The First International Conference on

Photocatalysis and Solar Energy Conversion: Development of Materials and Nanomaterials

Call for Papers: Deadline - Friday, March 30, 2012

(Website: www.redoxtech.com)

Daejeon Convention Center (DCC), Daejeon, Korea

May 29 - June 1, 2012

International Organizing Committee

Chairman: Professor Minjoong Yoon, Chungnam National University, Daejeon, Korea

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Lead Conference Organizer

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Plenary Speakers / Titles of their Lectures

Professor Akira Fujishima, Tokyo University of Science, Japan
- TiO_2 Photocatalysis: Present Situation and Future Approaches

Professor Michael Grätzel, EPFL, Switzerland
- Nanostructured Photosystems for Solar Generation of Electricity and Fuels

Professor Michael Hoffmann, California Institute of Technology, USA

- Solar Fuels Production & Practical Reactor Design Considerations

Professor Jae-Sung Lee, Pohang University of Science and Technology (POSTECH), Korea
- Photocatalytic and Photoelectrochemical Water Splitting on Nanostructured Photocatalysts

Professor Arthur Nozik, National Renewable Energy Laboratory, USA
- Recent Progress in Next Generation Approaches to Solar Photon Conversion to Electricity and Fuels based on Nanoscience and Nanomaterials

Invited Speakers / Titles of their Lecture

Professor Hironori Arakawa, Tokyo University of Science, Japan
- Fabrication of Highly Efficient Dye-Sensitized Solar Cells Toward 12% Efficiency

Professor Detlef Bahnemann, Leibniz Universität Hannover, Germany
- Two-Dimensional Ordered Arrays of Bi_2WO_6 as Promising Photoanodes for the Photoelectrochemical Water Splitting

Proffesor Wonbong Choi, Florida International University, USA
- Carbon Nanomaterials, Carbon Nanotubs and Graohene, for Energy Applications

Professor Won Yong Choi, Pohang University of Science and Technology (POSTECH), Korea
- Titania as a Base Material for Solar Photocatalytic Conversion

Professor Anders Hagfeldt, Uppsala University, Sweden
- Research and Development of Dye-sensitized Solar Cells at the Center for Molecular Devices

Professor Seigo Ito, University of Hyogo, Japan
- Printed Full Inorganic Solar Cells

Professor Hwan-Kyu Kim, Korea University, Korea
- New Strategy on Materials Paradigm for Highly Efficient Dye-Sensitized Solar Cells

Professor Jaejung Ko, Korea University, Korea
- Design and Syntheses of Highly Efficient Sensitizers for DSSCs and OPV

Wan In Lee, Department of Chemistry, Inha University, Korea
- Control of Interfacial Layer for Efficient Dye-sensitized Solar Cells

Professor Yuh-Lang Lee, National Cheng Kung University, Taiwan
- Highly Efficient Gel- and Solid-State Dye-Sensitized Solar Cells

Professor Gang Liu
- Designing Efficient Photocatalysts by Doping Faceting and Heterostructuring

Professor Tetsuro Majima, Osaka University, Japan
- Single-Molecule Imaging of TiO_2 Photocatalytic Reaction

Professor Shogo Mori, Shinshu University, Japan
- Factors Controlling Charge Recombination Kinetics in Dye-Sensitized Solar Cells

Professor Won-Chun Oh, Hanseo University, Korea
- Carbon Based Photocatalysts

Professor Bunsho Ohtani, Hokkaido University, Japan
- Revisiting Principle of Photocatalytic Reactions and Design of Highly Active Photocatalyst Materials

Professor Yaron Paz, Technion, Israel
- Photocatalysis vs. Photo-Induced Water Splitting: Concepts and Miss-Concepts

Professor A. Subrahmanyam, Indian Institute of Technology Medras, India
- A Critical Analysis of the Semiconductor / Liquid Interface in Photocatalysis Experiments

Professor Darren Delai Sun, Nanyang Technological University, Singapore
- Designed and Fabrication of Nature Mimicking 'Forest-Like' Photocatalysts for Energy Harvesting

Professor Peng Wang, Chinese Academy of Science, China
- Improve the Performance of Dye Solar Cells via Materials Design

Professor Kyung Byung Yoon, Sogang University, Korea
- Novel Catalysts for Water Oxidation and CO_2 Reduction from KCAP

Professor Minjoong Yoon, Minjoong Yoon, Chungnam National University, Daejeon, Korea
- Heteropolyoxometalate-TiO_2 Nanocomposites for Solar Cell and Solar Fuels

Professor Qing Wang, National University of Singapore
- Semiconductor-sensitized Mesoscopic Solar Cells: Charge Transport and Materials

Professor Hiromi Yamashita, Osaka University, Japan
- Single-site Photocatalysts Designed Using Nanoporous Materials

Professor Shozo Yanagida, Osaka University/The University of Tokyo, Japan
- Molecular-Orbital Evaluation of Key Materials in Dye-sensitized Solar Cells

Professor Arie Zaban, Bar-Ilan University, Israel
- Quantum Dots Based Photoelectrochemical Solar Cells

The Scope of the Conference

There has been remarkable progress in the fields of photocatalysis and solar energy conversion over the past four decades since the first publication in *Nature* by Honda and Fujishima (1972). The research, development, demonstration and commercialization in these fields have attracted global interest from academia, government research laboratories and

from industry. In recent years, engineering firms have been paying considerable attention to these developments. Thus, a conference covers the recent developments in photocatalysis and solar energy conversion is urgently needed. Thus, we are organizing the First International Conference on Photocatalysis and Solar Energy Conversion: Development of Materials and Nanomaterials.

