

The First Workshop of A3 Foresight Program
Junctioned Composite Photocatalytic Systems for Efficient Overall Water Splitting
January 9-12, 2011, Dalian, China

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| January 9 (Sunday) | |
| 12:30–15:00 | Registration/Reception (Lobby of the Bayshore Hotel) |
| 18:00-20:00 | Reception dinner (4 th floor of the Bayshore Hotel) |
| January 10 (Monday) | |
| Session 1 chairpersons: Can Li and Jun Kubota | |
| 08:30-09:00 | Opening ceremony |
| 09:00-09:30 | Taking photos & Coffee break |
| 09:30-10:00 | Can Li (Professor, China) Introduction of the A3 Foresight Program “Junctioned composite photocatalytic systems for efficient overall water splitting” |
| 10:00-10:30 | Jun Kubota (Associate Professor, Japan) Infrared study on photocatalysis for water splitting |
| 10:30-11:00 | Kanak P.S. Parma (Research Professor, Korea) Artificial photosynthesis and energy production using selective semiconductors materials |
| 11:00-11:30 | Hongxian Han (Associate Professor, China) Synergistic effect of co-catalyst loading on photocatalytic water splitting |
| 11:30-12:00 | Tsutomu Minegishi (Assistant Professor, Japan) Chalcogenide thin film based photocathodes for water splitting |
| 12:00-14:00 | Lunch time |
| Session 2 chairpersons: Hongxian Han and Kanak P.S. Parma | |
| 14:00-14:20 | Suk Joon Hong (PhD student, Korea) Composite electrode of BiVO ₄ /WO ₃ for enhanced photoactivity of water oxidation |
| 14:20-14:40 | Lei Huang (Postdoc, China) Effects of surface modification of CdS quantum dots on photocatalytic H ₂ production activity |
| 14:40-15:00 | Jae Hong Kim (PhD student, Japan) Investigation of photoelectrochemical properties of copper gallium selenide thin film for water splitting: hydrogen generation under the visible light |
| 15:00-15:20 | Suk Joon Hong (PhD student, Korea) Composite electrode of BiVO ₄ /WO ₃ for enhanced photoactivity of water oxidation |
| 15:20-15:40 | Coffee break |
| Session 3 chairpersons: Lei Huang and Tsutomu Minegishi | |

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| 15:40-16:00 | Donge Wang (PhD student, China) Crystal facet dependence of water oxidation on BiVO ₄ sheets under visible light irradiation |
| 16:00-16:20 | Xuwang Lu (PhD student, Japan) Surface modification of p-type Si photoelectrodes with oxide materials for hydrogen evolution |
| 16:20-16:40 | Won Yong Kim (MS student, Korea) Combined steam and carbon dioxide reforming of methane as application for steel industry |
| 16:40-17:00 | Xiuli Wang (Assistant professor, China) Correlation between trap states and carrier dynamics of TiO ₂ in photocatalysis |
| 17:00-17:20 | Takahiro Ishihara (PhD student, Japan) Preparation of Rh:SrTiO ₃ /Nb:SrTiO ₃ photoelectrode for overall water splitting |
| 17:20-17:40 | Seung Hoon Han (PhD student, Korea) Bimetallic tungstencarbide for PEMFC anode catalyst |
| 17:40-18:00 | Naoyuki Nishimura (PhD student, Japan) Photoelectrochemical properties of porous LaTiO ₂ N electrodes under visible-light irradiation |
| 18:00-20:00 | Banquet (4th floor of the Bayshore Hotel) |
| January 11 (Tuesday) | |
| Session 4 chairpersons: Jingying Shi and Yosuke Moriya | |
| 08:30-09:00 | Tsuyoshi Takata (Lecturer, Japan) Effect of aliovalent doping on the enhancement of photocatalytic activity |
| 09:00-09:20 | Fuyu Wen (PhD student, China) Photocatalytic H ₂ production on hybrid catalyst system composed of inorganic semiconductor and biomimetic hydrogenase |
| 09:20-09:40 | Su Su Khine Ma (PhD student, Japan) Modification of TaON photocatalysts for H ₂ evolution in a two-step water splitting system |
| 9:40 – 10:00 | Xiang Wang (PhD student, China) UV Raman spectroscopic study of the TiO ₂ surface-phase junctions |
| 10:00-10:20 | Coffee Break |
| Session 5 chairpersons: Donge Wang and Suk Joon Hong | |
| 10:20-10:40 | Mengkui Tian (Visiting Scientist, Japan) Visible light driven tin oxide and its photoelectrochemical water splitting properties |
| 10:40-11:00 | Hwichan Jun (PhD student, Korea) Vertically oriented nanoporous iron oxide structure for photoelectrochemical hydrogen |

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| | production |
| 11:00-11:20 | Ryohji Ohnishi (PhD student, Japan) Non-Pt metal nitride electrocatalysts for cathode of PEFC |
| 11:20-11:40 | Wenhua Zhang (Professor, China) Solution-phase synthesis of single-crystalline SnSe nanowires |
| 11:40-12:00 | Duck Hyun Youn (PhD student, Korea) Transition metal nitrides for oxygen reduction reaction in fuel cells |
| 12:00-14:00 | Lunch time |
| Session 6 chairpersons: Fuyu Wen and Tsuyoshi Takata | |
| 14:00-14:20 | Yi Ma (PhD student, China) Enhancing hydrogen production activity and suppressing CO formation in photocatalytic biomass reforming on Pt/TiO ₂ through optimization of anatase-rutile phase structure |
| 14:20-14:40 | Yosuke Moriya (Postdoc, Japan) Synthesis of La ₂ Ti ₂ O ₇ and LaTiO ₂ N using alkali metal salts as flux |
| 14:40-15:00 | Ji Wook Jang (PhD student, Korea) New synthesis method for water soluble graphene |
| 15:00-15:20 | Coffee break |
| Session 7 chairpersons: Xiuli Wang and Mengkui Tian | |
| 15:20-15:40 | Jiao Zhao (PhD student, China) Synthesis of photoluminescent metal-organic coordination polymers with bithiophenedicarboxylic acid |
| 15:40-16:00 | Badro Im (PhD student, Korea) 1-D perovskite nanoarray film by hydrothermal synthesis |
| 16:00-16:20 | Jae Young Kim (PhD student, Korea) Iron oxide electrode modified with multi wall carbon nanotube for photoelectrochemical water oxidation |
| 16:20-16:40 | Jingying Shi (Associate Professor, China) Sulfide co-catalysts for photocatalytic hydrogen production |
| 18:00-19:00 | Dinner |
| January 12 (Wednesday) | |
| 9:00 – 11:00 | Delegates discussion for the future cooperation of the A3 Foresight Program |
| End of the program | |