in 3D and 2D hybrid perovskites
9h00 – 9h15	Alla Skorokhod MOLTECH-Anjou	Hybrid lead-iodide perovskite materials for photovoltaic applications
9h15 – 9h30	Mirella Al Katrib LEPMI	Electrodeposition of Perovskites for Large Surface Solar Devices: Impact of Deposition Parameters, Substrate Nature and Conversion Route.
9h30 – 9h45	<i>Dmitry Aldakov</i> IRIG-SyMMES	Pérovskites sans plomb encapsulées dans les matrices mésoporeuse
9h45 – 10h00	<i>H. Khemliche</i> ISMO	Dépôt sous-vide de couches minces de pérovskites hybrides : mode de croissance et structure cristalline
10h00 – 10h15	Pause e-café	
Président de session : Jacky Even		
10h15 – 10h30	Thanh-Tuân Bui LPPI	Triphenylamine/Thieno[3,4-c]pyrrole-4,6-dione based D- π -A- π -D Dyes: Synthesis, Characterization and Photovoltaic Applications
10h30 – 10h45	Joachim Breternitz DSDEM Berlin	Une étude structurale systématique pour les pérovskites halogénées
10h45 – 11h00	<i>Peter Reiss</i> IRIG/SyMMES/STEP	Polymorphisme dans les pérovskites halogénées à base de formamidinium : au-delà du facteur de tolérance
11h00 – 11h15	<i>B. Slimi</i> Univ. Valencia	Optical properties of a mixed perovskite (FAPbI ₃) _{1-x} (MAPbBr ₃) _x thin Films Synthesized by Spin Coating Process for Solar Cells
11h15 – 11h30	<i>Subodh K. Gautam</i> LPS	Reversible nature of photo-induced phase segregation and origin of long carrier lifetime in triple cation mixed halide perovskite films
11h30 – 11h45	<i>Asma A. Medjahed</i> IRIG/SyMMES/STEP	Solutions solides de pérovskites hybrides halogénées : propriétés intrinsèques à l'ambiante et comportement en température



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JEUDI 01 AVRIL – APRES-MIDI – SESSION 2 : Caractérisations matériaux et modélisation/simulation.

Président de session : Thierry Pauporté		
13h00 – 13h30 Conférence invitée	Iván Mora-Seró INAM, Universitat Jaume I (Spain)	Stabilization of halide perovskite solar cells, from black phase stabilization to outdoors tracking
13h30 – 13h45	Tan NGUYEN ISCR	Multi-excitons and correlation effects in perovskite nanocrystals
13h45 – 14h00	Pilar Lopez-Varo IPVF	Dynamic Temperature Effects in Perovskite Solar Cells and Energy Yield
14h00 – 14h15	Oriane Baussens LETI	Etude du bruit dans les dispositifs détecteurs à base de monocristaux de MAPbBr ₃ : applications en spectroscopie gamma
14h15 – 14h30	Emilie Planes LEPMI	Stability of perovskite solar cell's: role of interfaces
14h30 – 14h45	Pause e-café	
Président de session : Philip Schulz		
14h45 – 15h00	D. Mayou Institut Néel	Large fluctuations of the inner electrical potential and electronic properties of halide perovskites
15h00 – 15h15	Guido Roma SRMP	Conséquences de l'anharmonicité dans les pérovskites halogénées inorganiques : de l'effet Rashba à la ferroélectricité et hyperferroélectricité
15h15 – 15h30	Nguyen Ha My Dang INL	Tailoring exciton-polaritons at room temperature by perovskite-based metasurfaces
15h30 – 15h45	Maria Chamarro INSP	Effets de confinement quantique 1D et 2D dans les nanocristaux de CsPbBr ₃
15h45 – 16h15 Conférence invitée	Matt Beard NREL (USA)	Controlling Charge, Spin and Light in Metal-Halide Inspired Hybrid Semiconductors
16h15 – 16h45	Pause e-café	

JEUDI 01 AVRIL – APRES-MIDI – Posters

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Président de session : Bernard Geffroy (CEA)

16h45 – 16h55	Zuzanna Molenda IMS	Doping of the hybrid halide perovskite for the enhanced conductivity
16h55 – 17h05	Fei CHENG IRCP	The effect of MAI on FA1-xMAxPbI3 perovskite stability
17h05 – 17h15	Minjin Kim LPICM	Observation of internal circuit change of perovskite solar cell according to ageing
17h15 – 17h25	Parth Raval UCCS	Understanding long-term moisture stability of crystalline and defect passivated methylammonium lead halide perovskites
17h25 – 17h35	Géraud Delport Cavendish Lab. - IPVF	Revealing nanomechanical domains in mixed-halide perovskite films
17h35 – 17h45	Javier A. Mayen Guillen LITEN	MAPb(Br1-xClx)3 perovskite materials for direct ionising radiation detection
17h45 – 17h55	Hindia Nahdi LPICM – Segula Technologies	Introduction de brome dans des cellules solaires triples mésoscopiques à électrode de carbone
16h55 – 17h05	A. Torkhani ITODYS –Univ. Tunis	Functionalization of ETL and HTL metallic oxide by Formamidinium (FA) based Self-Assembled Monolayers for the growth of APbI3 (A= MA, FA) perovskite films
17h05 – 17h15	T. CAMPOS LuMIn - IPVF	Study of 2D/3D halide perovskite heterostructure to improve the stability of photovoltaic devices
17h15 – 17h45	Discussions All	

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VENDREDI 02 AVRIL – MATINEE – SESSION 1 suite : Synthèses et propriétés fondamentales.

