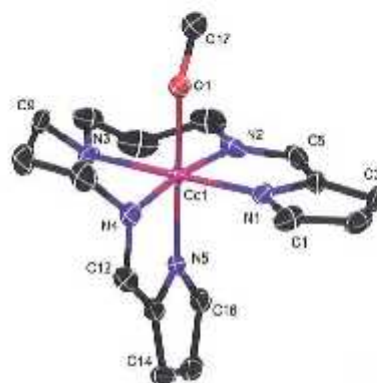


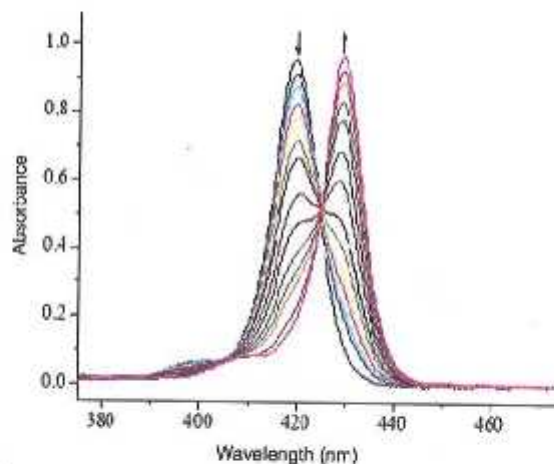
## CONTENTS

- 137 **Synthesis, crystal structure, redox property and theoretical studies of a pyrrole containing cobalt(III) Schiff base compound**
- A mononuclear cobalt(III) complex with a pentadentate Schiff base ligand derived from the condensation of N-(3-aminopropyl)propane-1,3-diamine with pyrrole-2-aldehyde has been synthesised. X-ray crystallography reveals that the geometry of cobalt(III) ion is a distorted octahedron in which the triamine part of the pentadentate ligand occupies the meridional positions, while two pyrrole nitrogen atoms are in *cis* dispositions.



Anangamohan Panja\* & Tarun Kanti Mandal

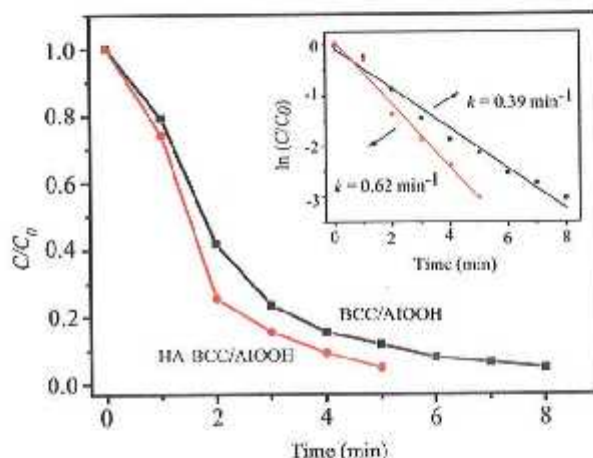
- 145 **Synthesis of zinc porphyrins and effect of peripheral substituents on the coordination reaction**
- Free-base porphyrins modified with Boc-L-threonine and their zinc porphyrins have been synthesized. The reaction is spontaneous, with coordinated bonds formed between zinc porphyrins and imidazole derivatives. The ability to form complexes is related to the peripheral substituents in zinc porphyrins and the structure of imidazole derivatives. The zinc porphyrin synthesized with 4-chlorobenzaldehyde and N-methylimidazole shows the highest association constant.



Shujun Wang\*, Yuling Peng, Chenggen Zhang,  
 Yongbing Li & Chao Liu

153 Humic acid-induced synthesis of hierarchical basic copper carbonate/ $\text{AlOOH}$  microspheres and its enhanced catalytic activity for 4-nitrophenol reduction

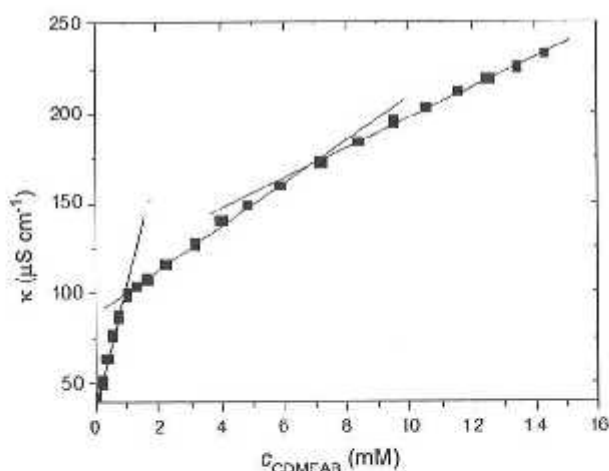
The urchin-like HA-BBC/ $\text{AlOOH}$  ( $0.62 \text{ min}^{-1}$ ) shows better performance than pure BBC/ $\text{AlOOH}$  microspheres with flower-like structure ( $0.39 \text{ min}^{-1}$ ) for reduction of 4-nitrophenol to 4-aminophenol with excess  $\text{NaBH}_4$  as a model reaction. Also, addition of humic acid during synthesis of the catalysts greatly enhances the catalytic efficiency.



