



PV Heterojunction Tech CONFERENCE

Virtual Conference | 17-18 March 2021

Post Event Report



550+

ATTENDEES REGISTERED



20

PRESENTATIONS



10+

HOURS OF CONTENT



250+

COMPANIES ATTENDED

EVENT HOST & PARTNER:

HEVEL
ENERGY GROUP

Event overview

The first PV HeterojunctionTech conference - held online during 17-18 March 2021 - turned out to be one of the most successful events undertaken by the PV-Tech team.

For years, heterojunction (HJT) cell technology had been promoted by the PV industry as having inherent benefits over almost all other cell types; however, it is only now that the technology is truly on the verge of becoming the lead proponent that will drive the industry forward over the next 5-10 years.

The event featured the three leading producers of HJT cells in mass production today: Hevel Solar, Jinergy and Risen Energy. Each of the speakers from these companies outlined clearly how production had grown quickly in recent years to several hundred MW annual levels, and how this provided the platform for the first cost-effective and efficiency-leading GW-scale HJT fabs to be planned.

The other sessions focused on the supporting institutes and equipment suppliers that are now fully aligned with the new generation of GW-plus HJT producers globally. In contrast to the previous efforts to commercialize HJT as a mainstream technology to the PV industry, this technology-specific grouping of key stakeholders is vital for manufacturers to succeed.

While most in the sector understand the cell efficiency advantages - in particular over mainstream p-mono PERC today - the benefits of HJT modules in real-world conditions were highlighted possibly to the broadest global PV audience to date. These benefits relate to elevated

temperature performance and near-ideal bifaciality arising from the symmetrical layer stacks deposited either side of the n-type substrate during cell production.

A further differentiator of PV HeterojunctionTech was hearing the voices of downstream companies, including EPCs installing HJT modules in the field and testing/reliability labs that have now started to provide key third-party verification of the technology. Going forward, this part of the PV industry will become increasingly important as a means of educating investors when forecasting site capex and yield.

Already, many of those involved at the March 2021 online event are asking us the same question: when is the next PV HeterojunctionTech event taking place?

It would seem fair to say now that HJT is on the verge of prime-time commercialization, not just for niche residential rooftop installations, but for large ground-mounted projects in every country and region contributing to sector growth over the next 5-10 years. Providing a platform for the entire industry to learn about heterojunction now could not have come at a better time!



Finlay Colville
Head of Research, PV Tech

Speakers



ANIS JOUINI
CEO
CEA-INES (INSTITUT NATIONAL
DE L'ENERGIE SOLAIRE)



CHARLES ROUX
Head of Solar Cell Division
CEA-NATIONAL SOLAR ENERGY
INSTITUTE (INES)



STEFAN ROEST
Co-founder & CTO
ETERNALSUN SPIRE



KAINING DING
Head Of Department
FORSCHUNGSZENTRUM JÜLICH



JOCHEN RENTSCH
Head of Department - Production Technology
(Surfaces & Interfaces)
FRAUNHOFER INSTITUTE FOR
SOLAR ENERGY SYSTEMS (ISE)



BERND STANNOWSKI
Head of Silicon Solar Cells Group at PVcomB
HELMHOLTZ-ZENTRUM BERLIN (HZB),
PVCOMB



OLEG SHUTKIN
Head of Engineering and Power
Generation Business Unit
HEVEL SOLAR



IGOR SHAKHRAY
CEO
HEVEL SOLAR



EKATERINA TERUKOVA
Team leader of Solar energy department
HEVEL SOLAR



DMITRY ANDRONIKOV
Chief Process Engineer at Hevel R&D Center
HEVEL SOLAR



LIYOU YANG
CEO
JINNENG CLEAN ENERGY
TECHNOLOGY (JINERGY)



PETER BENDIX
Technical Engineer
NEXT2SUN



CARSTEN ROHR
Vice President – Business Development
NORSUN



JENYA MEYDBRAY
CEO
PV EVOLUTION LABS (PVEL)



FINLAY COLVILLE
Head of Market Research
PV-TECH & SOLAR MEDIA LTD



YANFENG CUI
Senior R&D Manager
RISEN ENERGY



DIRK BEISENHERZ
Product Manager Sputtering Systems
SINGULUS TECHNOLOGIES



XUEMEI CHENG
Project Manager R&D Solar
SINGULUS TECHNOLOGIES



SEBASTIAN GATZ
Vice President Photovoltaics
VON ARDENNE

Key topics covered during event

DAY 1

Heterojunction Mass Production: Companies Defining the New Manufacturing Landscape for HJT in 2021

Following an introduction to the event, the opening session reviews the commercial mass production landscape in 2021 for Heterojunction cells and modules.

