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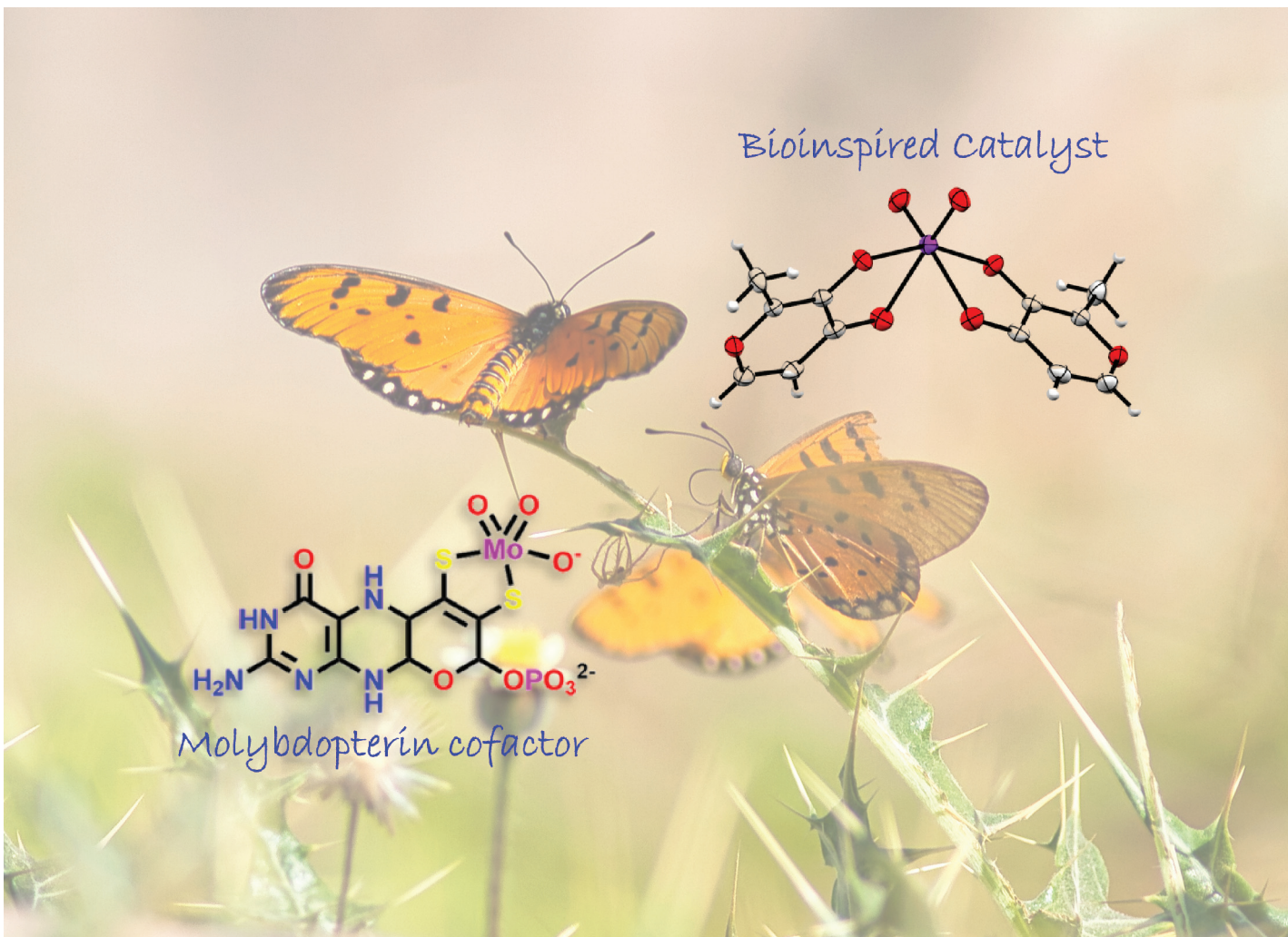


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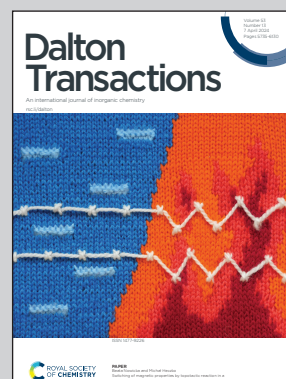


Showcasing biomimicking research from Professor Nabanita Sadhukhan's laboratory, Department of Speciality Chemicals Technology, Institute of Chemical Technology, Mumbai, India.

Molybdenum-maltolate as a molybdopterin mimic for bioinspired oxidation reaction

A novel *cis*-dioxomolybdenum(vi)-maltolate  $[\text{MoO}_2(\text{Mal})_2]$  was synthesized as a biomimetic model for molybdopterin cofactor.  $[\text{MoO}_2(\text{Mal})_2]$  successfully catalyzes hypoxanthine to xanthine at room temperature in acetonitrile–water mixture.  $[\text{MoO}_2(\text{Mal})_2]$  showed significant potential to catalyse other commercially valuable organic transformation reactions, namely controlled oxidation of toluene to benzaldehyde, and styrene to styrene oxide. Moreover,  $[\text{MoO}_2(\text{Mal})_2]$  is a nontoxic compound exhibiting a prospect for application as a molybdenum supplement.

As featured in:



See Nabanita Sadhukhan *et al.*, *Dalton Trans.*, 2024, **53**, 5770.