



Showcasing research from Prof. Dr Ejaz Hussain and Dr Khezina Rafiq's laboratory, Inorganic Materials Laboratory, 52S, Institute of Chemistry, The Islamia University of Bahawalpur, Punjab, Pakistan.

Facile transfer of surface plasmon electrons of Au-NPs to  $\text{Zn}_3\text{V}_2\text{O}_8$  surfaces: a case study of sunlight driven  $\text{H}_2$  generation from water splitting

For future energy perspectives, an effective way to produce  $\text{H}_2$  from water splitting is suggested using  $\text{Au}@\text{Zn}_3\text{V}_2\text{O}_8$  photocatalysts. This work highlights an efficient and sustainable strategy for clean energy applications. The higher photocatalytic activities were attributed to the plasmonic-induced electrons of Au generating Schottky junctions at the point of contact between the metal and semiconductor system. Method of preparation, particle size, calcination time and morphology of the catalysts are also studied as important factors that influence the efficiency of catalysts. This work will prove the potential for the ultimate replacement of conventional and costly technologies specifically in developing countries.

### As featured in:



See Khezina Rafiq,  
Ejaz Hussain *et al.*,  
*Nanoscale Adv.*, 2023, 5, 3233.