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Dr. Kazunari Domen, a Professor in The University of Tokyo, and a Special Contract Professor in Shinshu University. Domen has been working on overall water splitting reaction on heterogeneous photocatalysts to generate clean and recyclable hydrogen. In 1980, he reported NiO-$SrTiO_3$ photocatalyst for overall water splitting reaction, which was one of the earliest examples achieving stoichiometric $H_2$ and $O_2$ evolution on a particulate system. In 2005, he has succeeded in overall water splitting under visible light on GaN:ZnO solid solution photocatalyst. In 2015, he has reported a new principle of photocatalyst sheet. And in 2016, he reported a photocatalyst sheet based on a so-called Z-Scheme water splitting using La, Rh-codoped $SrTiO_3$ and Mo-doped $BiVO_3$, which showed more than 30% quantum yield of water splitting at 420 nm with more than 1% solar to hydrogen energy conversion efficiency. In 2018, Domen reported water splitting panel using a photocatalyst sheet for a large-scale solar hydrogen production. He has published more than 800 original and review papers and h-index is more than 110. His research interest is now being focused on a large-scale solar hydrogen production based on photocatalyst sheets and water splitting panel.

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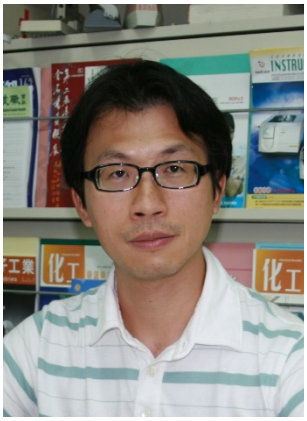
Dr. Can Li, a Professor in Dalian Institute of Chemical Physics, Chinese Academy of Sciences. Can Li identified the transition metal ion sites in zeolite framework of catalysts with UV resonance Raman spectroscopy, and these sites are determined to be responsible for the excellent performance in green oxidation reactions. Another advance is that the surface phase junction of photocatalysts was found to be an origin of the built-in electric field for charge separation in photocatalysis by taking the advantage of the UV Raman spectroscopic characterization.

Can Li advanced the scientific concepts in photocatalysis, such as dual-cocatalyst, surface phase junction, spatial charge separation between facets, and hole-storage-layer. Can Li and his team developed a heterogeneous catalyst with mononuclear manganese shows a turnover frequency more than 200 $s^{-1}$ for chemical water oxidation, exceeding the highest level in this field, and is even comparable to that of nature PSII OEC, $CaMn_4O_5$. In particular, Can Li and his team achieved the spatially imaging photogenerated charges on photocatalysts with home-developed characterization technology KPFM-SPV, which has been recognized as a world-class progress in the field.



Dr. Kevin Chia-Wen Wu, a Professor in National Taiwan University. Dr. Wu's main research interests are the structural design and tailoring of functional nanoporous materials for sustainable chemistry & engineering applications including biomass conversion, membrane separation, biomedicine and energy devices. His work on new synthesis methods for heterogeneous catalysts has produced novel and highly active catalysts for fine chemicals production from lignocellulosic biomass. His research also focuses on fundamental challenges in heterogeneous catalysts, for example the detailed investigation of active metal sites on supporting materials and kinetics controlling conversion pathways. Dr. Wu has an excellent publication track record with 160 peer-reviewed publications, including a book on materials design of catalysts for lignocellulosic biomass conversion, and articles in leading journals including *Angew. Chem. Int. Ed., Adv. Mater., JACS*, *Green Chem., Energy Environ. Sci. etc.* His work has been cited more than 9100 times resulting in a h-index of 53.

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Prof. Xiangju Meng (Zhejiang University) obtained his B.S. degree (1999) and Ph.D. degree (2004) at Jilin University, China. After postdoctoral research in Tokyo Institute of Technology and National Institute of Advanced Industrial Science and Technology (AIST), he joined Prof. Xiao's group. He became a full professor at Zhejiang University in 2015. His research interests include zeolites and heterogeneous catalysis. Prof. Meng and colleagues developed novel solvent-free route for zeolites preparation, which completely changes the inherent concept of the traditional zeolite synthesis and should be very important for both industry and fundamental research in the future. Prof. Meng and his colleagues have designed a series of efficient zeolite-based catalysts for VOCs abatement. Recently, Prof. Meng and his colleagues have successfully prepared pure siliceous Beta zeolites at industrial scale, which have been commercialized to be used as efficient adsorbent for honeycomb zeolite rotor concentrator as well as supports for catalytic abatement of formaldehyde.