

# 2nd International Integrated-PV Workshop

Bringing together experts on IPV research and applications

VIRTUAL Event

March 27-28, 2023, free of charge

#2ndIPVworkshop

## **Integrated PV (IPV) - *The way to overcome space constraints and competing land use***

Many countries in the world have announced massive expansion plans of their PV capacity targets, sparking concerns whether there is sufficient space available and/or whether there are sacrifices to be made between PV deployment and land that is currently used for other purposes such as agriculture. One of the plenary talks at the 8th World Conference for PV Energy Conversion (WCPEC-8) in September 2022 in Milano showed that “Integrated PV” (IPV) solutions on buildings, water bodies (inland and marine waters) and agricultural land alone could provide sufficient space even for the extreme scenario of a future all-electric world that would require ~60 TWp of PV capacity. Therefore, IPV technologies have a huge upside potential, especially in countries where most of the prime land has already been used for PV installations (hence discussions about competing uses of land have started), and where land is scarce or expensive.

Based on the highly successful 1st IPV Workshop in 2022, the 2nd edition will focus on latest innovations that will help shaping this new but fast-growing segment within the solar PV industry. Technologies include Building-integrated PV (BIPV), Floating PV, Agrivoltaics, and Vehicle-integrated PV (VIPV). The healthy mix of speakers from industry and academia will allow to develop a holistic view of the various IPV technologies, covering today’s state of the art, latest trends and further R&D needs. Aim of the workshop is to create a better understanding of the various IPV technologies, their potential, and their inter-disciplinary synergies, but also to raise awareness of “non-technical” matters which have already surfaced in some countries; those include, for example, legal issues, regulatory hurdles and environmental & social acceptance.

Integrated PV will be the “Next Big Thing” in solar!

--Dr. Thomas Reindl, General Chair of the 2nd International IPV Workshop

# Program | Monday, March 27, 2023

CST  
Beijing Time

CEST  
Central European  
Summer Time

14:00	8:00	Thomas Reindl	Opening Introduction & the case for Integrated PV
<b>Session 1</b>		<b>Thomas Reindl</b>	<b>Plenary Session</b>
14:20	8:20	Christian Breyer LUT University	Future electricity scenarios and the need for Integrated PV
14:45	8:45	Wilfried van Sark Utrecht University	Overview and Latest Trends in Integrated PV
15:10	9:10	Coffee Break	
<b>Session 2</b>		<b>Kaining Ding Akira Terakawa</b>	<b>VIPV</b>
15:20	9:20	Bonna Newman Lightyear	Status, Challenges and Research Needs of VIPV
15:40	9:40	Neel Patel FZ Juelich	Impact of additional PV weight on the energy consumption of electric vehicles with onboard PV
15:55	9:55	Xiaoyan Gao Trina Way	VIPV, Exploring a New Application for Clean Energy
16:10	10:10	Keiichi Komoto Mizuho Research & Technologies, Ltd.	VIPV Status in Japan
16:25	10:25	Coffee Break	
<b>Session 3</b>		<b>Matthieu Despeiss Zhiqiang Feng</b>	<b>BIPV</b>
16:35	10:35	Pierluigi Bonomo SUPSI	Overview & Latest Trends in BIPV
16:55	10:55	Heng Xia Shenzhen University	Pixel House in the 2022 Solar Decathlon China
17:10	11:10	Hans-Peter Merklein Envelon	From BIPV solution to Inspiring BIPV Architecture
17:25	11:25	Rebecca Yang RMIT University	BIPV Digitalisation
17:40	11:40	David Wei Araymond Energy	The Contribution of AER to the Next TW Installation in Minimizing Freight, Installation & Maintenance Labor Cost
17:55	11:55	Zhiqiang Feng	Closing

