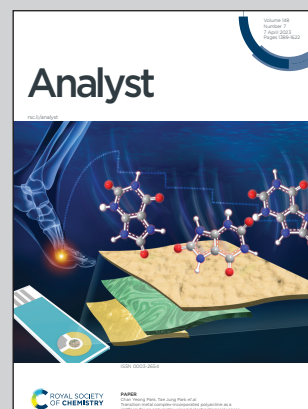


Showcasing research from Dr. Nilanjan Dey's laboratory,
Department of Chemistry, Birla Institute of Technology and
Science Pilani, Hyderabad, India.

Differential response for multiple ions: smart probe to
construct optically tunable molecular logic systems

In this work, we have designed numerous trivial (OR, NOR) as well as non-trivial (INHIBIT, IMPLICATION, COMPLEMENT, TRANSFER, NOT-TRANSFER) logic gates based on differential optical responses of a single molecular probe towards various heavy metal pollutants and anions, such as Cu^{2+} , Hg^{2+} , CN^- and I^- . In general, Dr. Dey's laboratory focuses on developing optical probes for biomolecules, investigating photochemical properties in confined media, designing vehicles for drug and gene delivery, developing responsive soft materials for biomedical applications, agriculture, sustainable chemistry, etc.

As featured in:



See Nilanjan Dey *et al.*, *Analyst*, 2023, 148, 1460.