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CALL FOR PAPERS

ABSTRACT DEADLINE: NOVEMBER 1, 2005

REMINDER: *In fairness to all potential authors, late abstracts will not be accepted.*

MRS Symposium FF: Materials and Basic Research Needs for Solar Energy Conversion

The direct conversion of solar energy to electricity and fuels is attracting increasing attention as the importance of renewable resources as part of the world's energy mix becomes clear. This symposium will focus on the materials science needs for both the current generation of solar technologies as well as the future third generation of technologies, including the evolution of existing solar technologies such as Si, next-generation technologies such as quantum dot and organic-based devices, as well as bio-inspired or based approaches to solar energy conversion and fuel production.

Key subject areas will include:

- Inorganic photovoltaics
- Organic composite photovoltaics
- Photoelectrochemical energy conversion and fuel production
- Nanomaterials and nanostructures for solar photon conversion
- Third-generation ultrahigh-efficiency solar photon conversion
- Artificial photosynthetic materials (CO₂ reduction and H₂O splitting)
- Bio-inspired materials and self-organized materials for solar energy conversion
- Biological photosynthesis
- Photocatalysis for solar fuels
- Thermophotovoltaics and thermoelectric materials
- Materials for solar thermal conversion

A special session is intended that will focus on the reports from the April 2005 DOE/Office of Science Workshop on "Basic Research Needs for Effective Solar Energy Utilization."

Invited speakers include: **Harry Atwater** (California Inst. of Technology), **Allen J. Bard** (Univ. of Texas-Austin), **G. Brudvig** (Yale Univ.), **S. Campagna** (Univ. di Messina, Italy), **Alexander L. Efros** (Naval Research Lab), **Graham Fleming** (Univ. of California-Berkeley), **Stephen Forrest** (Princeton Univ.), **Richard Freisner** (Columbia Univ.), **Richard Friend** (Univ. of Cambridge, United Kingdom), **Michael Graetzel** (EPFL, Switzerland), **Brian Gregg** (National Renewable Energy Lab), **Martin Green** (Univ. of New South Wales, Australia), **Marilyn Gunner** (City College of New York), **Devens Gust** (Arizona State Univ.), **James Heath** (California Inst. of Technology), **Alan Heeger** (Univ. of California-Santa Barbara), **Tony Heinz** (Columbia Univ.), **Christiana Honsberg** (Univ. of Delaware), **Joseph Hupp** (Northwestern Univ.), **L. Ingram** (Univ. of Florida), **P. Ludden** (Univ. of California-Berkeley), **Thomas Mallouk** (Univ. of Pennsylvania), **Michael McGehee** (Stanford Univ.), **Thomas J. Meyer** (Univ. of North Carolina), **Dan Nocera** (Massachusetts Inst. of Technology), **Bruce Parkinson** (Colorado State Univ.), **Laurence Peter** (Univ. of Bath, United Kingdom), and **Michael Seibert** (National Renewable Energy Lab).

Symposium Organizers

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