- PV-Tech & Solar Media Ltd
- Jinneng Clean Energy Technology (Jinergy)
- Risen Energy
- Hevel Solar

LIVE VIDEO TOUR: Hevel Solar's R&D Center in St. Petersburg, Russia

Live factory tour of Hevel's R&D Center in St. Petersburg, will include a virtual visit of this facility followed by a Q&A.

- Hevel Solar

R&D Activities in Heterojunction: Driving Cell Efficiencies above 25% in Production PART 1

Research activities into heterojunction PV technologies continue to be prioritized within the global research community.

- CEA-National Solar Energy Institute (INES)
- Hevel Solar

R&D Activities in Heterojunction: Driving Cell Efficiencies above 25% in Production PART 2

Research activities into heterojunction PV technologies continue to be prioritized within the global research community.

- Fraunhofer Institute for Solar Energy Systems (ISE)
- Helmholtz-Zentrum Berlin (HZB)

DAY 2

New Production Equipment & Materials for Heterojunction Efficiency & Cost Enhancements

Reviewing the global supply-chain of equipment and materials suppliers, many with decade-plus experience optimizing cell performance from HJT production lines.

- VON ARDENNE
- NorSun
- SINGULUS TECHNOLOGIES
- Hevel Solar

SPECIAL LIVE VIDEO TOUR: Megawatt-scale HJT Deployment for Utility-Scale Applications

Another special feature of the event will have a direct feed from one of Hevel's large-scale utility solar farms in Russia, including a video stream of the site build and features.

This session will address key issues that need to be considered when designing large-scale ground-mounted HJT-based plants, site optimization, and maximizing yields.

- Hevel Solar

HJT Modules in Rooftop & Ground-mount Installations, including Testing & Reliability Analysis

Presentations covering HJT module end-market deployment, including third-party testing and examples of commercial & industrial installations from the past 12 months.

- Next2Sun
- Eternalsun Spire
- PV Evolution Labs (PVEL)

What our attendees thought...

“ The conference succeeded in conveying the idea that the industry is on the brink of the launching the move into true high volume HJT manufacturing, illustrating in very concrete ways that this is now reality and no longer an idea as it has been for some years. Almost all speakers had prepared excellent presentations well-furnished with pertinent data and not just strategies or philosophies. As a particular example, never before has it been possible to obtain such a clear status of the Asian HJT cell and module producers. Also the chapter with equipment companies was completely to the point, demonstrating the great strides that they are taking towards high-throughput machines and cost reductions. Best conference I have attended in a long time.

Dick Heslinga, Director Strategic Marketing PV Industrialisation, **CEA-INES**

“ Great insights about the latest development on HIT due to high-level speakers . It was very interesting topics and the format including the live videos. A big thank to the organizer for making it possible.

Cherradi Nabih, CTO, **Desert technologies**

“ Event was both a great introduction and overview of current status and topics in Si hetero junction technology. It was also very helpful to learn about the plans of some of the major players in that field. As always, Finlay Colville's long-term experience in the PV market and his future outlook made the event also a reference to be cited for our own assessments.

Joachim Mueller, Head Of Department Patterning And Laser Processing, **NICE Solar Energy**

“ It was helpful to hear about the issues identified from actual production experiences such as Jinery and Risen, and their thoughts on wafer size expansion.

