Symposium 19: Advances in Photocatalytic Materials for Energy and Environmental Applications

Monday, June 3, 2013

Photocatalytic Materials for Energy and Environment I

1:20 PM-6:00 PM
Room: Pacifica/Tide
Session Chair(s): To Be Announced

1:20 PM
(PACRIM10-S19-001-2013) Improving Hematite-Based Photoelectrochemical Water Splitting by Forming Homo- and Hetero-junctions (Invited Speaker)
Matthew T Mayer, Chun Du, Yongjing Lin, Dunwei Wang*, Boston College, USA

1:50 PM
Hani Albetran, It-Meng (Jim) Low*, Curtin University, Australia

2:10 PM
(PACRIM10-S19-003-2013) Photocatalytic activity of TiO2 and SrTiO3 nanoparticles precisely controlled in size and shape
Atsushi Muramatsu*, Takeshi Kimijima, Masafumi Nakaya, Kiyoshi Kanie, Tohoku University, Japan

2:30 PM
(PACRIM10-S19-004-2013) Engineering the band structure of anatase TiO2 microspheres with a gradient doping for photocatalytic solar energy conversion (Invited Speaker)
Gang Liu*, Institute of Metal Research, Chinese Academy of Sciences, China

3:00 PM
Break

3:20 PM
(PACRIM10-S19-005-2013) Ultra-thin films and coatings for applications in sustainable energy conversion and storage (Invited Speaker)
Gunnar Westin*, Uppsala University, Sweden

3:50 PM
(PACRIM10-S19-006-2013) Solar hydrogen using co-catalyst doped niobia nanosheets and nanotubes
Ken-ichi Katsumata*, Keisuke Kojima, Nobuhiro Matsushita, Kiyoshi Okada, Tokyo Institute of Technology, Japan

4:10 PM
(PACRIM10-S19-007-2013) Synthesis of Nitrogen Doped Nanocrystalline TiO2 Powders and Their Applications on Indoor Air Purification
Wenbin Cao*, University of Science and Technology Beijing, China; Yi Lu, The 306th Hospital of PLA, China

4:30 PM
(PACRIM10-S19-008-2013) Control of Fluid Friction on the Surface Coated with TiO2 Photocatalyst under UV Illumination (Invited Speaker)
Akira Nakajima*, Tokyo Institute of Technology, Japan; Munetoshi Sakai, Kanagawa Academy of Science and Technology, Japan; Toshihiro Isobe, Yasushi Morii, Daito Kobayashi, Sachiko Matsushita, Tokyo Institute of Technology, Japan
Tuesday, June 4, 2013

Photocatalytic Materials for Energy and Environment II

8:30 AM-11:50 AM
Room: Pacifica/Tide
Session Chair(s): To Be Announced

8:30 AM
(PACRIM10-S19-010-2013) A porous BiVO4 photoanode for solar hydrogen production from natural seawater (Invited Speaker)
Wenjun Luo, Congping Wu, Ruiqiong Wang, Zhigang Zou*, Ecomaterials and Renewable Energy Research Center, China

9:00 AM
Giacomo Giorgi, Koichi Yamashita*, The University of Tokyo, Japan

9:30 AM
(PACRIM10-S19-012-2013) Creating active sites in mesostructure of MCM-41 for efficient photocatalytic hydrogen generation under visible light
Shaohua Shen*, Jie Chen, Zheng Liu, Liejin Guo, Xi'an Jiaotong University, China

9:50 AM
(PACRIM10-S19-013-2013) Comparative study on photocatalytic decomposition activity and photoinduced hydrophilicity of brookite-

Photocatalytic Materials for Energy and Environment III

1:20 PM-6:00 PM
Room: Pacifica/Tide
Session Chair(s): To Be Announced

1:20 PM
(PACRIM10-S19-017-2013) Limited-layered MoS2 as Co-catalyst on Graphene Sheets for High Efficient Photocatalytic Hydrogen Evolution (Invited Speaker)
Gongxuan Lu*, Lanzhou Institute of Chemical Physics, China
1:50 PM
(PACRIM10-S19-018-2013) Self-Assembly Based Hybrid Carbon and Plasmonic Nanostructures for Energy and Environmental Applications (Invited Speaker)
Dong Ha Kim*, Ewha Womans University, Republic of Korea

2:20 PM
Yong Zhou*, Nanjing University, China

2:40 PM
(PACRIM10-S19-020-2013) Investigation of Water Treatment by Photocatalytic Ozonation over WO3 under Visible Light Irradiation
Takayuki Mano*, Syunsuke Nishimoto, Yoshikazu Kameshima, Michihiro Miyake, Okayama University, Japan

3:00 PM
Break

3:20 PM
(PACRIM10-S19-021-2013) Semiconductor quantum dot for solar energy conversion devices (Invited Speaker)
Yasuhiro Tachibana*, RMIT University, Australia

3:50 PM
(PACRIM10-S19-022-2013) Enhanced visible light photocatalytic activity of flower-like SnIn4S8 microspheres loaded with Ag nanoparticles (Invited Speaker)
Xinyong Li*, Dalian University of Technology, China

4:20 PM
(PACRIM10-S19-023-2013) Designed Photoelectrode and Charge Transport in Dye Sensitized Solar Cells based on submicrospheres
Linhua Hu*, Jiang Sheng, Songyuan Dai, Institute of Plasma Physics, Chinese Academy of Sciences, China

4:40 PM
(PACRIM10-S19-024-2013) Dye-sensitized Solar Cells Based on Hierarchically Structured Titania Anodes
Jianxi Yao*, State Key Laboratory of Alternate Electrical Power System with Renewable Energy Sources, China; Zhihua Tian, Renewable Energy School, North China Electric Power University, China

5:00 PM
(PACRIM10-S19-025-2013) Hydrothermal Synthesis and Photoluminescence of Tb3+and La3+Doped Sm2Zr2O7 Nanocrystals
HaiBo Jin*, Pengwan Chen, Being Institute of Technology, China

5:20 PM
(PACRIM10-S19-026-2013) Superhydrophobic-superhydrophilic pattern with high wettability contrast on porous TiO2 film
Shunsuke Nishimoto*, Michiaki Becchaku, Yoshikazu Kameshima, Michihiro Miyake, Okayama University, Japan

5:40 PM
(PACRIM10-S19-027-2013) Direct Detection of Nanoscale Variations in $V_{oc}$, $I_{sc}$, and Photoconductivity
Yasemin Kutes, James Bosse, Alexandra Merkouriou, University of Connecticut, USA; Jose Luis Cruz-Campa, Erik Spoerke, Sandia National Laboratories, USA; Brandon A Aguirre, David Zubia, University of Texas at El Paso, USA; Bryan D Huey*, University of Connecticut, USA