This international conference is designed to bring together interested parties from universities, research institutions and industry to exchange information, views, experience and perspectives. This conference presents the most current findings generated at the laboratories of universities and research institutions, as well as in the field by the practitioners. Abstracts are being solicited in the following areas:

- **Semiconductor Photochemistry, Photoelectrochemistry and Photocatalysis, in particular for Environmental Applications (**Water Treatment, Air Treatment, Self-cleaning, Disinfection, Anti-corrosion Effects, etc..)
- **Development of Materials and Nanomaterials** (Photocatalyst Preparation, Doping and Co-doping, Spectral Range Broadening for Solar Application, Photocatalyst-sorbent combination, novel supports for photocatalysts, etc.).
- **Molecular and Nanostructured Solar Cells**
- **Dye-Sensitized Solar Cells; Fuel Cells**
- **Solar Fuel Production (**e.g. H_2, CH_4, etc.)
- **Dynamics of Photo-Induced Energy and/or Electron Transfer**
- **Fundamental investigations into Semiconductors and Nanostructures (**Mechanistic Studies, Modeling, Microchemical Systems,, etc.)
- **Biomedical Applications of Semiconductors** (Sunscreens, Photodynamic Therapy, Risk Assessment of Nanomaterials, etc.)
- **Technological, Environmental and Commercial Issues (**Standardization, Technology Transfer, Life Cycle Assessment, Intellectual Property, Management and Economics)
- **Process Development** (Integration of Photocatalysis with other Technologies, Photocatalytic Lithography)
- **Advanced Oxidation Technologies for Water, Air and Soil Treatment**

Call for Abstracts

Scientists, engineers, and business professionals who are interested in this conference are invited to submit abstracts of up to 500 words in English describing their work. All abstracts are due by **Friday, March 30, 2012.** In addition to the plenary speakers (40 minutes each) and the invited speakers (25 minutes each), about 25-30 additional abstracts will be chosen

for short talks (15 minutes each) and the rest of abstracts will be presented in the poster session. Each poster will have 1.2 m x 1.2 m of display space.

Guidelines to Prepare Abstracts

Please follow the following guidelines in preparing your abstract(s):

- Type single space Using, if possible, Times New Roman 12-point font (preferred);
- Keep all material within a one-inch margin on all sides;
- The title should be typed in boldface (Title Case, 14- points) centered at the top of the page;
- Leave a double space between the title and the names of the author(s);
- The names of the authors should be typed in boldface in single space, followed the addresses of the authors in single space; Underline the name of the presenting author;
- Leave a double space between the end of the addresses and the opening paragraphs;
- Abstracts should be sent, in Microsoft Word format, to Dr. Hussain Al-Ekabi (E-mail: hussain@alekabi.com).

Call for Exhibits

Companies conducting business related to the themes of this conference are invited to exhibit their products and/or services. Exhibits will be displayed throughout the conferences in a central area near the registration desks, coffee breaks, poster sessions and lecture rooms. The cost of an 8-ft x 10-ft exhibiting space is **$1000US** if payment is received on or before **Friday, March 30, 2012**, and **$1250US** if payment is received after that date. This includes two free registrations to attend the technical session of the conference. Please, reserve early, as space is limited, and will be served on a first come first serve basis.

Registration

The deadline for the early registration is **Friday, March 30, 2012**. The on-site registration starts on **Monday, afternoon, May 28 at 2:00-8:00pm** and will resume on **Tuesday, May 29 at 7:30 a.m.**

All registration fees are set in US dollars. The registration fees can be paid either by credit cards (Visa, Master Card or American Express) or by “Encoded Checks” in US funds drawn on a US bank account made payable to “Redox Technologies, Inc.” Payment made by Visa will be converted, at our end, into their equivalents in US Dollars Using the exchange rate of Bank of Canada. Payments made by a Master Card or an American Express Card will be converted, at our end, into their equivalents in Canadian dollars Using also the exchange rate of Bank of Canada. As a result, depending on the fluctuation of the exchange rate and potential fees that your credit card financial institution may apply for the conversion, payments by credit card may turn to be slightly higher than the actual amount stated on the registration form. Participants are also allowed to pay by cash for on-site registration only.

Meeting Site and Accommodation

The conference will be held at the Daejeon Convention Center (DCC), May 29-31, 2012. A block of rooms with discounted rate of ₩100,000 per night (about $89US) has been reserved at the Yousung Hotel. The address of the hotel is:
480 Bongmyoung Dong, Yousung-Gu, Daejon, Korea
Tel: 82-42-820-0616,
Fax: 82-42-822-0041
Contact Person: Manager Mr. Woo Chul Park
E-mail address: chadps@hanmail.net.

Dates to Remember

Friday, March 30, 2012		Deadline for receiving abstracts
Friday, March 30, 2012		Deadline for receiving payments of early registration
Friday, April 20, 2012		Notification of the authors regarding their abstracts
Monday, May 28, 2012	2:00 – 8:00pm	On-site registration
Tuesday, May 29, 2012	8:30am – 5:30pm	Technical sessions
Wednesday, May 30, 2012	8:30am – 5:30pm	Technical sessions
Thursday, May 31, 2012	8:30am – 4:30pm	Technical Sessions
Friday, June 1, 2012	8:30am - 12:00noon	Technical Sessions
Friday, June 1, 2012	12:00 noon	Concluding remarks