

## **dyesol approach to DSSC: state of the art and future developments**

**Luca SORBELLO**

**Dyesol Italia, Roma, Italy**

During the last 10-15 years the worldwide research on DSC permitted to improve considerably the cell performance in terms of efficiency, power output, lifetime, etc hence leading this technology to commercialization. Different fields of application for DSC have been deeply analyzed like facade building integration, factories roof installation, consumables, indoor applications. In particular Building & factory roof integration are the two main applications on which DSC technology can play an important role, respectively realizing cells on glass and on metal substrates. But also market areas like automotive, sportswear and bags are possible fields of application of great interest for DSC. Dyesol within the DEPHOTEX project realized the first prototype of Textile DSC with a photon to electron conversion efficiency of about 2% under 1/3 Sun illumination on a 6 cm<sup>2</sup> cell using as a working electrode a substrate made of textile fabric. This innovation will allow the DSCs to be part of everyday objects made of textile fabrics like jackets, car dashboards or laptops bags. Dyesol, proud to be among the global leaders in Dye Solar Cell Technologies, is involved worldwide in plenty of different projects in partnership with important industrial groups like Pilkington, Tata, Timo, with the target of improving the DSSC technologies and commercialise them as soon as possible. Here we introduce Dyesol's research state of the art and the future developments with which the company candidates to keep its leader technology and market position for the forthcoming years.