

## 4<sup>th</sup> CdTe Workshop Agenda (Oct 1<sup>st</sup> – 2<sup>nd</sup>, 2020)

### Day 1

Thursday, October 1, 2020					
Virtual through Webex					
EST	PST	Duration	Subject	Presenter	Location
10:45AM	7:45AM	15	<>Virtual Social Time (Day 1)		
11:00AM	8:00AM	15	<>welcome and announcement		
			Welcome/Agenda (5')	Jim/Gang	FS/CSU
			US-MAC announcement (5')	Mike Heben	University of Toledo
11:15AM	8:15AM	40	<>Industrial Session		
			FS manufacturing and R&D update (10')	Gang Xiong	First Solar
			Building-Integrated PV by Toledo Solar (10')	Alvin Compaan	Toledo Solar Inc
			High -throughput CdTe device testing systems (10')	Upali Jayamaha	Consolidated Research Systems
			Low Cost Single Crystal CdZnTe-Silicon Tandem PV (10')	Peter Dingus	Uriel Solar
11:55AM	8:55AM	5	<> Break		
12:00PM	9:00AM	60	<>Industrial Session: continued		
			Introduction to NSG (10')	Kevin Sanderson	NSG
			Development of advanced materials for PV applications (10')	Jean-Nicolas Beaudry	5Nplus
			Direct Solar and advanced thin film encapsulation technology development (10')	Kurt Barth	Direct Solar
			Introduction to Nious Technologies Inc (10')	Csaba Szeles	Nious Technologies Inc.
			Magnetron sputtering for CdTe R&D and niche applications (10')	Victor Plotnikov	Lucintech Inc
			Update of Photovoltaic CdTe Development at Sivananthan Laboratories, Inc (10')	Paul Boieriu	Siva Lab
1:00PM	10:00AM	30	<> Break		
1:30PM	10:30AM	105	<>R&D session 1		
			Overview of SETO and Thoughts on Directions for CdTe PV R&D (15')	Andenet Alemu	DOE SETO
			Realizing very large grain-size CdTe thin film structures by vapor transport deposition (15')	David Albin	NREL
			Investigation of the back interface in rear illuminated devices (15')	Adam Phillips	University of Toledo
			Photogeneration of Carriers in MgZnO Buffer Layers (15')	Jim Sites	CSU
			Broadband anti-reflection coatings for thin film CdTe modules (15')	Mike Walls	Loughborough
			What we can learn from direct alloy growth and in situ doping of CdSeTe absorber layers (15')	Stuart Irvine	Swansea
			CdTe Research at CSM (15')	Colin Wolden	Colorado School of Mines
3:15PM	12:15PM	10	<> Break		
3:25PM	12:25PM	105	<>R&D session 2		
			Beyond 20% Efficient Arsenic Doped Solar Cells: Limitations and Opportunities (15')	Sachit Grover	First Solar
			Efforts to interrogate and improve the back contact in CdTe solar cells (15')	Mike Heben	University of Toledo
			Progress, challenges and next steps for efficient arsenic doping of Cd(Se)Te (15')	Amit Munshi	CSU
			What can we learn from back- and front-contact interfaces in CdSeTe using TEM? (15')	Robert Klie	Univ Illinois Chicago
			Spectrally-resolved PL and absorption for CdTe quality (15')	Mike Scarpulla	Utah
			Characterization of the environment around Cu dopants and Schottky barrier at the p-contact in CdTe solar cells (15')	Yong-Hang Zhang	Arizona State University
			Electro-optical properties and stability of TCO materials for CdTe solar cells (15')	Brian Good	NREL
5:10PM	2:10PM	0	<> End of Day 1		

Day 2

**Friday, October 2, 2020**

**Virtual through Webex**

Start EST	Start PST	Duration	Subject	Presenter	Location
10:45AM	7:45AM	15	<>Virtual Social Time (Day 2)		
11:00AM	8:00AM	120	<>Work Groups - Directions and Discussion		
			Opening (5')	Wyatt	NREL
			back contact (15')	Adam	University of Toledo
			characterization (15')	Craig	NREL
			absorber (15')	Mike Scarpulla	Utah
			front contact (15')	Sachit	First Solar
			blue sky (15')	Matt	NREL
			Discussion (40')	all	NREL
1:00PM	10:00AM	0	<> End of Day 2		