# Program | Tuesday, March 28, 2023

CST  
Beijing Time

CEST  
Central European  
Summer Time

14:00	8:00	Kaining Ding	Opening
<b>Session 4</b>		<b>Aude Derrier Dengyuan Song</b>	<b>BIPV</b>
14:05	8:05	Larry Zhao GoodWe	Design of integrated building photovoltaic applications
14:25	8:25	Mauro Pravettoni SERIS, NUS	"Peranakan PV", the next Frontier in Aesthetic PV
14:40	8:40	Millie Tan Gain Solar	Zero Carbon Aesthetic Architect-BIPV Application For Commercial & Residential Buildings
14:55	8:55	Yue Wu Advanced Solar Power	CdTe Thin Film Application in BIPV
15:10	9:10	Coffee Break	
<b>Session 5</b>		<b>Thomas Reindl</b>	<b>Floating PV</b>
15:20	9:20	Carlos Rodriguez SERIS, NUS	Overview & Latest Trends in Floating PV
15:40	9:40	Congyi Tan Envision Digital	New Standard for Floating PV Systems (TR100:2022)
15:55	9:55	Philipp Sinn SINN Power	Floating Solutions for Off-shore FPV and Other Ocean Energies
16:10	10:10	Stephen Thackerey Lancaster University	Environmental Impacts of FPV and Mitigation Measures
16:25	10:25	Coffee Break	
<b>Session 6</b>		<b>Kaining Ding</b>	<b>AGRI-PV</b>
16:35	10:35	Maximilian Trommsdorff Fraunhofer ISE	Standardisation of Agrivoltaics
16:50	10:50	Jean-Michel Villiot Amarenco	The enormous business potential for Agrivoltaics for governments, agrofood industrials and solar IPPs
17:05	11:05	Alessandra Scognamiglio ENEA	Agrivoltaics as part of Sustainable PV Landscapes
17:20	11:20	Gaël Nardin Insolight	Dynamic agrivoltaics: an agricultural tool to make the most of photons
17:35	11:35	Next chair	Closing

## Organizer



### **Thomas Reindl**

*Deputy CEO, Cluster Director*

Solar Energy Research  
Institute of Singapore, SERIS



### **Kaining Ding**

*Head of Department Silicon  
Heterojunction Solar Cells and  
Modules at IEK-5: Photovoltaics  
Forschungszentrum Jülich,  
Germany*



### **Ning Xu**

*Technical Advisor, Director of  
Photovoltaic Application Research  
Institute  
Yangtze Institute for Solar  
Technology*



### **Heyan Li**

*President & Founder, Chief  
Analyst*

Solarbe & Solarbe Consulting

## Speakers



### **Christian Breyer**

*PhD (Tech), Professor for Solar  
Economy*

LUT University



### **Wilfried van Sark**

*Full Professor of Photovoltaics  
Integration, Copernicus Institute  
of Sustainable Development  
Utrecht University*



### **Pierluigi Bonomo**

*Senior Researcher, Head of BIPV  
Team*

SUPSI



### **Mauro Pravettoni**

*Director of PV Modules for Urban  
Solar  
Solar Energy Research  
Institute of Singapore, SERIS*



### **Rebecca Yang**

*Associate Professor*

RMIT University



### **Philipp Sinn**

*CEO and Founder*

SINN Power



### **Carlos Rodriguez**

*Head of the Solar System  
Technology Group*

Solar Energy Research  
Institute of Singapore, SERIS



### **Stephen Thackerey**

*Freshwater ecologist*

Lancaster University





**Congyi Tan**  
Principal Engineer  
Envision Digital



**Hans-Peter Merklein**  
CEO  
Grenzbach Envelon GmbH



**Alessandra Scognamiglio**  
Senior Researcher, Licensed Architect  
ENEA



**Maximilian Trommsdorff**  
Head of Group Agrivoltaic  
Fraunhofer ISE



**Larry Zhao**  
PVBM Solution Director  
GoodWe



**Bonna Newman**  
Technical Director for Solar Products  
Lightyear



**Xia Heng**  
Assistant Professor  
Shenzhen University



**Gaël Nardin**  
R&D Manager  
Insolight SA



**Xiaoyan Gao**  
General Manager  
Trina Way



**Jean-Michel Villiot**  
CEO of the Business Line Agrisolar  
Amarenco



**Yue Wu**  
Deputy General Manager  
Advanced Solar Power, Inc.



**Neel Patel**  
PhD candidate  
FZ Juelich



**Millie TAN**  
International Sales Director  
Gain Solar



**Keiichi Komoto**  
Senior Consultant  
Mizuho Research & Technologies, Ltd.



**David Wei**  
Business Development Director  
ARaymond Energy, China

## Main Organizers



## Steering Committee

Kaining Ding	Forschungszentrum Jülich GmbH (JÜLICH)
Matthieu Despeisse	The Centre Suisse d'Electronique et de Microtechnique (CSEM)
Zhiqiang Feng	Trina solar
Thomas Reindl	Solar Energy Research Institute of Singapore (SERIS)
Bonna Newman	Lightyear
Akira Terakawa	Panasonic Corporation (Panasonic)
Aude Derrier	Institut National de l'énergie Solaire (CEA-INES)
Dengyuan Song	DAS Solar
Ning Xu	Yangtze Institute for Solar Technology (YIST)

## Contacts

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