



**INTERNATIONAL**

## INVITED SESSION SUMMARY

**Title of Session:** Building integrated photovoltaic solutions towards zero energy buildings.

**Name, Title and Affiliation of Chair:**

George E. Georghiou, Prof., University of Cyprus

**Details of Session (including aim and scope):**

This session aims to provide to the participants of SEB-21 with building integrated photovoltaic (BIPV) solutions that consist of photovoltaic elements, which substitute conventional construction materials, in an effort to reach zero energy buildings.

The scope of this session includes work that is related to:

- Real-world case studies of BIPV applications.
- Electrical and thermal analysis of BIPV systems.
- Challenges associated to BIPV integration to the building envelope.
- Integration of the BIPV elements to the electricity network of the building.
- Smart load management in buildings equipped with BIPVs.
- Reliability testing for BIPV elements integrated in the building envelope.
- Novel designs of architecturally sound BIPV solutions.
- 3D planning tools and examples of new and renovation buildings.
- Economic analysis and market potential for BIPV.

The BIPV technology can provide various solutions for the transition towards zero energy buildings while satisfying both engineering and architectural challenges, especially in cases where the available space for building applied photovoltaic (BAPV) modules is limited. The session will provide opportunities for researchers, architects, designers, system and building developers, and other stakeholders to present and review theoretical and applied work in the design, development, optimisation, integration and operation of BIPV systems.

We thus, invite authors to submit original research and case studies on the latest developments and innovations in BIPV technologies.

**Main Contributing Researchers / Research Centres (tentative, if known at this stage):**

University of Cyprus - FOSS, Utrecht University, Solar Energy Application Centre (NL), SUPSI (CH), FHTW (AT), Główny Instytut Górnictwa (PL), ML System (PL)

**Website URL of Call for Papers (if any):**

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