The 4th Seminar of A3 Foresight Program

——Junctioned Composite Photocatalytic Systems for Efficient Overall Water Splitting

Date: May 29-30, 2013

Venue: Biotechnology Building, DICP, Dalian, China

May 28 (Tuesday)	**Registration, reception and welcome banquet**
May 29 (Wednesday)	
8:30-9:00	**Opening ceremony- Speech delivered by Prof. Can Li, Dr. Yinglan Zhang**
9:00-9:40	**Keynote talk - Prof. Kazunari Domen** *Water splitting on Ta_3N_5 based materials*
9:40-10:10	***Coffee break & Taking photos***
Session 1	**Chairs: Prof. Hongxian Han and Dr. Ji Wook Jang**
10:10-10:35	**K1- Jae Young Kim** *Hematite Photoanode Surface-modifed with Phosphate Ions for Solar Water Splitting*
10:35-11:00	**C1- Guiji Liu** *Highly stable Ta_3N_5 photoanode system for photoelectrochemical water splitting*
11:00-11:25	**J1- Justin Clune** *Surface Modified $BaTaO_2N$ Electrodes Prepared by Particle Transfer Method for Stable Water Oxidation*
11:25-11:50	**K2-Ju Hun Kim** *Assessment of PEC performance for modified metal oxide photocatalyst*
11:50-13:30	***Lunch & Noon break***
Session 2	**Chairs: Fengqiang Xiong and Tomohiro Asai**
13:30-13:55	**C2-Rengui Li** *Spatial separation of photogenegrated electrons and holes among {110} and {010} crystal facets of $BiVO_4$*
13:55-14:20	**J2-Qian Wang** *Photocatalytic Hydrogen Evolution by $SrTiO_3$ codoped with Rh and La under Visible Light Irradiation*
14:20-14:45	**K3-Jae Yul Kim** *Photocatalytic selective oxidation of terminal methyl group of dodecane with molecular oxygen over Ti atom dispersed mesoporous TiO_2-SiO_2 mixed oxides*
14:45-15:10	**C3-Yushuai Jia** *A Novel Oxysulfide Semiconductor Photocatalyst*
15:10-15:40	**Coffee break & POSTER Session**

Session 3	**Chairs: Jingfeng Han** and **Dr. Duck Hyun Youn**
15:40-16:05	**J3-Tomohiro Asai** *Study on Preparation of $(Zn_xGa_{1-x})(O_xN_{1-x})$ Photocatalysts with Longer Absorption Edges for Overall Water Splitting*
16:05-16:30	**K4-Won Yong Kim** *Carbon Dioxide Reforming of Methane over Nickel Supported on Alumina Catalyst*
16:30-16:55	**C4-Chunmei Ding** *Photoelectrochemical Overall Water Splitting Using Cocatalyst/$BiVO_4$ Photoanode with Minimized Bias*
16:55-17:20	**J4- Hiroki Nagase** *Physical properties and photocatalytic activity of $(Ga_{1-x}Zn_x)(N_{1-x}O_x)$ synthesized using a rotary kiln type furnace*
17:20-20:00	**Dinner**
May 30 (Thursday)	
Session 4	**Chairs: Prof. Fuxiang Zhang** and **Prof. Jun Kubota**
8:30-9:10	**Keynote talk - Prof. Jae Sung Lee** *Photoelectrochemical Water Splitting over Bilayer Junction Photoelectrodes*
9:10-9:35	**C5- Fengqiang Xiong** *Enhanced photocatalytic water oxidation on ZnO*
9:35-10:00	**J5- Li Zhang** *Photoelectrochemical properties of $Ag_xCu_{1-x}GaSe_2$ photocathodes for Solar Hydrogen Production*
10:00-10:30	**Coffee break & POSTER Session**
Session 5	**Chairs: Dr. Xiang Wang** and **Yeilin Ham**
10:30-10:55	**K5- Suenghoon Han** *Carbon Supported PdCo Catalyst for Ethanol Oxidation Reaction in Alkaline Electrolyte*
10:55-11:20	**C6- Jingfeng Han** *Iron based PEC cell for overall water splitting*
11:20-11:45	**J6- Toru Takamura** *Photocatalytic water splitting activity of $LaTiO_2N$ synthesized from La_2TiO_5 precursor*
11:45-13:30	**Lunch & Noon break**

