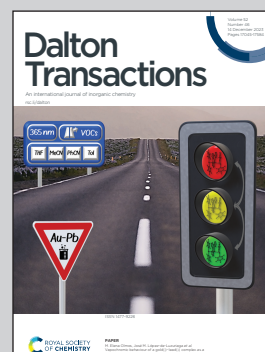


Showcasing research from Professor Ramesh K. Metre's laboratory, Department of Chemistry, Indian Institute of Technology Jodhpur, India.

A closed-shell phenalenyl-based dinuclear iron(III) complex as a robust cathode for a one-compartment  $\text{H}_2\text{O}_2$  fuel cell

This research work highlights a novel strategy to prepare a dinuclear  $\text{Fe}(\text{III})$  complex,  $[\text{Fe}^{\text{III}}_2(\text{hmbh-PLY})_3]$  from the redox-interesting phenalenyl-derived hmbh-PLYH<sub>2</sub> ligand to efficiently catalyze  $\text{H}_2\text{O}_2$  reduction in an advantageous one-compartment  $\text{H}_2\text{O}_2$  fuel cell resulting into high PPD ( $2.41 \text{ mW cm}^{-2}$ ). DFT studies were performed to gain reasonable insights into the two-electron catalytic reduction pathway.

As featured in:



See Moumita Majumder, Srijan Sengupta, Ramesh K. Metre *et al.*, *Dalton Trans.*, 2023, **52**, 17163.