

Final Announcement & Conference Program
**The 1st KIST Forum on Pioneers in New Concept Solar Cells &
The 2nd Korea-Japan Bilateral Workshop on Dye-sensitized and
Organic Solar Cell**

August 30-31, 2007

Convention Hall

Korea Institute of Science and Technology (KIST), Seoul, Korea

Invitation

You are cordially invited to participate in the The 1st KIST Forum on Pioneers in New Concept Solar Cells & The 2nd Korea-Japan Bilateral Workshop on Dye-sensitized and Organic Solar Cell which will be held on August 30-31, 2007, at Korea Institute of Science and Technology (KIST), Seoul, Korea. The workshop will be devoted to discuss New Science and Technology for New Concept Solar Cells, Dye-sensitized Solar Cells (DSSC) and Organic Photovoltaics (OPV). We look forward to welcoming and meeting you in Seoul on the special occasion.

Nam-Gyu Park (KIST)

Organizing committee

Nam-Gyu Park (Chair, KIST, Korea)

Junkyung Kim (KIST, Korea) Dong Young Kim (KIST, Korea) Kyungkon Kim (KIST, Korea) Jai Kyeong Kim (KIST, Korea) Il-Doo Kim (KIST, Korea) Byoung Koun Min (KIST, Korea) Sung-Yeon Jang (KIST, Korea) Unyong Jeong (Yonsei U., Korea) Wan In Lee (Inha U., Korea) Yu Ju Shin (Catholic U., Korea) Hironori Arakawa (Tokyo U. Science, Japan) Shuzi Hayase (Kyushu Inst. Tech., Japan) Shozo Yanagida (Osaka U., Japan) Susumu Yoshikawa (Kyoto U., Japan) Tsutomu Miyasaka (Toin Yokohama U. Japan)

Sponsors

Ministry of Science and Technology

Korean Photovoltaic Development Organization, Ministry of Commerce, Industry and Energy

The Polymer Society of Korea

Korea Organic Solar Cell Research Society

DONGJIN SEMICHEM Co. Ltd., SEAH TEC Corp., SONG AM Corp.

Scientific Program

Part I (August 30th (Thu)) One-day Forum

The 1st KIST Forum on Pioneers in New Concept Solar Cells

5 invited presentations will be scheduled. Prof. Michael Graetzel (EPFL, Switzerland), Dr. Arthur Frank (NREL, USA), Prof. Antonio Marti (Institute of Solar Energy University Politech, Spain), Dr. Matt Beard (NREL, USA) and David Carroll (WFU, USA) will give oral presentations and discuss about feasibility of new concept solar cells with theoretically super-high efficiency. This program is also managed in conjunction with a Future Pioneer Technology Project supported by MOST.

Part II (August 31st (Fri)) One-day workshop

The 2nd Korea-Japan Bilateral Workshop on Dye-sensitized and Organic Solar Cells

6 distinguished Japanese scientists and 10 distinguished Korean scientists will talk about recent progress on DSSC and OPV researches as well as the special plenary lecture by Prof. Michael Graetzel (EPFL, Switzerland) and Dr. Arthur Frank (NREL, USA). Prof. Shozo Yanagida (Osaka Univ.), Prof. Tsutomu Miyasaka (Toin Univ.), Prof. Susumu Yoshikawa (Kyoto Univ.), Dr. Takayuki Kitamura (Fujikura Ltd.), Dr. Kazuo Higuchi (Toyota Central Lab), Prof. Masahiro Hiramoto (Osaka Univ.) agreed to give oral presentations from Japanese side, and Prof. Kang-Jin Kim (Korea Univ.), Prof. Yong Soo Kang (Hanyang Univ.), Prof. Seung-Hwan Han (Hanyang Univ.), Dr. Nam-Gyu Park (KIST), Prof. Wan-In Lee (Inha Univ.), Dr. Dong-Young Kim (KIST), Dr. Kyungkon Kim (KIST), Prof. Jaejung Ko (Korea Univ.), Dr. Ji-Won Lee (Samsung SAIT), Prof. O Bong Yang (Cheonbuk Univ.) agreed to give oral presentations from Korean side.

About 40 Poster presentations on DSSC and OPV are expected from both Korea and Japan.

Call for papers for poster presentation

Contributed papers for poster presentation at PART II Korea-Japan Bilateral Workshop will be accepted. Abstracts will be two-page in A4 format. Deadline of abstract submission will be July 31st. For further information, please contact Dr. Nam-Gyu Park (e-mail: npark@kist.re.kr) Prof. H. Arakawa (e-mail: h.arakawa@ci.kagu.tus.ac.jp)

Guideline for the invited speakers

Speakers invited to the PART I: The 1st KIST Forum on Pioneers in New Concept Solar Cells are encouraged to submit the presentation materials to Dr. Byoung Koun Min (bkmin@kist.r.ekr) .

