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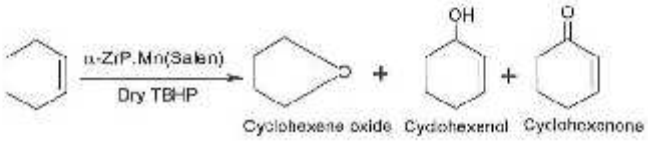
CONTENTS

1449 Catalytic oxidation of cyclohexene by α-zirconium phosphate intercalated Mn(Salen) using 70% *tert*-butyl-hydroperoxide as an oxidant

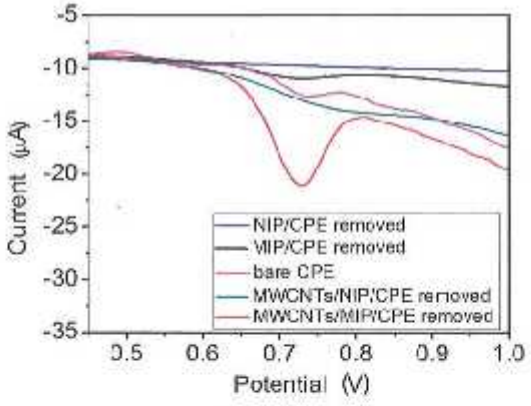
The heterogeneous catalytic system, α-ZrP.Mn(Salen)/70%TBHP, gives the maximum conversion (85%) in the oxidation of cyclohexene under the optimum conditions of 30 mmol, 10 mmol and 0.1 mmol of 70% TBHP, cyclohexene and α-ZrP.Mn(Salen), respectively at 80 °C and 6 h of reaction time. The catalyst can be reused for three cycles without appreciable loss of activity.



S Khare*, R Chokhare, P Shrivastava, J S Kirar & S Parashar

1458 Determination of the azo dye, sunset yellow, by using carbon paste electrode modified with molecularly imprinted polymer

A highly selective voltammetric sensor for sunset yellow using selective molecular imprinted polymers for preparation of carbon paste electrode is reported. The sensitivity of the sensor is improved significantly on modification with multiwalled carbon nanotubes. The MWCNTs/MIP/CPE shows very high recognition ability in comparison with the MWCNTs/NIP/CPE. Under the optimum conditions, the linear relationship between current and concentration is obtained in the range of 8×10^{-8} to 1×10^{-5} mol L^{-1}. The detection limit of the sensor is 2.667×10^{-8} mol L^{-1} ($S/N = 3$).



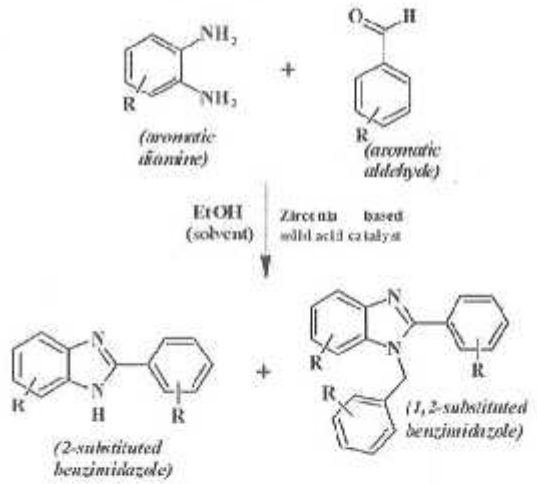
Zhihua Wang*, Yijiang Shan, Lijuang Xu, Guofan Wu & Xiaoquan Lu*

Notes

1465 Catalytic synthesis of benzimidazole derivatives over modified forms of zirconia

T E Mohan Kumar, S Z Mohamed Shamshuddin*, Venkatesh & S Reena Saritha

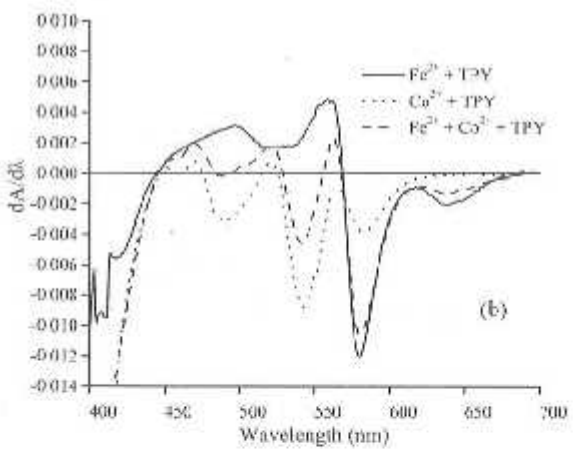
Synthesis and characterization of solid acid catalysts, viz., ZrO_2, $Mo(VI)/ZrO_2$ and $Pt\text{-}SO_4^{2-}/ZrO_2$, is reported. $Mo(VI)/ZrO_2$ comprising moderate to strong acid sites as well as bearing the catalytically active tetragonal phase of zirconia, is an efficient and reusable solid acid catalyst for the synthesis of benzimidazoles. $Pt\text{-}SO_4^{2-}/ZrO_2$ with very strong acid sites loses its activity when reused.



1471 Cloud point extraction with mixed micelles of TX-114/DOSS and derivative spectrophotometry for simultaneous determination of Fe^{2+} and Co^{2+} using 2,2',6',2''-terpyridine

K Ravi Kumar & P Shyamala*

A new cloud point extraction procedure with derivative spectrophotometry for the simultaneous preconcentration and determination of Fe^{2+} and Co^{2+} has been developed. Both Fe^{2+} and Co^{2+} metal ions are simultaneously complexed with 2,2',6',2''-terpyridine at a *p*H 3.8, and extracted into mixed micelles of Triton X-114 and docusate sodium salt. Under optimum conditions, the linear ranges of Fe^{2+} and Co^{2+} are 0.373–2.42 μg mL^{-1} and 3.14–18.86 μg mL^{-1} respectively. Their corresponding limits of detections are 0.498 ng mL^{-1} and 4.54 ng mL^{-1}.



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