



Showcasing collaborative research work from the Group of Prof. Arindam Mondal, Chandra Sekhar Tiwary at Indian Institute of Technology Kharagpur and Prabal K Maiti at Indian Institute of Science Bangalore, India

Utilization of DNA and 2D metal oxide interaction for an optical biosensor

The combined experimental and theoretical work establishes an understanding of the interaction between DNA and a two-dimensional (2D) metal oxide for developing a biosensor for detection of viral infections. The spectroscopy analysis demonstrates the chemical interaction between single-stranded DNA (ssDNA) and 2D metal oxide which is further explained with theoretical simulation. Our investigation opens the pathway to develop a cost-effective, diagnostic biosensor with high sensitivity.

As featured in:



See Arindam Mondal, Prabal K Maiti, Chandra Sekhar Tiwary *et al.*, *Phys. Chem. Chem. Phys.*, 2023, 25, 17143.