



Monday 4 July 2022

12:00	Registration, tea and coffee
12:30	Lunch
13:15	Welcome and introductions David Fermin, <i>Chair of Scientific Committee</i>
13:25	Outline of Discussion format <i>Royal Society of Chemistry Publishing Editors</i>
13:30	Introductory lecture (Session Chair: David J. Fermin) David Mitzi <i>Duke University, USA</i>
14:30	Break
14:45	Session 1 - Indium-free CIGS analogues (Session Chair: Jake Bowers)
14:45	Ultrathin wide band gap kesterites Charlotte Platzer-Björkman <i>Uppsala University, Sweden</i>
14:50	The kesterite-stannite structural transition as a way to avoid Cu/Zn disorder in kesterites: the example of $\text{Cu}_2(\text{Zn,Mn})\text{SnSe}_4$ Galina Gurieva <i>Helmholtz Zentrum Berlin, Germany</i>
14:55	Ex situ Ge-doping of CZTS nanocrystals and CZTSSe solar absorber films Matthew Naylor <i>University of Northumbria, UK</i>
15:00	Discussion
16:15	Flash presentations (by invitation of the Scientific Committee)
16:30	Poster session and wine reception



Tuesday 5 July 2022

09:30	Session 2 - Bulk and surface characterisation techniques of solar absorbers (Session Chair: Jonathan Scragg)
09:30	Photoluminescence assessment of materials for solar cell absorbers Susanne Siebentritt <i>Université du Luxembourg, Luxembourg</i>
09:35	Chemical and electronic structure of the heavily intermixed (Cd,Zn)S:Ga/CuSbS₂ interface Marcus Bär <i>Helmholtz-Zentrum Berlin, Germany</i>
09:40	Discussion
10:30	Morning break
11:00	Session 2 (cont.) - Bulk and surface characterisation techniques of solar absorbers (Session Chair: Jonathan Scragg)
11:00	Time-resolved photoluminescence studies of perovskite chalcogenides Rafael Jaramillo <i>MIT, USA</i>
11:05	Multi-modal characterization of kesterite thin-film solar cells: experimental results and numerical interpretation Jens Wenzel Andreasen <i>Technical University of Denmark, Denmark</i>
11:10	Discussion
12:00	Lunch and poster session
13:30	Session 3 - Novel chalcogenides, pnictides and defect-tolerant semiconductors (Session Chair: Susan Schorr)
13:30	Stoichiometry modulates the optoelectronic functionality of zinc phosphide (Zn_{3-x}P_{2+x}) Mirjana Dimitrievska <i>École Polytechnique Fédérale de Lausanne (EPFL)</i>
13:35	Zinc germanium nitrides and oxide nitrides: the influence of oxygen on electronic and structural properties Joachim Breternitz <i>Helmholtz-Zentrum Berlin, Germany</i>
13:40	Discussion
14:30	Afternoon break
15:00	Session 3 (cont.) - Novel chalcogenides, pnictides and defect-tolerant semiconductors (Session Chair: Susan Schorr)
15:00	Accelerating research on novel photovoltaic materials Thomas Unold* <i>Helmholtz Zentrum Berlin, Germany</i>
15:05	GeSe photovoltaics: doping, interfacial layer and devices Matthew Smiles <i>University of Liverpool, UK</i>
15:10	Discussion
16:00	Afternoon break



16:30	Session 3 (cont.) - Novel chalcogenides, pnictides and defect-tolerant semiconductors (Session Chair: Susan Schorr)
16:30	Comprehensive rear surface passivation of superstrate Sb_2Se_3 solar cells via post-deposition selenium annealing treatments and the application of an electron blocking layer Byungha Shin <i>KAIST, Korea</i>
16:35	A post-deposition annealing approach for organic residue control in TiO_2 and its impact on $\text{Sb}_2\text{Se}_3/\text{TiO}_2$ device performance Nicolae Spalatu <i>Tallinn University of Technology, Estonia</i>
16:40	Discussion
17:30	Close of sessions
19:00	Conference dinner



Wednesday 6 July 2022

09:00	Session 4 – Materials design and bonding (Session Chair: David Scanlon)
09:00	Rapid thermal annealing process for Se thin-film solar cells Jiang Tang* <i>Huazhong University of Science and Technology, China</i>
09:05	Low temperature (Zn,Sn)O deposition for reducing interface open-circuit voltage deficit to achieve highly efficient Se-free Cu(In,Ga)S₂ solar cells Moohit Sood <i>University of Luxembourg, Luxembourg</i>
09:10	Discussion
10:00	Morning break
10:30	Session 4 (cont.) – Materials design and bonding (Session Chair: David Scanlon)
10:30	Impact of metastable defect structures on carrier recombination in solar cells Seán Kavanagh <i>Imperial College London, UK</i>
10:35	Off-stoichiometry in I-III-VI₂ chalcopyrite absorbers: a comparative analysis of structures and stabilities Kostiantyn Sopiha* <i>Uppsala University, Sweden</i>
10:40	Discussion
11:30	Concluding remarks lecture (Session Chair: Thomas Weiss) Aron Walsh <i>Imperial College London, UK</i>
12:20	Poster prize presentation and acknowledgements
12:30	Close of meeting and lunch

Speakers presenting virtually are denoted with an asterisk.