

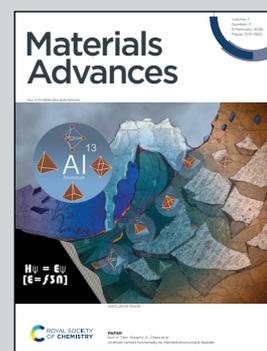
Showcasing research from Prof. Badekai Ramachandra Bhat, Catalysis and Materials Chemistry laboratory, Department of Chemistry, National Institute of Technology Karnataka, Surathkal, India.

Photo-assisted water splitting over a NiCoP/g-C<sub>3</sub>N<sub>4</sub> heterostructure: understanding the role of visible light in electrochemical water splitting

A photoresponsive NiCoP/g-C<sub>3</sub>N<sub>4</sub> heterostructure enables efficient electrochemical water splitting under visible-light illumination. Graphitic carbon nitride (g-C<sub>3</sub>N<sub>4</sub>) acts as a visible-light absorber, generating photocarriers that are effectively transferred to the catalytic sites of nickel cobalt phosphide (NiCoP). This interfacial charge-transfer synergy accelerates the kinetics of hydrogen and oxygen evolution reactions, significantly reducing overpotentials and the overall cell voltage, while delivering stable, high-efficiency water splitting at practical current densities.

Image reproduced by permission of Badekai Ramachandra Bhat from *Mater. Adv.*, 2026, **7**, 1417.

As featured in:



See Badekai Ramachandra Bhat *et al.*, *Mater. Adv.*, 2026, **7**, 1417.