

Day I – Thursday November 17 th		
08:30	Registration Welcome coffee	Imec 5, 0 th floor: Lobby Imec 5, 1 st floor: Lounge
09:15	Opening session <i>Chair = Jes Larsen, Uppsala University</i>	Imec 5, 2 nd floor: Room 2A
	09:15 Welcome Speech <i>by Jo De Boeck and Bart Vermang, imec</i>	
	Session 1 – Impact of Ge on absorber formation	
	09:35 – Different pathways to solution-processed CZGS ₂ Se absorbers for thin-film solar cells, <i>by Thomas Schnabel, ZSW</i>	
	09:55 – Understanding the positive role of Ge in CZTSe:Ge solar cells, <i>by Sergio Giraldo, IREC</i>	
	10:15 – Fabrication and characterization of 4.2 % efficient CZGSe based solar cells, <i>by Guy Brammertz, imec</i>	
10:35	Coffee break	Imec 5: Lounge
11:05	Session 2 – Kesterite absorber optimization <i>Chair = Susan Schorr, HZB</i>	Imec 5: Room 2A
	11:05 – Substitution of Li for Cu in CZTSe: toward wide band gap absorber with low cation-disorder for thin film solar cells, <i>by Alain Lafond, IMN</i>	
	11:25 – Alkali doping in solution processed kesterite solar cells, <i>by Stefan Haab, Empa</i>	
	11:45 – Beyond 10 % efficient sulfide kesterite CZCTS solar cell: role of cadmium alloying, <i>by Chang Yan, UNSW</i>	
	12:05 – Influence of SnS secondary phase on CZTS Solar cells, <i>by Yi Ren, Uppsala University</i>	
12:25	Lunch break	Imec 5: Lounge
13:25	Session 3 – Structural properties of kesterite absorbers <i>Chair = Ian Forbes, Northumbria University</i>	Imec 5: Room 2A
	13:25 – Study on the tetragonal distortion (c/2a) of CZTSe absorbers, <i>by Jose Marquez, Northumbria University</i>	
	13:45 – Interpreting time-resolved photoluminescence for kesterite devices and absorbers, <i>by Charles Hages, HZB</i>	
	14:05 – Effects of [Cu]/[Zn+Sn] ratio on optical spectra of CZTSe thin films on Mo/glass, <i>by Mikhail Sulimov, Strathclyde University / Ural Federal University</i>	
	14:25 – Intrinsic point defects in off-stoichiometric CZTSe kesterite type compounds, <i>by Elisa Valle-Rios, HZB</i>	
14:45	Coffee break	Imec 5: Lounge
15:15	Session 4 – Progress in heterojunction formation <i>Chair = Johan Lauwaert, Ghent University</i>	Imec 5: Room 2A
	15:15 – Interface engineering of CZTSSe/CdS hetero-junction by epitaxial Al(OH) ₃ nanolayers using a wet chemical route, <i>by Haibing Xie, IREC</i>	
	15:35 – ZTO buffer layer and low temperature post annealing resulting in a 9.0 % efficient Cd-free CZTS solar cell, <i>by Tove Ericson, Uppsala University</i>	
	15:55 – Lattice-matched CZTS/CeO ₂ solar cell with open circuit voltage boost, <i>by Andrea Crovetto, Technical University of Denmark</i>	
	16:15 – Evaporated CdIn ₂ S ₄ buffer layer for kesterite solar cells, <i>by Leo Choubrac, IMN</i>	
17:00	Poster session , see page 3	Imec Cafeteria
18:00	Reception	Imec Cafeteria
19:30	End poster session, start dinner	Imec Cafeteria
21:30	End of day I	

Day 2 – Friday November 18 th		
09:00	Invited talk <i>Chair = Maarja Grossberg, Tallinn University of Technology</i>	Imec Cafeteria: -IA
	09:00 – Optimizing Cu-based chalcopyrites for photovoltaics - results from DFT calculations, by <i>Clas Persson, Oslo University</i>	
	Session 5 – Progress in rear contact and substrate	
	09:30 – Functionalized transparent conductive oxides as back contact for kesterite solar cells, by <i>Moises Espindola-Rodriguez, IREC</i>	
	09:50 – Flexible and light-weight CZTSe solar cells fabricated at low-temperature on polymer substrate, by <i>Edgardo Saucedo, IREC</i>	
	10:10 – Improvement of V_{OC} in kesterite solar cells by introducing metal oxide layers at rear interface and p-n junction, by <i>Samaneh Ranjbar, imec</i>	
10:30	Coffee break – Working Groups 1 and 2 Coffee break – Working Group 3	Imec 5: Lounge Imec Cafeteria: -IA
11:00	Working Group 1 – Structural properties <i>Moderators = Thomas Unold, HZB & Leo Choubrac, IMN</i>	Imec 5: Room IA
	11:00 – CZTSe surface composition and defect concentration analysis by innovative UV Resonant Raman spectroscopy, by <i>Victor Izquierdo-Roca, IREC</i>	
	11:15 – Influence of Cu content on changes in band gap energy in CZTSSe solar cell absorbers for different degrees of order, by <i>Mario Lang, KIT</i>	
	11:30 – Discussion	
	12:15 – Summary	
	Working Group 2 – Progress in absorber formation <i>Moderators = Guy Brammertz, imec & Edgardo Saucedo, IREC</i>	Imec 5: Room IB
	11:00 – Strategies for band gap graded kesterite absorbers through cation substitution, by <i>Markus Neuschitzer, IREC</i>	
	11:15 – Inclusion of alkali elements in CZTSe absorbers and their influence on physical and optoelectronic properties, by <i>Sylvester Sahayaraj, imec</i>	
	11:30 – Discussion	
	12:15 – Summary	
	Working Group 3 – Progress in cell architecture <i>Moderators = Alex Redinger, HZB & Tove Ericson, Uppsala University</i>	Imec Cafeteria: -IA
	11:00 – Alternative buffers and partial electrolyte treatments for CZTSe solar cells, by <i>Christian Andres, Empa</i>	
	11:15 – Intermixing at the $In_xS_y/CZTSSe$ interface and its impact on the chemical and electronic structure, by <i>Dirk Hauschild, KIT</i>	
	11:30 – Discussion	
	12:15 – Summary	
12:30	Lunch break	Imec 5: Lounge
13:30	Closing session	Imec Cafeteria: -IA
	13:30 – Overview of sessions 1 to 5 by <i>Bart Vermang, imec</i>	
	13:40 – Overview of working group 1 by <i>Thomas Unold, HZB & Leo Choubrac, IMN</i>	
	13:50 – Overview of working group 2 by <i>Guy Brammertz, imec & Edgardo Saucedo, IREC</i>	
	14:00 – Overview of working group 3 by <i>Alex Redinger, HZB & Tove Ericson, Uppsala University</i>	
	14:10 – Presentation of STARCELL by <i>Edgardo Saucedo, IREC</i>	
	14:20 – Discussion next workshop host by <i>ALL</i>	
14:30	End of the Workshop (A lab visit is possible)	

