

# 2022 PACE Young Scientist Conference

Monday 10 October 2022			
Science Coffee and Registration			9:30-11:00
Opening Conference			11:00-12:20
Lunch			12:20-13:30
SESSION I Thin film preparation			
Invited talk	Deposition of functional thin films by Spatial Atomic Layer Deposition	David Muñoz-Rojas	13:30-14:10
1	ALD-Deposition of cathodic materials for 3D Li-ion micro batteries – Ongoing results	Antoine Peisert	14:10-14:30
2	Deposition of perovskite based thin films with controlled stoichiometric compositions using a combinatorial deposition process: Chemical Beam Vapour Deposition	Vincent Rogé	14:30-14:50
<i>Coffee break</i>			14:50-15:05
Invited talk	Aerosol deposited thick films	Hana Ursic	15:05-15:45
3	Processing of piezoelectric thin films on glass by flash lamp annealing	Juliette Cardoletti	15:45-16:05
4	Ferroelectric Lead-Free (K,Na)NbO <sub>3</sub> Thin Films by Chemical Solution Deposition	Nagamalleswara Rao Alluri	16:05-16:25
<i>Coffee break</i>			16:25-16:40
5	Effect of annealing atmosphere on ferroelectricity of solution-processed La:HfO <sub>2</sub> thin films.	Barnik Mandal	16:40-17:00
6	Structural characterization of Sn atomic clusters synthesized by Cluster Beam Deposition	Jose Enrique Martinez Medina	17:00-17:20
Networking and Social drinks			17:20-18:30
<i>Dinner</i>			18:30-21:00
Tuesday 11 October 2022			
SESSION II Optoelectronic properties			
Invited talk	Induced functionalities by symmetry breaking	Marin Alexe	9:00-9:40
7	How to measure electronic transitions in ferroic oxides?	Christina Hill	9:40-10:00
8	Optical effects in ferroelastic domains and their walls	Georgy Gordeev	10:00-10:20
<i>Coffee break</i>			10:20-10:35
Invited talk	Optical properties of transition metal dichalcogenides: single-photon emitters and strain	Florian Libisch	10:35-11:15
9	Optical Properties of highly Anisotropic Crystals	Angelina Gudima	11:15-11:35
10	Birefringence change induced by antiferroelectric switching in transparent PbZr <sub>0.95</sub> Ti <sub>0.05</sub> O <sub>3</sub> film	Pranab Biswas	11:35-11:55
<i>Coffee break</i>			11:55-12:10
11	Curcuminoid borondifluoride: new dyes for the organic laser diode	Anthony D'Aléo	12:10-12:30
12	Influence of red and blue light on optical and electrical properties of Cu(In,Ga)(S,Se) <sub>2</sub> and Cu(In,Ga)Se <sub>2</sub> absorbers	Aubin Prot	12:30-12:50
<i>Lunch</i>			12:50-13:50

## SESSION III Solar cells

Invited talk	Molecular engineering of interfaces for stable and efficient perovskite solar cells	Anurag Krishna	13:50-14:30
13	Synthesis and Characterization of CH <sub>3</sub> NH <sub>3</sub> SnI <sub>3</sub> Films: A Path Towards Lead-Free Perovskite Solar Cells	Ajay Singh	14:30-14:50
14	Optimizing front transport layers for achieving high efficiency wide band-gap Cu(In,Ga)S <sub>2</sub> solar cell	Mohit Sood	14:50-15:10
<b>Coffee break</b>			15:10-15:25
Invited talk	The solar cell material Cu(In,Ga)Se <sub>2</sub> at the micro- and nanometer scale	Sascha Sadewasser	15:25-16:05
15	Grid optimization for PV mini-modules employing CIGS micro stripes	Shilpi Shital	16:05-16:25
16	Inkjet printing of thin chalcogenide semiconductor layers for solar cell applications	Alice Debot	16:25-16:45
<b>Coffee break</b>			16:45-17:00
17	Anisotropy-induced fluctuations in Cu(In,Ga)Se <sub>2</sub>	Diego Colombara	17:00-17:20
18	Back surface passivation of chalcopyrite solar cells with Metal oxide interlayers	Taowen Wang	17:20-17:40
<b>Break</b>			17:40-18:30
<b>Gala Dinner</b>			18:30-21:00
Wednesday 12 October 2022			
SESSION IV Thin film characterization			
Invited talk	Accurate composition depth profiling of light elements in thin films (using ion beams) - what can be achieved?	Daniel Primetzhofer	9:00-9:40
19	New imaging modalities for thin films imaging Using Helium Ion Microscopy	Saba Tabean	9:40-10:00
20	Thin Film Characterization Techniques: Applications in Hydrogen Storage Materials	Dustin Andersen	10:00-10:20
<b>Coffee break</b>			10:20-10:35
Invited talk	Processing and applications of piezoelectric thin films	Nicolas Godard	10:35-11:15
21	Helium implantation for tuning functional properties in sol-gel films	Constance Toulouse	11:15-11:35
22	Atomistic simulations of electrocaloric effects in ferroelectric-paraelectric superlattices	Diana Elisa Murillo Navarro	11:35-11:55
<b>Coffee break</b>			11:55-12:10
23	Controlled growth of Au nanoparticles on Al <sub>2</sub> O <sub>3</sub> coatings for enhanced localized surface plasmon resonance	Marta Ferreira	12:10-12:30
24	Co-evaporation and characterization of tin-based perovskite films for solar cell	Joana Ferreira	12:30-12:50
<b>Standing Lunch &amp; Poster Session</b>			12:50-13:00
25	The role of photovoltaics for the energy transition and its potential in Luxembourg	Max Wolter	15:00-16:00
<b>Closing of the conference &amp; Drinks</b>			

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