Interfaces in Emerging Chalcogenide Based Solar Cells

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Thursday 23th April 2026
Bucharest time, Romania (EEST)

8:00-8.30	**Registration**		
Introductory session			
8.30-8.40	*Foreword*		**Nicolae Spalatu** (TALTECH, EST)
8.40-8.50	*Welcome*		**Lucian Pintilie** (NIMP, ROU)
8.50-9.00	*Event info/news*		**Aurelian Galca** (NIMP, ROU)
$Sb_2(S,Se)_3$ solar cell interfaces, Moderator: **Elisa Artegiani** (UNIVR, ITA)			
9.00-9.20	O01	*Electronic Structure of $Sb_2(S,Se)_3$ and Solar Cell Interfaces by Kelvin Probe and Photoelectron Yield Spectroscopy at Ambient Pressure*	**Marin Rusu** (HZB, DEU)
9.20-9.40	O02	*Atomic Layer Deposited SnO_x Interlayer for Interface Passivation in Co-Evaporated Sb_2Se_3 Solar Cells (online)*	**Hoang Van Quy** (VINUNI, VNM)
9.40-10.00	O03	*Interface-induced conformal growth of ultrathin Sb_2S_3 for high efficiency TiO_2-based photovoltaics*	**Hadeer Hussien** (TALTECH, EST)
10.00-10.30	Coffee Break & **Poster Session**		
$Sb_2(S,Se)_3$ absorber engineering & intrinsic properties, Moderator: **Natalia Maticiuc** (HZB, DEU)			
10.30-10.50	O04	*From Toxic to Sustainable: Low-Toxicity Solvent Strategies for High-Performance Sb_2S_3 Solar Cells*	**Lucia Leonat** (NIMP, ROU)
10.50-11.10	O05	*Solution-grown antimony sulfide selenide segmental absorber films for thin-film heterojunction solar cells*	**Natalia Kujawska** (P-LODZ, POL)
11.10-11.30	O06	*Intrinsic and Extrinsic Stability Factors in Sb_2S_{3-x} – based solar cells*	**Cristina Besleaga** (NIMP, ROU)
11.30-11.50	O07	*Decoupling growth kinetics and Sb_2S_3 absorber thickness via additive-assisted hydrothermal synthesis and post-growth etching (online)*	**Evgeniia Gilshtein** (DTU, DNK)
11.50-12.10	O08	*Environment-Induced Defect Dynamics in Sb_2Se_3 Thin Films for Emerging Chalcogenide Solar Cells*	**Gokhan Yilmaz** (MAKU, TUR)
12.10-12.30	O09	*Effect of TiO_2 Electron Transport Layer architecture on Spray Pyrolysis Deposited Sb_2S_3 Thin Films for Solar Cells*	**Rayene Merah** (U-Constantine, DZA)
12.30-12.50	O10	*Air annealing of the CdS layer to improve Sb_2Se_3 devices efficiency*	**Elisa Artegiani** (UNIVR, ITA)
12.50-14.20	Lunch & **Poster session**		
14.20-17.00	**Practical/interactive discussions***		**A.** *solution processed chalcogenides, HTLs, ETLs* **B.** *optoelectrical characterization and modelling* (including **DTLS** and **TSC**) **C.** *structural and compositional characterisation* (**FIB, TEM, SEM, XPS**) **D.** *First-principles calculations*
18.00-22.00	NetWorking in Fabrica (downtown Bucharest)		

