

# Indian Journal of Chemistry

Sect. A: Inorganic, Bio-inorganic, Physical, Theoretical & Analytical

VOL. 58A

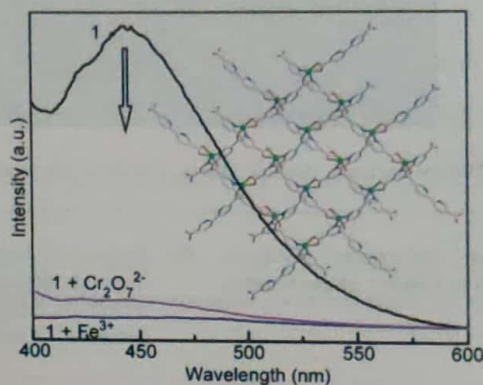
NUMBER 01

January 2019

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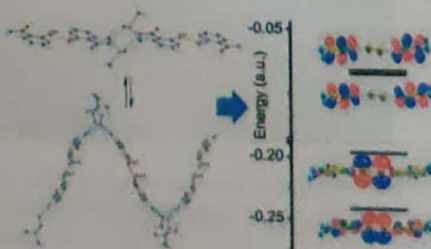
### Papers

- 9 **A fluorescent zinc(II)-based layered complex for selective sensing of  $\text{Cr}_2\text{O}_7^{2-}$  and  $\text{Fe}^{3+}$  ions in water system** A new layered complex with distorted  $\text{Zn}^{+2}$  octahedra extended by 2,2-bipyridine-5,5-dicarboxylate connectors detects both  $\text{Cr}_2\text{O}_7^{2-}$  and  $\text{Fe}^{3+}$  ions through fluorescence quenching with high quench constants ( $1.12 \times 10^5 \text{ M}^{-1}$  and  $2.12 \times 10^4 \text{ M}^{-1}$ ) and low limits of detection ( $0.54 \mu\text{M}$  and  $1.02 \mu\text{M}$ ).



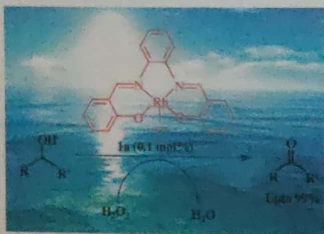
De-Yu Zhang, Hongming He, Yu Zhang, Xiu-Guang Wang\*, Xiao-Jun Zhao\* & En-Cui Yang\*

- 18 **Investigation of structure-property correlation in 2,2'-dipyridyl diselenide based derivatives** Structure-property correlation of 2, 2'-diseleno-bis(3-nicotinamide) and its analogous selone derivatives, presents the key role of nature of substituent at C-3 position of pyridyl ring in controlling molecular structure, packing capacity and thermal stability of molecular assembly. Evaluation for glutathione peroxidase (GPx) like activity revealed better activity with stronger electron withdrawing group at C-3 position.



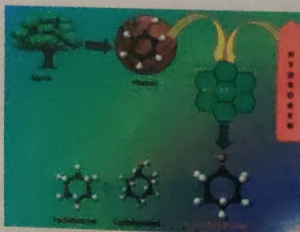
Prasad P. Phadnis\*, Sandeep Nigam, Ratikanta Mishra, Amey Wadawale, Mukesh Kumar, Amit Kunwar, Chiranjib Majumder, K I Priyadarshini & Vimal K Jain

- 29 **A new water-soluble Rh(III)-salophen complex as efficient catalyst for alcohol oxidation in aqueous medium** A new water soluble Rh(III)-Salophen complex as a catalyst for the oxidation of electronically diverse alcohols to their corresponding carbonyl compounds, in aqueous medium using hydrogen peroxide as oxidant, showed high efficiency with conversion up to 99% and 100% selectivity.



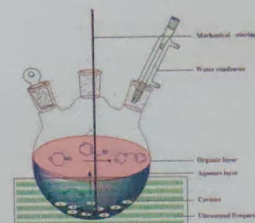
Biplab Banik, Podma Pollay Sarmah, Abhijit Dutta, Paritosh Mondal & Pankaj Das\*

- 36 **Effect of mesoporous ruthenium catalysts for hydrogenation of phenol in vapour phase reactor** Ruthenium dioxide supported SBA-15 ( $\text{RuO}_2\text{-SBA-15}$ ) catalyst for the hydrogenation reaction of phenol to cyclohexanone, showed maximum conversion with the use of mesoporous silica support as compared to activated carbon and  $\text{Al}_2\text{O}_3$ .



Jeevanandham Kayalvizhi & Arumugam Pandurangan\*

- 45 **Ultronically promoted synthesis of N-benzylmorpholine under polymer-supported phase-transfer catalysis – a kinetic study** A detailed kinetic investigation of the reaction of morpholine with benzyl bromide under a polymer-supported phase transfer catalyst, suggests that the overall reaction rate greatly enhances under ultrasonication.



Manickam Sathiyaraj, Perumal Venkatesh\*, Venugopal Rajendran, Mohammadbilal Mohammadfiyas & Varathan Selvaraj

- 53 **Guide to Authors**

Authors for correspondence are indicated by (\*)

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