



**Smart Solar Power in Europe –
Intersolar, Munich, 16 May 2019**

**Workshop Summary
“Advanced industrial PV
technologies / Emerging PV
technologies”**

Advanced industrial PV technologies / Emerging PV technologies

Moderator: Pierre-Jean Rigole

Approach

The workshop was structured in the following way:

- Presentation of the workshop aim and objectives.
- Introduction round where participants briefly shared their experience and expertise and ideas.
- First exercise: Identify topics/areas that should be included in the next call.
- Discuss and comment the outcome of first exercise in group. Key questions: What potential do you see for your organization and your expertise area?
- Write down on the whiteboards project ideas.
- Break
- Ideas' owners presented further their ideas to the whole group and their need from potential partners as well as request for support from the funding agencies.
- The audience was offered the possibility to vote for the ideas they could be interested in.
- Further discussion on project ideas.
- Close session.

Results

The following output from the workshop is summarise below.

Possible topics for a joint call with SES

- Mass customisation – Development of solar technologies that can be mass-customized to the application and optimised for the decentralized system.
- Affordable flexible solar cell for car and aviation
- “Free form” solar cell
- Education and training about emerging technologies
- Industrialisation of rooftop installation.
- Regulation for high efficiency.

Possible topics for call independent of SES

- Reliability
- Characterisation of ageing of PV panels
- Recyclability
- Emerging technologies
- Green solar cell – Sustainable solar cell
- Green perovskites
- CZTS
- Bio-polymers (and thermoplastics) for encapsulation
- Conductive films based on abundant materials (no Ag or Au)
- New applications, i.e. flexible, semi-transparent / transparent, R2R, etc...
- Advanced silicon solar cell

- Shingled heterojunction
- Bifacial
- Digitalized production / industry 4.0
- Tandem with perovskite
- Low cost and high efficiency solar cell, e.g. metal oxide heterojunctions.
- Light-weighted solar cell
- Agri-PV (combined use of land for electricity production and agriculture), floating-PV, infra-PV



Photo: Workshop session on Advanced industrial PV technologies / Emerging PV technologies



Photo: Results of the workshops presented in the final plenary session Conclusions of the Day with several promising findings for future cooperation between research and industry as well as between the two networks of SOLAR-ERA.NET and ERA-Net SES