



UNIVERSITÀ  
DEGLI STUDI  
DI PADOVA



## PV SOLAR SCHOOL - INTERNATIONAL WINTER SCHOOL 2025

### Materials and Technologies for Solar Energy: Photovoltaics and Thermal Solar

	MON 10/02	TUE 11/02	WED 12/02	THU 13/02	FRI 14/02	
<b>08:30</b>	<b>OPENING - Matteo Meneghini (School Director)</b>					
<b>09:00</b>	<b>Ivan Gordon - IMEC</b> Crystalline-Silicon solar cells: State-of-the-art and future challenges	<b>Giulia Spaggiari -CNR</b> Exploring antimony-based chalcogenides for more cost-effective thin film photovoltaics	<b>Filippo Spertino - PoliTo</b> Cooperative planning of photovoltaic and wind systems	<b>Arianna Berto - Univ. of Padova</b> Integration of PV-T modules in heat pumps for residential applications	<b>Nicola Trivellin - Univ. of Padova</b> Degradation studies on Perovskite solar cells and modules	
<b>09:50</b>	<b>David Moser - Eurac Research</b> The past, the present, and the future of solar PV O&M	<b>Simona Binetti - Univ. of Milano Bicocca</b> From CIGS to Kesterite: Advancements in Solar Cell Technology	<b>Giovanni Spagnuolo - Univ. of Salerno</b> On-site diagnosis of PV modules	<b>Alessandro Galia - Univ. of Palermo</b> The role of concentrating solar thermal technologies for the decarbonization of energy-intensive industries	<b>Vanni Lughì - Univ. of Trieste</b> Critical materials in photovoltaic technologies	
<b>10:40</b>	<b>BREAK</b>	<b>BREAK</b>	<b>BREAK</b>	<b>BREAK</b>	<b>BREAK</b>	
<b>11:10</b>	<b>Mario Tucci - ENEA</b> Heterojunction vs TopCON, who is the best?	<b>Alessandro Romeo - Univ. of Verona</b> The Curious Case of CdTe solar cells: past, present, and future of the most successful thin film technology	<b>NETWORKING ACTIVITY</b>	<b>Mark Rossetto - MRP Energy</b> 20 years of PV technology evolution and PV plants diagnostics	<b>Francesco Sgarbossa - Univ. of Padova</b> Innovative doping process for new high efficiency Si solar cells architectures	
<b>12:00</b>	<b>Fabrizio Bizzarri - ENEL</b> Innovation in solar cell/module production	<b>Iacopo Benesperi - Univ. of Torino</b> Photovoltaic technologies for indoor applications		<b>Maurizio Cellura - Univ. of Palermo</b> Eco-design and Life Cycle Assessment of solar technologies	<b>Noah Tormena</b> <b>Vittorio Ferrara</b> <b>Valeria Demontis</b> <b>Irene Motta</b>	
<b>12:50</b>	<b>LUNCH BREAK</b>	<b>LUNCH BREAK</b>		<b>LUNCH BREAK</b>	<b>CLOSING CEREMONY AND AWARDS</b>	
<b>14:00</b>	<b>Matteo Meneghini - Univ. of Padova</b> Solar Cell Reliability: Fundamentals and Case Studies	<b>Ivan Gordon - IMEC</b> Technology development alone is not enough to reach the climate goals: why policies and lobbying matter		<b>15:00</b>	<b>SPECIAL SESSION: PRESENT AND FUTURE OF SOLAR TECHNOLOGIES (NEST DISSEMINATION EVENT)</b>	
<b>14:50</b>	<b>Marco Balucani - RISE TECHNOLOGY</b> Metallization of solar cells and the associated interconnection of modules: Where we came from and where we are going.	<b>Carlos Meza - HS-ANHALT</b> Green Hydrogen production using photovoltaics: A Power-Flow Modeling and Techno-Economic Analysis			Prof. Matteo Meneghini (University of Padova) - Welcome from organizing institutions	
<b>15:40</b>	<b>ATTENDEES TALKS (8+2 minutes)</b> <b>Jessica Jazmine Nicole Barrantes</b> <b>Gabriella Gonnella</b> <b>Mousa Sondoqah</b> <b>Simone Barbarossa</b>	<b>Simon Ternes - Univ. of Rome TV</b> Machine Learning in Photovoltaics research			Welcome from the Authorities	
<b>16:30</b>	<b>BREAK</b>	<b>BREAK</b>			Prof. Maurizio Cellura (University of Palermo) - Introduction to the NEST Project	
<b>15:20</b>				<b>15:20</b>	<b>David Moser - Eurac Research</b> Relaunching Photovoltaic Industry in Italy	<b>NETWORKING ACTIVITY</b>
<b>15:40</b>				<b>15:40</b>	<b>Massimo Izzi / Mario Tucci - ENEA</b> Novel technologies for silicon photovoltaics	
<b>16:00</b>				<b>16:00</b>	<b>Giulia Spaggiari - CNR</b> Innovation in photovoltaics for off-grid applications	
<b>16:20</b>			<b>16:20</b>	<b>Matteo Meneghini - University of Padova</b> Solar cells reliability: the importance of diagnostics		
<b>16:40</b>			<b>16:40</b>	<b>Alessandro Galia - University of Palermo</b> Role of solar thermal for decarbonization		
<b>17:00</b>			<b>17:00</b>	<b>Arianna Berto - University of Padova</b> Integration between photovoltaics and heat pumps		
<b>17:20</b>			<b>17:20</b>	<b>Roberto Speranza - IIT</b> Integration between PV and energy storages		
<b>17:40</b>			<b>17:40</b>	<b>Quyen Le Luu - University of Palermo</b> Eco-design and Life Cycle Assessment for solar technologies		
<b>17:50</b>	<b>Mussab Hammas Khan</b> <b>Noor UI Ain Ahmed</b> <b>Mirco Riganti</b>	<b>Paola Jakuzá</b> <b>Salvatore Ferruggia Bonura</b> <b>Nazifi Charandabi Rana</b>	<b>18:00</b>	<b>END OF SESSION + NETWORKING APERITIF</b>		
<b>18:15</b>	<b>END OF SESSION</b>					
<b>19:30</b>			<b>SOCIAL DINNER</b>			