Président de session : Claudine Katan		
8h30 – 8h45	Elsa Cassette LIDYL	Multiexciton dynamics in colloidal 2D perovskite nanoplatelets: Auger recombination and multiple exciton generation in the strong confinement regime
8h45 – 9h00	Joanna M. Urban LNCMI - LuMIn	Magneto-spectroscopy studies provide direct evidence for the coupling of excitons to organic ligand vibrations in 2D RP perovskites
9h00 – 9h15	Maroua Ben Haj Salah MOLTECH-Anjou	The Key Role of the Interface in the Highly Sensitive Mechanochromic Luminescence Properties of Hybrid Perovskites
9h15 – 9h30	P. Bourges LLB	Direct evidence of weakly dispersed and strongly anharmonic low frequency optical phonons at low temperature in hybrid organolead perovskites
9h30 – 9h45	Stéphanie Pouget IRIG/MEM	Ferroeasticité et contraintes dans les couches minces de MAPbI3
9h45 – 10h00	Claudio Quarti ISCR – Univ. Mons	Tetrazine-incorporating layered halide perovskites featuring type II electronic interface: a small cation with several optical and electronic resonances
10h00 – 10h15	Julien Houel, ILM	Doping crystalline MAPbBr3 hybrid perovskites with high-fluorescence quantum yield CdSe/CdZnS quantum dots: from emissive thin-films to hybrid single-photon sources
10h15 – 10h30	Pause e-café	

VENDREDI 02 AVRIL – MATINEE – SESSION 2 suite : Caractérisations matériaux et modélisation/simulation.

Président de session : Lionel Hirsch		
10h30 – 10h45	M.-R. Amara LPENS – NTU Singapour	Bright-dark exciton thermal mixing in single CsPbBr3 nanocrystals
10h45 – 11h00	G. N. Manjunatha Reddy UCCS	Molecular-level insights into organic-inorganic interfaces in mixed dimensional hybrid perovskites through solid-state NMR spectroscopy
11h00 – 11h15	Raphaël MERMET - LYAUDOZ INL	Resonant Metasurface for Halide Perovskite-Based Emitting Devices: Extraction Efficiency Enhancement and Radiation Pattern on-Demand
11h15 – 11h30	P. Boutheyre LuMIn	Directing random lasing emission using cavity exciton-polaritons
11h30 – 11h45	Edouard Breniaux CIRIMAT	Stabilisation de pérovskites halogénées inorganiques par insertion de phase 2D et étude structurale par DRX in-situ

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11h45 – 12h00	C. Corbel LSI	A dominant positron capture and annihilation at vacancies in MAPbI ₃ and CsMAFAPb(IxBr1-x) ₃ layers on PEDOT-PPS/ITO/glass substrates
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VENDREDI 02 AVRIL – APRES-MIDI – SESSION 3 : Dispositifs pérovskites et aspects industriels.

Président de session : Solenn Berson		
12h40 – 12h50 Présentation industrielle	David Williamson FOM TECHNOLOGIES	Benefit of slot-die technology for upscaling Perovskite research
12h50 – 13h00 Présentation industrielle	Adrien SCHOMBOURGER MBRAUN	Présentation MBRAUN
13h00 – 13h30 Conférence invitée	Cacovich Stefania IPVF	Multidimensional Imaging Methods for Metal Halide Perovskite Characterization
13h30 – 13h45	Daming Zheng IRCP	Coupled Additives and Interfacial Engineering for High Efficiency and Stable Methylammonium-Free Cs _{0.1} FA _{0.9} PbI ₃ Perovskite Solar Cells
13h45 – 14h00	J. Bouclé XLIM	Perovskite solar cells as energy harvesters and data receivers for visible light communications (VLC)
14h00 – 14h15	Zhelu Hu LPEM	Enhancing the efficiency and stability of perovskite solar cells by transport layer and interfacial engineering
14h15 – 14h30	Hedi Kouki ITODYS – Univ. Tunis	Control of stability of Perovskite solar cell by Functionalization of intermediate metal oxide layers with tailored Self-Assembled Monolayers in ambient air
14h30 – 14h45	Pause e-café	
Président de session : Johann Bouclé		
14h45 – 15h00	Liam Gollino IRCP	Les d-HPs, une nouvelle famille de pérovskites avec une teneur réduite en plomb
15h00– 15h15	S. Karthick CINVESTAV-IPN Mexico - XLIM	Effect of Copper and Bismuth iodide incorporation in FA-Cs perovskite solar cells by one-step solution process
15h15– 15h30	Sophie BERNARD EDF Lab - LRCS	Study of The Synergetic Effects Of Chloride and Surfactants Additions on Perovskite Crystallisation, in A Slot-Die Coating Process for Large-Scale Fabrication
15h30 – 15h45	Tao Zhu IRCP	PEAI-Treatment for High-Efficiency and Stable Solar Cells Based on a MACI-Mediated Grown FA _{0.94} MA _{0.06} PbI ₃ Perovskite
15h45 – 16h00	Pause e-café	
16h00 – 16h30	Remise des prix par les partenaires socio-économiques Clôture des JPH2021	