Mikio Taguchi, General Manager, **Panasonic**



100%

Would attend again



88%

Rated the Virtual Platform as Good or Excellent



97%

Rated the Quality of Speakers as Good or Excellent

Sample list of attending companies

2.JP
3M
8ME
AALTO UNIVERSITY
ACCIONA
ACES RENEWABLES
ADANI GROUP
ADANI SOLAR
ADVANCED ENERGY INDUSTRIES
AE111 AUTARKE ENERGIE
AGP
AIR LIQUIDE
ALPHA
AMARA-E
AMAT
AMBERWAVE
APPLIED MATERIALS
ASHTON FINANCIAL SERVICES
ASTRA
ASYS GMBH
ATAMOSTEC
AURORA SOLAR TECHNOLOGIES
AUTARQ
AVAADA ENERGY
AVANCIS GMBH
AVELAR SOLAR TECHNOLOGY
BAYWA R.E.
BECQUER ENERGY
BLISTECH INTERNATIONAL
BLUE POWER PARTNERS
BMT CANADA LIMITED
BNRG RENEWABLES
BOREALIS POLYMERS
BOROSIL RENEWABLES
BRIGHTNIGHT
BRIGHTSPOT AUTOMATION
BUSCH
CCC
CEA-NATIONAL SOLAR ENERGY INSTITUTE (INES)
CED
CENTRICA
CENTROPLAN
CERO GENERATION
CES
CIEMAT
CIFTJA TECHNOLOGIES
CLEAN ENERGY ASSOCIATES (CEA)
CONOSORZIO HYPATIA
COVEME SPA
CREDIT SUISSE
CS WISMAR
CSEM
CW-ENERJI INC.
CZECH TECHNICAL UNIVERSITY IN PRAGUE
D2SOLAR
DAI NIPPON PRINTING

DEAXO
DELFT UNIVERSITY OF TECHNOLOGY
DELOITTE
DESERT TECHNOLOGIES
DESIGN & DEVELOPMENT
DKS
DNP
DOWA ELECTRONICS
DR UTILIGHT CORP
DSM ADVANCED SOLAR
DTEK RENEWABLES
DUTCH NEW ENERGY RESEARCH
ECO SYSTEMS INTERNATIONAL
EDF RENEWABLES
EDP RENEWABLES
EGP
EIT INNOENERGY
ENDEAS
ENEA
ENEL
ENEL GLOBAL THERMAL GENERATION SRL & GREEN POWER SPA
ENEL GREEN POWER
ENEL/3SUN
ENGIE SOLAR
ENI SPA
EPFL
EPFL
ES
ETERNALSUN SPIRE
EXYTE
FALCK RENEWABLES
FIRST SOLAR
FLR
FORSCHUNGSZENTRUM JÜLICH
FORTUM
FRAUNHOFER-INSTITUT FÜR SOLARE ENERGIESYSTEME ISE
FRV
FSEC
GAF ENERGY
GAS RECOVERY AND RECYCLE
GCIG RENEWABLES HOLDINGS
GEBR.SCHMID
GLOBEIQ AFRICA
GPG
GREATECH GROUP
GRENOBLE INP
GRIDSERVE
GTA
H.A.L.M. ELEKTRONIK
HANWHA Q CELLS
HELMHOLTZ-ZENTRUM BERLIN (HZB)
HEMLOCK SEMICONDUCTOR OPERATIONS
HENKEL
HERAEUS