Session 6	**Chairs: Guiji Liu and Jae Young Kim**
13:30-13:55	**K6- Duck Hyun Youn** *Facile Synthesis of MoS_2/graphene Composite Electrocatalysts for Hydrogen Evolution Reaction*
13:55-14:20	**C7- Wei Yu** *Influence of nano-aggregation on the performance of all polymer solar cells*
14:20-14:45	**J7- Jingyuan Liu** *Development of $La_5Ti_2Cu(S,Se)_5O_7$ photocatalyst for H_2 evolution*
14:45-15:10	**K7- Dr. Ji Wook Jang** *Self-assembled foam-like graphene networks formed through nucleate boiling*
15:10-15:40	**Coffee break & POSTER Session**
Session 7	**Chairs: Yushuai Jia and Qian Wang**
15:40-16:05	**C8- Xiaojia Zheng** *Controlled Growth of II-VI semiconductor Films within TiO_2 Nanotubes for Semiconductor Sensitized Solar Cells*
16:05-16:30	**J8- Takuya Arashi** *Development of non-Pt electrocatalysts with electroconductive titanium oxides with niobium for oxygen reduction reaction of polymer electrolyte fuel cells*
16:30-16:55	**K8- Younghye Lee** *Alkylation of naphthalene for production of 2,6-DAN on modified Large pore Zeolite*
16:55-17:25	**Closing remarks**
17:25-20:00	**Banquet**
May 31 **8:30-10:00**	**Lab tour**

Poster Presentation

(Lobby of the Biotechnology Building)

P1	**Shanshan Chen**	China	*Nitrogen-doped tantalum-based layered oxides with wide visible light absorption for water reduction and oxidation*
P2	**Yeilin Ham**	Japan	*Flux-Treated $SrTiO_3$ as a Highly Active Water Splitting Photocatalyst*
P3	**Hunmin Park**	Korea	*Synthesis of hexagonal, cubic phase of molybdenum carbide and its activity for CO hydrogenation*
P4	**Xiang Wang**	China	*Effects of Zn^{2+} and Pb^{2+} modifications on the photocatalytic activity of Ga_2O_3 for water splitting*
P5	**Shuai Shen**	China	*Time-Resolved IR Spectroscopy Studies of the Charge Separation with Size controlled Nanometer Au/TiO_2 Photocatalyst*
P6	**Hiromu Kumagai**	Japan	*Cu-Ga-Se photocathodes prepared from powder materials for sunlight driven water splitting*
P7	**Nan Wang**	China	*Facile preparation of plate-like assemblies of tungsten oxide for photoelectrochemical water splitting by magnetron sputtering and chemical etching*
P8	**Jin Hyun Kim**	Korea	*Assessment of PEC performance for modified metal oxide photocatalyst*
P9	**Youn Jeong Jang**	Korea	*Copper Oxide photocathode material for hydrogen evolution*
P10	**Yo Han Choi**	Korea	*The effect of Molybdenum carbide for Light Olefin (C2-C3) in the CO_2 Hydrogenation*
P11	**Ruifeng Chong**	China	*PhotocatalyticConversion of Glycerol-Water Mixture into Ethylene glycol and H_2 on TiO_2-based Photocatalysts*
P12	**Yoon Bin Park**	Korea	*Preparation of $Ag_3(PO_4)_x(VO_4)_{1-x}$ photocatalyst and its Photocatalytic Performance*
P13	**Vit Kalousek**	Japan	*The photoelectrochemical system using Pt/C electrode assemblies and Nb:STO for conversion of Toluene to Methylcyclohexane*
P14	**Ji Zhao**	China	*Facile synthesis of freestanding Si nanowire arrays by one-step template-free electro-deoxidation of SiO_2 in molten salt*