

The 284th MANA Special Seminar



An Electronically Integrated $\text{TiO}_{2-x}\text{N}_x$ + Au Nanocomposite for Solar H_2 Generation

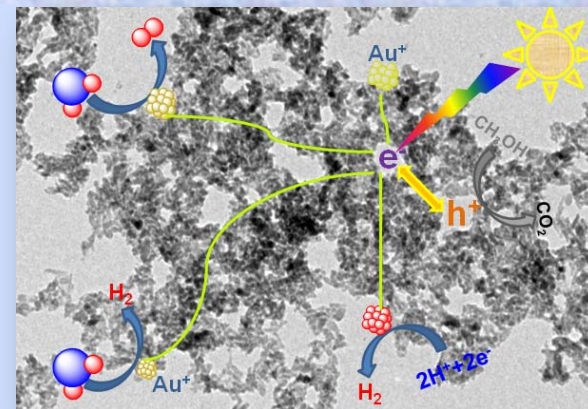
Chair: Dr. Katsuhiko Ariga (MANA PI)



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Minimization of charge recombination by decreasing the number of defects on photocatalytic materials is expected to increase the charge utilization. Charge diffusion from the point of origin to the active catalytic sites requires a porous framework with active metal suitably incorporated in it. Our recent efforts in combining the above two factors led to a active catalyst for solar hydrogen generation by electronically integrating nanogold clusters with disordered mesoporous $\text{TiO}_{2-x}\text{N}_x$ (Au-NT). Au-NT nanocomposite materials exhibit solar H_2 generation ($1.5 \text{ mmol h}^{-1} \text{ g}^{-1}$) from aqueous methanol. Various factors involved in improving the photocatalytic activity will be discussed in the presentation.



Venue: Auditorium, 1F, WPI - MANA Bldg.

Namiki site

Date: September 24th, Monday Time: 10:30am-11:15am

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