Speakers invited to the PART II: The 2nd Korea-Japan Bilateral Workshop on DSSC and OPV are recommended to submit two-page abstract in A4 format. For further information, please contact Dr. Nam-Gyu Park (e-mail: npark@kist.re.kr) or Dr. Kyungkon Kim (e-mail: kimkk@kist.re.kr)

Registration

Please contact Dr. Nam-Gyu Park (e-mail: npark@kist.re.kr) by July 31st. Registration fee including banquet is KRW 150,000.

Accommodation

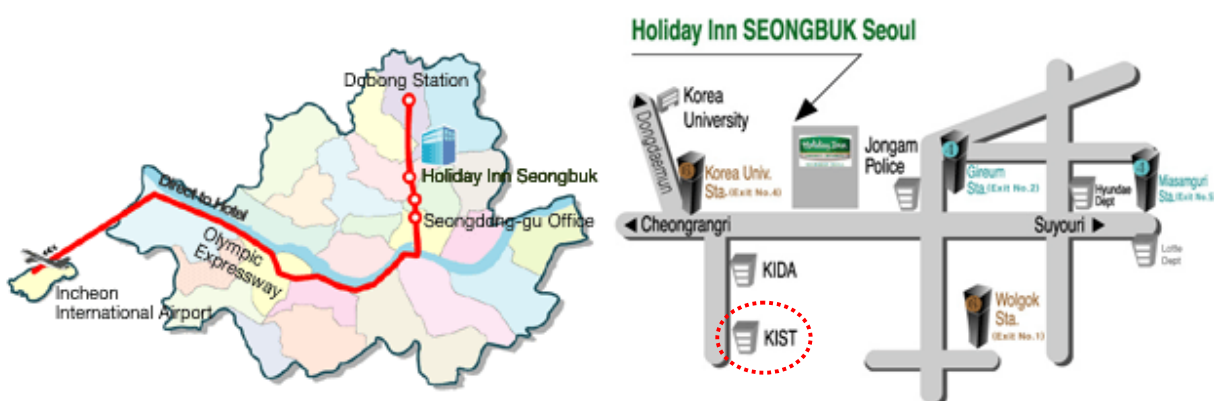
Organizing committee will take care of hotel reservation. Please contact Dr. Nam-Gyu Park (e-mail: npark@kist.re.kr). Earlier contact than before August 6th is preferred

Venue

The workshop will be held Convention Hall, International Cooperation Building in KIST, which is located at the north-east of Seoul, Korea. (<http://www.kist.re.kr>).

How to get to Holiday Inn Seongbuk and KIST

You can take an airport limousine bus from the Incheon International Airport, which is one of the fastest and most convenient ways to the hotel (please see the website http://www.holiday.co.kr/eng/about_location.htm). Hotel provides a shuttle bus between KIST and Hotel



PROGRAM

August 30 (Thu) at Conventional Hall, KIST

The 1st KIST Forum on Pioneers in New Concept Solar Cells

9:00 - : Registration

10:00-12:00: Open-Hearing for Future Solar Cell Technologies in Korea (Chair: Dr. Nam-Gyu park)

10:00 Prof. Wan-In Lee (Inha Univ., Korea)

▶ Design of novel multi-junction solar cells with nano materials and structures

10:30 Prof. Sung Hwan Han (Hanyang Univ., Korea)

▶ Frequency modulation in Organic Solar Cells

11:00 Prof. Donghwan Kim (Korea Univ., Korea & Head of KPVDO)

▶ Multiple exciton generation in nanostructures for third generation solar cell applications

11:30 Dr. Sang Soo Lee (KIST, Korea)

▶ Biomimetic Solar Cells

12:00-13:40: Lunch

13:40 Opening Address1: Dr. Dongwha Kum (President of KIST)

13:50 Opening Address2: Sang-Mok Lee (Direct of Basic Research Bureau, MOST)

Chair: Prof. Sung Hwan Han

14:00 Prof. Michael Gratzel (EPFL, Switzerland)

▶ New concepts based on nanostructures solar cells

14:40 Dr. Arthur Frank (NREL, USA)

▶ Transitioning from 2nd to 3rd generation solar cells: opportunities in sensitized solar cell R&D

15:20-15:40: Break

Chair: Prof. Donghwan Kim

15:40 Prof. Antonio Marti (ISEUP, Spain)

▶ Intermediate band solar cells for a next generation of photovoltaics

16:20 Dr. Matt Beard (NREL, USA)

▶ **Multiple exciton generation in colloidal semiconductor nanocrystals and nanocrystal arrays:**

Towards third generation solar photon conversion

17:00 Prof. David Carroll (WFU, USA)

