



Supported by the  
European Commission's  
Seventh Framework  
Programme



## Workshop

### BUILDING-INTEGRATED, FIBRE-REINFORCED SOLAR TECHNOLOGY

<http://www.bfirst-fp7.eu/home>

Hotel Titania, Panepistimiou 52, Athens.

16 Nov 2016

Η εκδήλωση απευθύνεται σε μηχανικούς – αρχιτέκτονες και οι παρουσιάσεις είναι στην Αγγλική γλώσσα

Θα τηρηθεί σειρά προτεραιότητας στις δηλώσεις συμμετοχής λόγω περιορισμένων θέσεων

#### Presentations

- 9:00** Reception
- 9:20** Introduction & welcome
- 9:30** Building integrated photovoltaic panels (BIPV): potential and benefits, best practices) – *Eduardo Romain, Tecnalia*
- 10:30** BFIRST project: BIPV products (products portfolio, design guidelines and catalogues, manufacturing process) – Tjerk Reijenga, Bear – J. Zafon, Atersa - Acciona
- 11:30** Presentation of demo sites (Installation guidelines, energy savings installation parameters) – *Eduardo Romain, Tecnalia* – *Stephan Pierret, Optimal Computing* - *Anastasios Kyritsis, CRES*
- 12:30** Lunch / buffet sandwich
- 13:30** Departure to Pikermi for the demonstration site visit

#### CRES PV Lab & Demonstration site visit

- 14:15** PV Lab & demonstration site visit at Pikermi
- 15:30** Return to Athens

The organizers will provide transportation means to Pikermi and back to Athens for the registered participants

Contact Person : Anastasia Theodorakou

Tel : 210-6607416, email : [ntheod@cres.gr](mailto:ntheod@cres.gr)



## SUMMARY

Photovoltaics (PV) have experienced an exponential increase in the last 10 years. The case for **building-integrated photovoltaics (BIPV)** is, however, radically different from that of general PV industry. Despite the impressive figures for the photovoltaic market, current deployment for BIPV applications has still a large room for improvement.

New products must be developed in order to overcome technical and non-technical barriers for BIPV at a European scale. A higher degree of standardization is needed in order to facilitate the work of architects and engineers. A complete characterisation of the products, at laboratory, experimental building and real building scale and the development of extensive product catalogues with exhaustive product performance description are essential in order to encourage the incorporation of BIPV products into construction works. Finally, carefully planned dissemination strategies are important to contribute to a wider knowledge of the technology and its possibilities by all the parties involved in BIPV.

The aim of **BFIRST** project is the development and demonstration of a set of standardised, multifunctional photovoltaic building components based on a recently developed technology for solar cells encapsulation within glass **fibre-reinforced composite materials**.

By means of this new technology, cell encapsulation within **composite materials** takes place in a single step, yielding a self-supporting, monolithic and lightweight photovoltaic module. Curved and complex geometries can be obtained, opening a wide range of new BIPV products with enhanced building integration possibilities. Moreover, by using a composite material, in which the cells and their connections are completely embedded, the need to use additional materials as a base or covering is eliminated. Protective coating materials can also be added, either onto the mould during the manufacturing process, or afterwards, once the component has been released from the tool.

The resulting PV modules present advanced characteristics in terms of structural capacity, transparency, adaptability to non-planar geometries, protection, weight and reduction of stages in the manufacturing process, as well as issues concerning transport, manipulation, assembly and safety and security.