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Summary of interaction discussions (the day before) **Best practices**, Moderator: **Nicolae Spalatu** (TALTECH, EST)			
8.30-8.40	B01	*Solution processed chalcogenides*	**Natalia Kujawska** **Katharina Dehm**
8.40-8.50	B02	*Electrical measurements*	**Cristina Besleaga** **Elisa Artegiani**
8.50-9.00	B03	*Structural investigations*	**Aurelian Galca** **Cristian Radu**
9.00-9.20	B04	*Interfaces*	**Charif Tamin** **Abdessamad El Kanouny**
CdTe solar cells, moderator: **Charif Tamin** (INL, FRA)			
9.20-9.40	O11	*Sb_2Se_3 as an effective dopant for CdTe solar cells*	**Elisa Artegiani** (UNIVR, ITA)
9.40-10.00	O12	*The influence of the deposition working power on some physical properties of RF-sputtered cadmium telluride films for photovoltaic applications*	**Sorina Iftimie** (UNIBUC, ROU)
10.00-10.20	O13	*CdTe solar cells for tandem application with Silicon devices (online)*	**Mariyam Mukhtar** (UNIVR, ITA)
10.20-10.40	O14	*Effect of Large Bi-Exciton Binding Energy in Type II CdSe/CdTe QDs on Efficiency of MEG Solar Cells*	**Stanko Tomic** (VINCA, SRB)
10.40-11.00	Coffee Break & **Poster Session**		
Exotic and promising chalcogenides, Moderator: **Marin Rusu** (HZB, DEU)			
11.00-11.20	O15	*Selenium alloying in $BaZrS_3$ perovskite for efficient tuning of properties*	**Lorenza Romagnoli** (UNIROMA1, ITA)
11.20-11.40	O16	*First-Principles Determination of Pnictogen Chalcohalide Band Alignments for Improved Solar-Cell Applications*	**Cibran Lopez** (UPC, ESP)
11.40-12.00	O17	*TOPCon-Inspired Dielectric Tunnel Interfaces for Wide-Bandgap Se Solar Cells*	**Charif Tamin** (INL, FRA)
12.00-12.20	O18	*Tuning the Structural and Charge Transport Properties of GeS Thin Films*	**Audrius Drabavičius** (FTMC, LTU)
12.20-12.40	O19	*Interface Engineering of the c-TiO_2/SnS Junction for Enhanced Thin-Film Solar Cell Performance*	**Abdessamad El Kanouny** (U Hassan II, MAR)
12.40-14.10		Lunch & **Poster session**	
A Tale of a Magic Characterization Method & Moon of forehead, Moderator: **Sorina Iftimie** (UNIBUC, ROU)			
14.10-14.30	O20	*Hyperspectral photoluminescence mapping and analysis on chloride-activated chalcogenide CdSe thin films*	**Bohuslav Rezek** (CVUT, CZE)
14.30-14.50	O21	*Tuning the Optoelectronic Properties of Wide-Bandgap Cu_2ZnSnS_4 by Silver Substitution, Sodium and Lithium Co-Doping and Thermal Annealing*	**Messaoud Tamin** (UBE, FRA)
14.50-15.10	O22	*How the molybdenum process influences the growth of CZTS: A comparative study of different lab-grown and commercial molybdenum substrates*	**Alessandro Veneri** (UNIVR, ITA)
15.10-15.30		Closing remarks, impressions, perspectives and farewell	
15.30-17.30		**Visit of NIMP laboratories**	

	Posters (during the coffee breaks and lunches in both days of the workshop)	
P01	*NiO_x nanoparticles as HTM in semi-transparent Sb_2S_3 solar cells*	**Alessandra Rocchina Palmieri** (TALTECH, EST)
P02	*Synthesis and Processing of Colloidal Nanocrystals for Sustainable Thin-Film Photovoltaic Devices*	**Katharina Dehm** (FAU, DEU)
P03	*Impact of hole transport layers on the performance of Sb_2S_3 solar cells*	**Viorica Stancu** (NIMP, ROU)
P04	*Influence of Post-deposition Annealing Temperature and Time on Sb_2S_3 films and Solar Cells grown by Ultrasonic Spray Pyrolysis*	**Robert Aleksander Liiv** (TALTECH, EST)
P05	*FIB-SEM tomography of structural, chemical and electronic properties of Sb_2Se_3 solar cell layer stacks*	**Jaroslav Kuliček** (CVUT, CZE)
P06	*Morphological and structural analysis of $Sb_2(S,Se)_3$ thin films based solar cells*	**Cristian Radu** (NIMP, ROU)
P07	*Development of Antimony Sulfide Selenization to From Antimony Sulfide Selenide Using Selenourea as a Selenium-Source*	**Jekaterina-Ketrin Rostsupkina** (TALTECH, EST)
P08	*Effect of the Annealing Atmosphere on the Properties of the $Cu_2ZnSn(S,Se)_4$ (CZTSSe) Thin Films and Their Photovoltaic Performance*	**Mehmet Ali Olgar** (OHU, TUR)
P09	*Influence of Annealing Temperature on the Properties of Cu_2ZnSnS_4 Thin Films Obtained via Ligand Exchange*	**Roman Golubovski** (UKIM, MKD)
P10	*Tunable Ag Incorporation in Electrodeposited Kesterite CZTS Thin Films for Photovoltaic Applications*	**Mohamed Yassine Zaki** (UM6P, MAR)
P11	*Optimization of Growth Parameters in Sol–Gel-Derived Bi_2S_3 Thin Films*	**Hamide Kavak** (CU, TUR)
P12	*The importance of XPS in the analysis of the dopants in solar cells*	**Amelia Bocirnea** (NIMP, ROU)
P13	*Advanced Characterization Techniques for Next-Generation Photovoltaic Technologies*	**Veton Haziri** (UBT, RKS)
P14	*Development of chalcogenide semiconductors for photovoltaic applications*	**Vladimir Dulev** (BAS, BGR)
P15	*Temporal Anomaly Evaluation and Feature Selection for Real-Time Health Monitoring of Solar Inverter Interfaces in Chalcogenide-Based PV Systems*	**Ibrahim Ozturk** (Osmaniye, TUR)
P16	*DFT study of diazonium-derived grafting on SnS surfaces*	**Avni Berisha** (UNI-P, RKS)
P17	*Biomass-Derived Activated Carbons as Sustainable Interfacial Materials for Energy Storage and Emerging Chalcogenide Photovoltaic Systems*	**Murat Yılmaz** (Osmaniye, TUR)