▶ Organic Solar Cell for High Efficiency

18:00 Reception 1 at OurHome Restaurant, second floor of Convention Hall:

- Welcoming address by Dr. K.T. Hong, Director of Materials Science and Technology Division, KIST

August 31st (Fri) at Convention Hall, KIST
The 2nd Korea-Japan Bilateral Workshop on Dye-sensitized and Organic Solar cells

8:30- : Registration

9:00 Opening address (Chair: Nam-Gyu Park)

1. Prof. Kang-Jin Kim (Korea Univ.)
2. Prof. Shozo Yanagida (Osaka Univ.)

Session 1. Chair: Nam-Gyu Park

9:20 Plenary Lecture1 Prof. Michael Gratzel (EPFL, Switzerland)

▶ Mesoscopic Solar Cells for the 21th Century

9:50 Plenary Lecture2 Dr. Arthur J. Frank (NREL, USA)

▶ Moving from Disorder to Order: Architectural Effects on Transport, Recombination, and Light Harvesting in Dye-Sensitized TiO₂ Nanotube Arrays

10:20 Invited Lecture1 K1 (Prof. Kang-Jin Kim, Korea Univ)

▶ Low-energy oxygen plasma treatment of TiO₂ film for enhanced performance of dye-sensitized solar cells

10:40 10 min. Break

Session 2. Chair: Dr. D. Y. Kim

10:50 Invited Lecture2 J1 Prof. Shozo Yanagida (Osaka Univ.)

▶ Iodine-free Dye-sensitized TiO₂ Solar Cells

11:10 Invited Lecture3 K2 (Prof. Yong Soo Kang, Hanyang Univ)

▶ Charge transfer resistance at the counter electrode side in the solid state DSSCs

11:30 Invited Lecture4 J2 Prof. Tsutomu. Miyasaka (Toin Univ.)

▶ Module fabrication and carbon-based solidification of plastic DSC

11:50 Invited Lecture5 K3 (Prof. Sung-Hwan Han, Hanyang Univ)

▶ Enhanced charge-collection efficiency of hybrid solar cells in the presence of single-walled carbon nanotubes

12:10 Lunch time and Poster Session at 1st Floor of Convention Hall

Session 3. Chair: Prof. T. Miyasaka/ Prof. W. I. Lee

14:00 Invited Lecture6 J3 Prof. Susumu Yoshikawa (Kyoto Univ.)

▶ Improvements of Polymer Organic Thin Film Solar Cell

14:20 Invited Lecture7 K4 (Dr. Kyungkon Kim, KIST)

▶ Gold nanoparticle-polymer hybrid solar cell

- 14:40 Invited Lecture8 J5 Prof. Masahiro Hiramoto (Osaka Univ.)**
▶ Improvements of Low Molecular Organic Thin Film Solar Cell
- 15:00 Invited Lecture9 K5 (Dr. Nam-Gyu Park, KIST)**
▶ Control of light scattering efficiency in dye-sensitized solar cell
- 15:20 Invited Lecture10 J5 Dr. Takayuki Kitamura (Fujikura Ltd)**
▶ Thermal durability of dye-sensitized solar cell with current collecting grid
- 15:40 Invited Lecture11 K6 (Dr. Dong Young Kim, KIST)**
▶ Highly efficient dye-sensitized solar cells based on networked Nanorod Electrodes

16:00 10 min. Break

Session 4. Chair: Dr. K. Kim/ Prof. M. Hiramoto

- 16:20 Invited Lecture12 K7 (Prof. W.-I. Lee, Inha Univ)**
▶ Application of long-range ordered mesoporous TiO₂ films to DSSC
- 16:40 Invited Lecture13 J6 Dr. Kazuo Higuchi (Toyota Central Lab)**
▶ Development of promising types of DSC modules for outdoor use
- 17:00 Invited Lecture14 K8 (Dr. Ji-Won Lee, Samsung SAIT)**
▶ Dye-Sensitized Solar Cells Employing Quasi-Solid Gel Electrolytes: Optimization of cell performances
- 17:20 Invited Lecture15 K9 (Prof. J. Ko, Korea Univ)**
▶ Molecular Engineering of Organic Sensitizers for Solar Cell Applications
- 17:40 Invited Lecture 16 K10 (Prof. O Bong Yang, Chunbook Nat'l Univ.)**
▶ Preparation of PEGME/TiO₂ composite electrolyte for solid-state dye-sensitized solar cell

18:00 Banquet at OurHome Restaurant, second floor of Convention Hall

20:00 Closing address by Dr. H. W. Lee, Head of Center for Energy Material, KIST, and Prof. Shozo Yanagida, Osaka Univ. along with an announcement for the 3rd workshop in Japan