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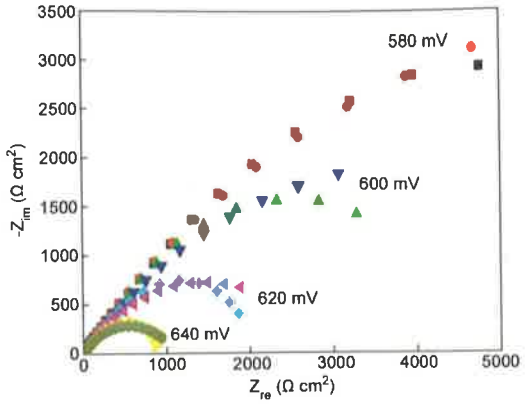
CONTENTS

1100 Electrochemical impedance spectroscopy study of oxygen evolution reaction on nanosized $CoWO_4$ and $NiWO_4$

V K V P Srirapu, Ajay Kumar, Nirmala Kumari & Ravindra Nath Singh*

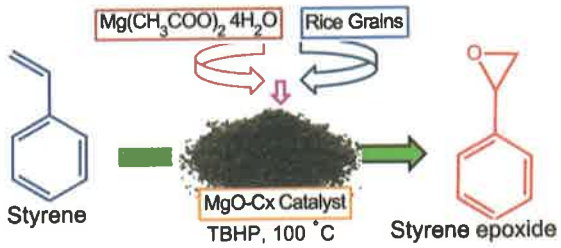
$CoWO_4$ and $NiWO_4$ are investigated as electrocatalysts for the oxygen evolution reaction in 1 M KOH by electrochemical impedance spectroscopy. The electrode kinetic parameters, Tafel slope and reaction order for the OER determined from the EIS study are very close to those obtained from the steady-state dc polarization techniques.



1106 Epoxidation of styrene over MgO-rice derived carbon composite catalyst prepared by *in situ* transformation technique

M Kalpana, E Siva Sankar*, K Saidulu Reddy, K S Rama Rao, J Swathi, V Vijay Kumar, G Naresh & A Venugopal*

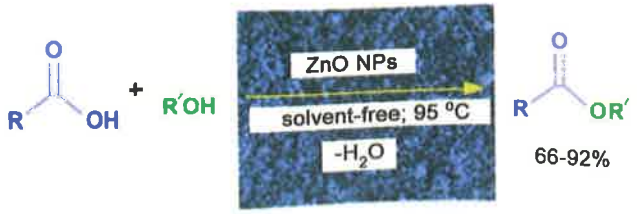
A low-cost and eco-friendly MgO-rice derived carbon composite catalyst, prepared via *in situ* transformation technique, is reported for epoxidation of styrene with 84% conversion, and 82% selectivity to styrene epoxide. The catalytic activity is attributed to the presence of well dispersed accessible basic sites obtained through *in situ* dispersion of MgO over the rice derived carbon.



1112 Synthesis and characterization of stable ZnO nanoparticles using imidazolium-based ionic liquids and their applications in esterification reaction

S H Kavya, V Vijaya Kumar & C Ramesh Kumar*

ZnO nanoparticles synthesized using microwave conversion method with [OMIM][PF_6] ionic liquid as capping agent as well as solvent, are used as a solid reusable acid catalyst for esterification of carboxylic acids with alcohols. The yield with primary alcohols is almost 80%. The acid catalyst exhibits reusability up to four cycles without significant loss of activity.



Notes

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