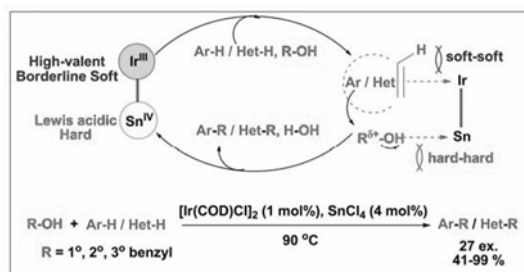


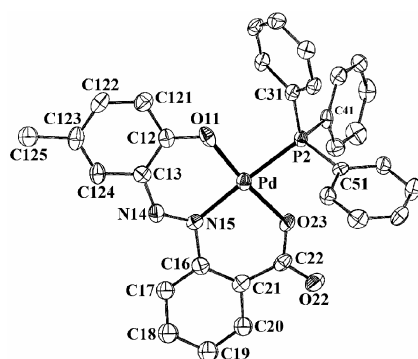
CONTENTS



Ir/Sn dual-reagent catalysis towards highly selective alkylation of arenes and heteroarenes with benzyl alcohols

Sujit Roy, Susmita Podder and Joyanta Choudhury 429–439

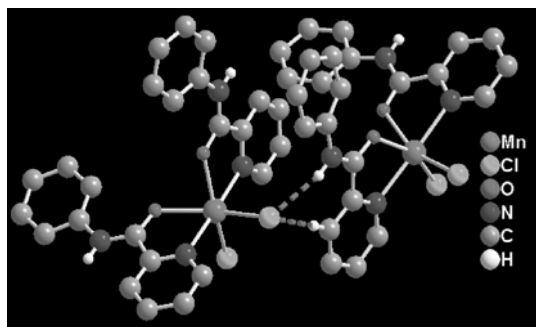
Reactions of arenes and heteroarenes with 1°/2°/3° benzyl alcohols proceed smoothly in the presence of a dual-catalyst combination of $[\text{Ir}(\text{COD})\text{Cl}]_2$ – SnCl_4 to afford the corresponding diarylmethane and triarylmethane derivatives.



Palladium and platinum complexes of 2-(2'-carboxyphenylazo)-4-methylphenol: Synthesis, structure and spectral properties

Sarmistha Halder, Michael G B Drew and Samaresh Bhattacharya 441–446

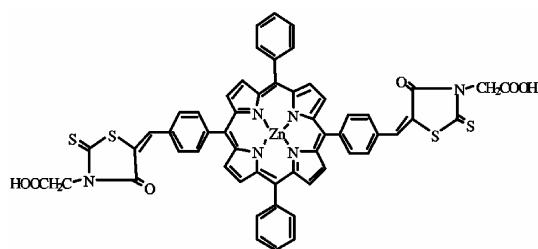
Reaction of 2-(2'-carboxyphenylazo)-4-methylphenol (H_2L) with $[\text{Pd}(\text{PPh}_3)_2\text{Cl}_2]$ has afforded a mixed-ligand complex of type $[\text{Pd}(\text{PPh}_3)(\text{L})]$. A similar reaction of H_2L with $[\text{Pt}(\text{PPh}_3)_2\text{Cl}_2]$ has yielded an analogous platinum complex. Structure of both the complexes has been determined by X-ray crystallography. These complexes show intense charge-transfer transitions in the visible region.



Two-dimensional supramolecular networks via C–H...Cl and N–H...Cl interactions utilizing bidentate neutral pyridine amide coordinated $\text{Mn}^{\text{II}}\text{Cl}_2$ tectons

Wilson Jacob and Rabindranath Mukherjee 447–453

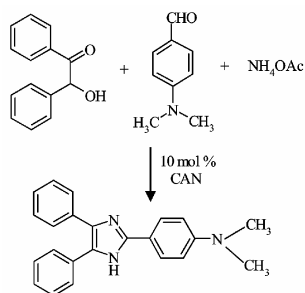
X-ray structures of $[(\text{HL}^1)_2\text{MnCl}_2]$ and $[(\text{HL}^2)_2\text{MnCl}_2]$ [$[\text{N}(\text{-phenyl})\text{-2-pyridinecarboxamide} (\text{HL}^1)]$ and its *N-p*-tolyl derivative (HL^2)] reveal that the Mn^{II} ions assume distorted octahedral coordination by pyridine N and amide O from the ligands. Secondary interactions $\text{X}\cdots\text{H}\cdots\text{Cl}$ ($\text{X} = \text{C}$ or N) generate self-complementary dimeric tectons, which lead to 2D supramolecular architectures.



Functionalized zinc porphyrin as light harvester in dye sensitized solar cells

L Giribabu, Ch Vijay Kumar, M Raghavender, K Somaiah, P Yella Reddy and P Venkateswara Rao 455–462

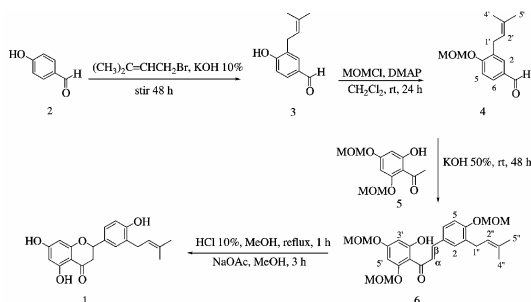
A new photosensitizer based on porphyrin and rhodanine acetic acid system was synthesized by Knoevenagel condensation method and fully characterized. The new photosensitizer was tested in dye sensitized solar cells by using both liquid and polymer gel redox electrolytes. It was found that the efficiency of the cell is more in liquid than polymer gel redox electrolyte probable due to the internal resistance of the cell. The results are compared with its dyad.



