

Workshop 4

TITLE:

Chemistry meets light: applications and perspectives in the fields of energy, environment, health, nanotechnology, food and cultural heritage

CONVENERS

- Amilra Prasanna de Silva (Queen's University, Belfast, Northern Ireland)
- Alberto Credi (University of Bologna, Italy)
- Margherita Venturi (University of Bologna, Italy)

WORKSHOP ORGANIZING COMMITTEE:

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ORGANIZED BY:

- GIdF (Interdivisional Group of Photochemistry)
- GIF (Italian Group of Photochemistry), www.fotochimica.org
- EnerCHEM (Interdivisional Group of Chemistry for Renewable Energies)

SHORT DESCRIPTION:

The workshop aims at presenting and discussing, with an interdisciplinary approach, the contribution of Photochemistry to various applicative and societal fields.

In particular, it will deal with (a) conversion of solar energy in heat, electricity and fuels; (b) water remediation and air purification by means of photocatalysts; (c) use of photochemical processes to obtain chemical products in innovative and sustainable ways; (d) development of photoactive molecular species for medical diagnostics and therapy; (e) design and synthesis of photoactive nanomaterials, molecular devices and machines to be used in various fields, from information technology to medical diagnostics and therapy; (f) preparation of new and safer dyes, additives, and preservatives for food; (g) use

of photochemical techniques for the conservation and restoration of cultural heritage.

The workshop will also address the problem of ethically correct uses of Photochemistry for a safe and sustainable technological and societal development

CALL FOR ABSTRACT:

See general indications for the conference, under WS4, or Chemistry meets light.

SPEAKERS and PROGRAMME:

Plenary lecture: Amilra Prasanna de Silva (Queen's University of Belfast, Northern Ireland) "Fluorescent sensors and logic systems"

Keynote lecture 1: Francisco Raymo (University of Miami, USA) "Photoswitchable fluorophores for bioimaging applications"

Keynote lecture 2: Licheng Sun (Department of Chemistry, KTH Royal Institute of Technology, Stockholm, Sweden) "Water splitting for solar fuels — From natural to artificial photosynthesis"

Keynote lecture 3: Aldo Di Carlo (University of Tor Vergata, Rome, Italy) "Perovskitebased solar cells"

Keynote lecture 4: Timothy Noël (Eindhoven University of Technology, Netherlands) "Solar photochemistry coming of age? – The development of luminescent solar concentrator-based photomicroreactors"

Keynote lecture 5: Engin Akkaya (Dalian University of Technology, China) "Recent progress in chemistry of photodynamic therapy"

Keynote lecture 6: Stefano Protti (University of Pavia, Italy) "Photoinduced sustainable arylations"

Keynote lecture 7: Simona Ghiani (Bracco Imaging, Milan, Italy) "Dye-based imaging probes for contrast-enhanced imaging applications"

Keynote lecture 8: Serena Silvi (University of Bologna, Italy) "Molecular devices and machines: challenges and perspectives"

Keynote lecture 9: Aldo Romani (University of Perugia, Italy) "Is the light only harmful to artworks?"

PROGRAMME OF THE WORKSHOP:

The symposium will also include six oral communications and a poster session.