Poster Session – Thursday November 17 th		
1	<i>P. Balaz</i>	Stannite and its big brother kesterite: possible solid-state synthesis of both quaternary nanocrystals in scalable amounts
2	<i>A. Walsh</i>	Materials modelling of CZTS: electrons, phonons and disorder
3	<i>T. Raadik</i>	Low temperature time resolved photoluminescence in ordered and disordered CZTS single crystals
4	<i>G. Gurieva</i>	Structural characterisation of CZTGSe by neutron diffraction
5	<i>G. Gurieva</i>	Investigation of detection limits of ZnSe and Cu ₂ SnSe ₃ secondary phases in CTZSe
6	<i>M. Sulimov</i>	A PL and PLE study of CZTSe/Mo and ZnO/CdS/CZTSe/Mo on glass substrates
7	<i>C. Schnohr</i>	Local kesterite composition and secondary phases in off-stoichiometric CZTSe
8	<i>N. Ross</i>	Selenium annealing study of compound sputtered CZTS precursors
9	<i>W. Kogler</i>	Ge-alloyed CZTGSSe solar cells with CdS and In ₂ S ₃ buffer layer
10	<i>H. Kavak</i>	Investigation of solvent/stabilizer ratio and thermal treatment effect on CZTS absorber layer
11	<i>L. Gütay</i>	In-situ Investigation of the order-disorder transition in CZTSe by optical transmission spectroscopy
12	<i>K. Ernits</i>	Electrical and physical characterizations for CZTS monograin layer solar cells and modules
13	<i>X. Kozina</i>	CZGSSe absorber formation studied by soft and hard x-ray photoelectron spectroscopy: Impact of precursor composition
14	<i>M. Neuwirth</i>	A multiple-selenization process for enhanced reproducibility of CZTSSe solar cells
15	<i>C. Rein</i>	Synthetic kesterites from deep eutectic solvents
16	<i>A. Aziz Suzon</i>	Green annealing route for sequential processed CZTS solar cell
17	<i>E. Saucedo</i>	Epitaxial relationships and structural quality of the CZTSe/CdS hetero-junction on the nanoscale
18	<i>S. Grini</i>	Spatial distribution of sodium in CZTSSe studied with secondary ion mass spectrometry image depth profiling
19	<i>C. Malerba</i>	Annealing effect on CZTS solar cell
20	<i>M. Valentini</i>	Stoichiometry effect on the order-disorder related E _g changes in CZTS
21	<i>M. Sayed</i>	Influence of deposition parameters on the properties of kesterite thin films prepared by spray pyrolysis
21	<i>F. Ducroquet</i>	Potential fluctuations on CZTSSe solar cells admittance
23	<i>G. Larramona</i>	Preliminary ageing tests on 11.5% CZTSSe devices spray coated from a water-ethanol ink
24	<i>V. Kosyak</i>	The effect of sulfur vacancy concentration on the equilibrium of native point defects in CZTS
25	<i>A. Redinger</i>	Influence of surface treatments on kesterite and CIGSe absorbers studied with Kelvin Probe force microscopy
26	<i>S. Garud</i>	Al ₂ O ₃ front surface passivation of kesterite solar cells
27	<i>T. Schwarz</i>	Formation of nano-sized Cu-Sn-Se particles in CZTSe thin-films and their effect on solar cell efficiency
28	<i>S. Levenco</i>	Photoluminescence in the kesterite Ag:CZTSSe absorbers with varied Ag content
29	<i>R. Gunder</i>	Cation distribution and point defect concentration in off-stoichiometric CZGSe compound semiconductors
30	<i>A. Irkhina</i>	Investigation of the growth of CZTS nanocrystals from hot-injection synthesis

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