Ceric ammonium nitrate catalysed three component one-pot efficient synthesis of 2,4,5-triaryl-1H-imidazoles

Jaiprakash N Sangshetti, Nagnath D Kokare,
Sandeep A Kotharkara and Devanand B Shinde 463–467

The synthesis of 2,4,5-triaryl-1H-imidazoles via condensation of benzoin/benzil, ammonium acetate is presented using ceric ammonium nitrate as an efficient catalyst.



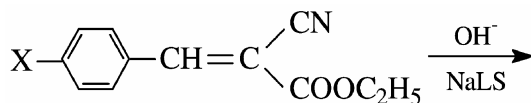
Synthesis and antimicrobial activity of 4',5,7-trihydroxy-3'-prenylflavanone

Adiana Mohamed Adib, Farediah Ahmad and
Muhammad Sum Idris 469–473

4',5,7-Trihydroxy-3'-prenylflavanone (1) was synthesized and tested for antibacterial effects against four pathogenic bacteria. The antibacterial screening of the synthesized compounds were performed *in vitro* by the filter paper disc diffusion method.

Micellar catalysis in the retro-Knoevenagel reaction of ethyl- α -cyanocinnamates

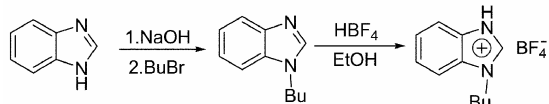
K Rajasekaran, A Sarathi and S Ramalakshmi 475–480



Rates of base catalysed cleavage of *para*-substituted ethyl α -cyanocinnamates were studied spectrophotometrically in the presence of anionic surfactant sodium laurylsulphate (NaLS). Kinetic data were analysed by Menger–Portnoy and Piszkiwicz models. The substrate-micelle binding constants correlate with the Hammett σ -constants and Hansch hydrophobicity constants- π of the substituents.

Preparation and characterization of a novel benzimidazolium Brønsted acidic ionic liquid and its application in esterifications

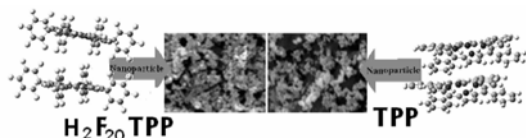
Shuan-Hu Chen, Qiong Zhao and Xue-Wang Xu 481–483



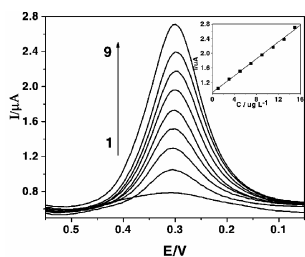
A novel Brønsted acidic ionic liquid 1-butylbenzimidazolium tetrafluoroborate ([Hbbim]BF₄) based on the benzimidazolium cation was synthesized and successfully used as a suitable catalyst for the esterifications of carboxylic acids with aliphatic alcohols.

Preparation and characterization of free-standing pure porphyrin nanoparticles

Arun Kumar Perepogu and Prakriti Ranjan Bangal 485–491



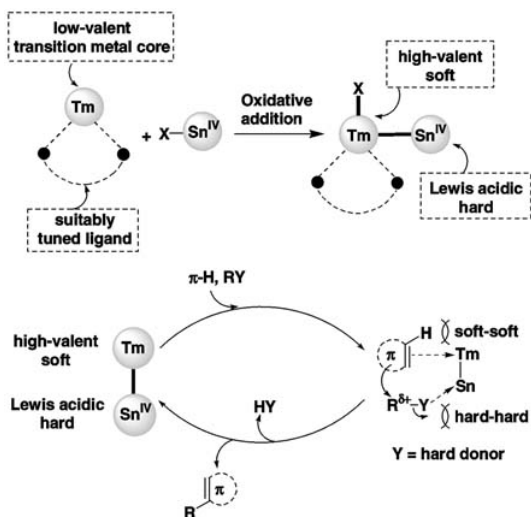
Preparation and characterization of the absolutely pure and free-standing nanoparticles of 5,10,15,20-meso-tetrakisphenyl porphyrin and catalytically repute 5,10,15,20-meso-tetrakis pentafluorophenyl porphyrin by improved 'reprecipitation method' is described. The innovation of this method lies on the judicial selection of organic solvent and amount of porphyrin solution to be injected in the aqueous media. Use of no other compounds except dichloromethane, a highly volatile organic solvent gives absolutely pure nanoparticles. This improved method will lead to produce organic nanoparticles of π -conjugated systems very easily and efficiently.



A study of nanostructured gold modified glassy carbon electrode for the determination of trace Cr(VI)

Benzhi Liu, Liyuan Lu, Min Wang and Yanqin Zi 493–498

A nanostructured gold modified glassy carbon electrode was employed for the determination of Cr(VI) in $\mu\text{g L}^{-1}$ level with high sensitivity and good reproducibility.



Cover picture: Proposed model for transition metal-Sn dual reagent catalysis. For details see the paper by Sujit Roy *et al* (pp 429–439).