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EXTENDED EDITION

Dye-Sensitized Solar Generation of Electricity and Fuels: the Role of Molecular Chemistry

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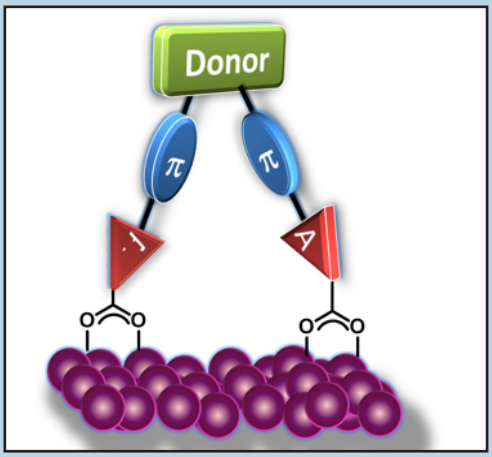
We present here our most recent research on the exploitation of molecular organic chemistry for photovoltaics and solar fuels. In particular, we show how a careful design of organic dyes is strategic in order to achieve peculiar properties of the final devices. Importantly, molecular engineering has allowed increased performances and enhanced stability. The presentation will be focussed on two main topics: a) the use of graphene-dye dyads and eco-friendly, low cost "drinkable" solvents in Dye-Sensitized Solar Cells; b) the use of engineered multibranched photosensitizers in photocatalytic and photoelectrochemical (PEC) production of hydrogen from water and sunlight.



Alessandro Abbotto is full-professor of Organic Chemistry and Organic Materials and director of the Solar Energy Research Center MIB-SOLAR at the University of Milano-Bicocca.
He is member of International Advisory Board of EurJOC.
He coordinates the interdivisional group of Chemistry of Renewable Energies (EnerCHEM) of the Italian Chemical Society.
His main research interests are in materials and devices for solar energy.

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ISOF 12 – Meeting Room (1st floor)
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