



Showcasing research from Professor Gopinath's laboratory, Catalysis and Inorganic Chemistry Division, CSIR – National Chemical Laboratory, Pune, India, and Academy of Scientific and Innovative Research, Ghaziabad, India.

Biomass components toward H_2 and value-added products by sunlight-driven photocatalysis with electronically integrated $Au^{\delta-}-TiO_2$: concurrent utilization of electrons and holes

A premium method to convert biomass components to value added products, that goes into making fuels, pharmaceuticals, has been demonstrated by direct sunlight driven photocatalysis. Negatively charged atom-like gold clusters integrated with titania has been used as photocatalyst, which converts biomass components into value added products along with green hydrogen in sunlight, and contributing to sustainable development and preserving climate. Particularly the demonstration of C-C bond cleavage of glycerol to the simpler molecules highlights the potential to cleave bigger biomass components into value added products.

As featured in:



See Chinnakonda S. Gopinath *et al.*, *RSC. Sustainability.*, 2023, 1, 481.