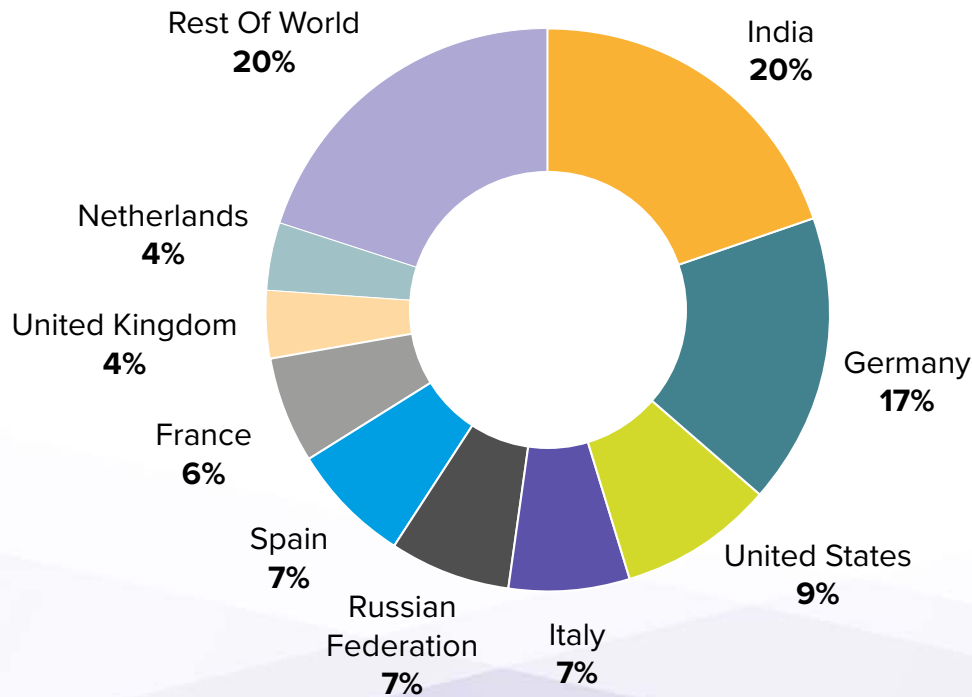
HERO FUTURE ENERGIES
HEVEL ENERGY GROUP
HILLHOUSE CAPITAL
IB VOGT
IBC SOLAR
ICB
IMEC
INEEL
INNOENERGY
INNOLANE
INSOLARE
INSTITUT FÜR SOLARENERGIEFORSCHUNG HAMELN
INTRIENERGY
ISC KONSTAZ
ISFH
IZEN INTERNATIONAL
J N RENEWABLE
JESA SA
JIANGSU LUSHAN NEW MATERIALS
JINNENG CLEAN ENERGY TECHNOLOGY (JINERGY)
JLBT & ENPOWER
JONAS & REDMANN
JUSUNG ENGINEERING
KALYON SOLAR TECHNOLOGIES PRODUCTION CORPORATION
KALYONPV RESEARCH AND DEVELOPMENT CENTER
KAUST
KEXIM BANK (UK)
KIER
KISMEC
KNESS PV
KPI GLOBAL INFRASTRUCTURE
KYOCERA
LIGHTYEAR
LUXOR SOLAR
MAINSTREAM RENEWABLE POWER
MASDAR
MAXEON SOLAR
MDPVL
MECO EQUIPMENT ENGINEERS
MERLIN SOLAR
MGEN
MISCHCO
MKS INSTRUMENTS
MOJO SOLAR
MONDRAGON ASSEMBLY
MONOCRYSTAL
MONTSERRAT UTILITIES
MRP
MSOVL
MSPVL
MUKAS CAPITAL
MUNDRASOLAR PHOTOVOLTAIC
MUNICH RE
NAMICS EUROPE

NATIONAL EXCELLENCE FOR CONSTRUCTION & ENERGY
NATIONAL RENEWABLE ENERGY LABORATORY
NATIONAL SUPERIOR SCHOOL OF POLITICAL SCIENCE (ALGERIA)
NEXT2SUN
NEXWAFE
NICE SOLAR
NLITEN
NORCONSULT AS
NORSUN
NUS/SERIS
ORB ENERGY
OSTEC
OSTEC-INTEGRA
OXFORD PHOTOVOLTAICS
PANASONIC CORPORATION
PANASONIC LIFE SOLUTIONS INDIA
PI BERLIN
PI PHOTOVOLTAIK-INSTITUTE BERLIN
PIERRE DAMMOUS & PARTNERS
PIK-SERVICE
PLANSEE SE
POWERVIS
PROTECH
PT. NUSANTARA SOLAR ENERGY
PV EVOLUTION LABS (PVEL)
PV TECH
PVLAB
Q CELLS
QSTEC
REC GROUP
RED DEER COLLEGE
RELIANCE
RELIANCE JIO
RIL
RISEN ENERGY
RODES MANAGEMENT CONSULTANCY
RYSTAD ENERGY
S.E.A.
SB ENERGY
SCHMID
SERIS (SOLAR ENERGY RESEARCH INSTITUTE OF SINGAPORE)
SHARP ENERGY SOLUTIONS CORPORATION
SHELL
SIEMENS GAMESA
SILCONTEL
SIMM SOLUÇÕES
SINGULUS TECHNOLOGIES
SMART ENERGY
SOLAR FORENSIC SERVICES
SOLAR LIGHTING TRADE & CONSULTING
SOLAR MEDIA
SOLAR PROFIT
SOLAR SALES
SOLARPRO