Wenjin Zhang, Zhengbin Tian, Lijian Chen & Shiyun Ai<sup>a</sup>

160 Micellar parameters and thermodynamics of interaction of fluoroquinolone drugs with cetyltrimethylethylammonium bromide

Interaction of fluoroquinolone antibiotic drugs, viz., ciprofloxacin hydrochloride, levofloxacin hemihydrate and lomefloxacin hydrochloride, with the cationic surfactant, cetyltrimethylethylammonium bromide, is studied by conductance measurements in water and in the presence of salts such as  $\text{NaCl}$ ,  $\text{Na}_2\text{SO}_4$  and  $\text{Na}_3\text{PO}_4 \cdot 12\text{H}_2\text{O}$  over the temperature range of 298.15–318.15 K. Addition of drug alters the micellization behaviour of the surfactant. Favourable micellization is observed in the presence of salts. Thermodynamic parameters reveal that drug-CDMEAB interactions are mainly hydrophobic and electrostatic in nature.

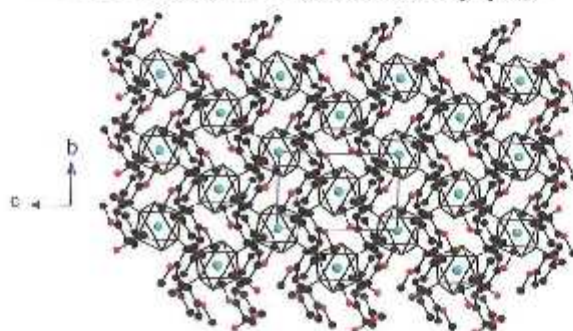


Sk. Md. Ali Ahsan, Mohammed Delwar Hossain, Md. Anamul Hoque<sup>a</sup> & Mohammed Abdullah Khan

## Notes

- 170 Tetraaquabis(4-methoxyphenylacetato-O<sup>-</sup>)magnesium(II) dihydrate and catena-poly[[[diaqua)manganese(II)]-bis( $\mu_2$ -4-methoxyphenylacetato-O,O<sup>-</sup>)]: A monomeric and a two-dimensional coordination polymer based on 4-methoxyphenylacetic acid

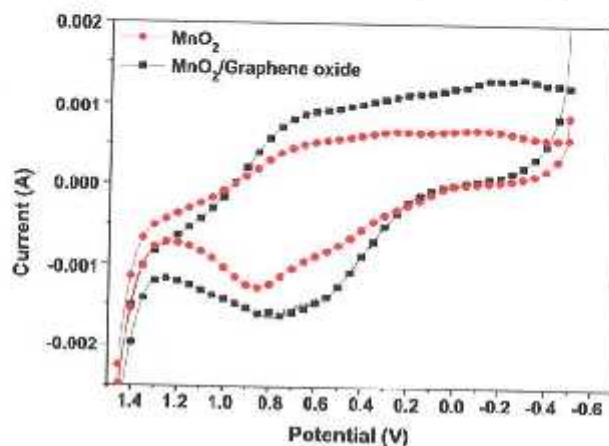
In tetraaquabis(4-methoxyphenylacetato-O<sup>-</sup>)magnesium(II) dihydrate, the 4-mpa functions as a monodentate ligand for Mg(II) situated on an inversion centre, resulting in a monomeric Mg(II) complex. The Mn(II) in catena-poly[[[diaqua)manganese(II)]-bis( $\mu_2$ -4-methoxyphenylacetato-O,O<sup>-</sup>)] is also located on an inversion centre and the  $\mu_2$ -bridging bidentate coordination mode of the ligand results in formation of a two-dimensional Mn(II) coordination polymer.



Kiran T Dhavskar & Bikshandarkoil R Srinivasan\*

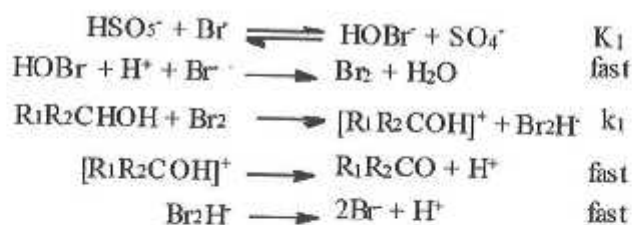
- 177 Oxygen reduction reaction of manganese oxide/graphene oxide nanocomposite

MnO<sub>2</sub>/graphene oxide composite coating has been prepared by electrochemical anodic deposition method. Morphological studies reveal the increase in porosity and exfoliation of graphene oxide by MnO<sub>2</sub> particles. The MnO<sub>2</sub>/GO composite coating has low over-potential for oxygen reduction as compared to MnO<sub>2</sub>.



K Pravinkumar, S Balaji\*, T Manichandran, M Anandakumar & G Kumaraguruparan

- 182 Kinetics and mechanism of oxidation of aliphatic and aromatic alcohols by *in situ* generated bromine in reaction between oxone and bromide ion



R<sub>1</sub> = H for primary aliphatic alcohols  
C<sub>6</sub>H<sub>5</sub> for aromatic alcohols

Malharrao R Thombare & Gavisiddappa S Gokavi\*