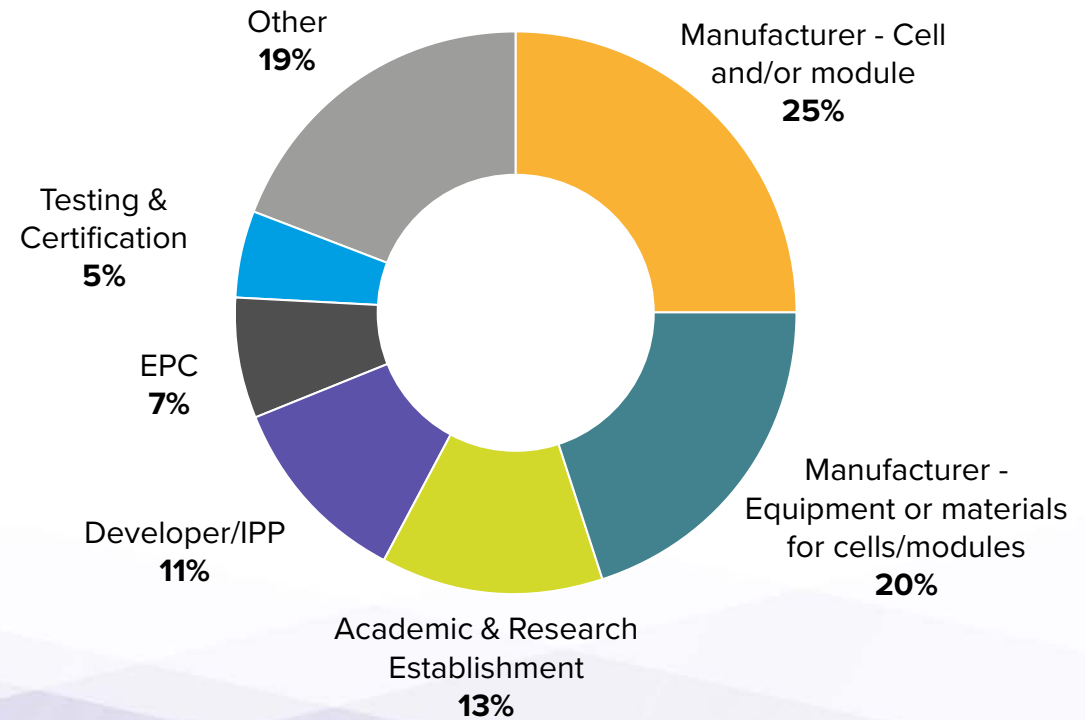
SOLARPROFIT
SOLITEK
SOLKEYS
SOLVIS D.O.O.
SOLYCO TECHNOLOGY
SONATRACH
SONNEDIX
SOUTH ENERGY
SP ENERGY PARTNERS
STAUBLI FAVERGES
STERLING & WILSON SOLAR
STICKY SOLAR POWER
STRATEGIC ENERGY
STS
SUMIRA TECHNO-CONSULTING
SUMISHO METALEX CORPORATION
SUN CHEMICAL
SUNDRIVE SOLAR
SUNRUN
SUN-YAT SEN UNIVERSITY
SUSS MICROTEC NETHERLANDS
SUZHOU SILVER MATERIALS
SWISS FEDERAL INSTITUTE OF TECHNOLOGY LAUSANNE
SYMA-GROUP
TEAMTECHNIK MASCHINEN UND ANLAGEN
THINK ENERGY SOLUTIONS
TIGER SOLAR
TNO
TOTAL REN
TOTAL SOLAR
TOYO ALUMINIUM
TOYO CHEMICAL INDUSTRIAL
TTVISION
TÜV RHEINLAND
UBIQUITY SOLAR
UFLA
UL
ULBRICH OF AUSTRIA
UNIVERSITI KEBANGSAAN MALAYSIA
UNIVERSITY OF DELAWARE
UNIVERSITY OF NEW SOUTH WALES
UNSW
URON
UTOPIA GREENERGY TECH
VANDESANDE CREATIVE SOLUTIONS
VAYLAX GMBH
VL RES APPLICATIONS & CONSULTANCY
VOLTALIA
VOLTINOV
VSR SOLAR
WAAREE ENERGIES
WACKER CHEMIE
WPD SOLAR
YONGYANG
ZS-HANDLING

Attendee Overview

Attendees by Country



Attendees by Company Activity



Contact us to find out more about future events



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