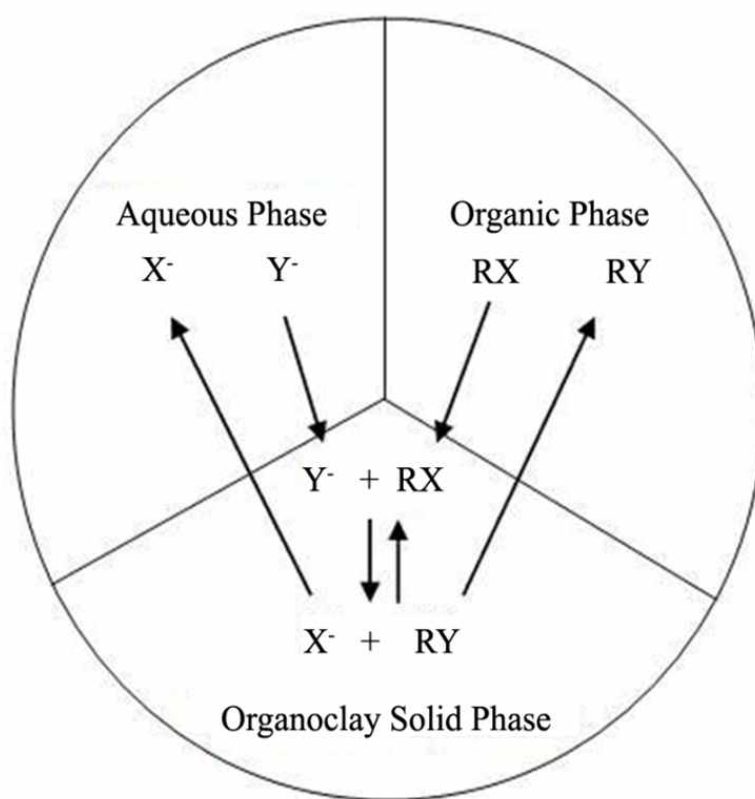


Modern Research in Catalysis

TRIPHASE CATALYTIC SYSTEM



ISSN: 2168-4480



Journal Editorial Board

ISSN: 2168-4480 (Print), 2168-4499 (Online)

<http://www.scirp.org/journal/mrc>

Editorial Board

Dr. Pedro Aguirre	University of Chile, Chile
Prof. Erdogan Alper	Hacettepe University, Turkey
Dr. Subhash Banerjee	Guru Ghasidas Vishwavidyalaya, India
Prof. Apurba Bhattacharya	Texas A&M Kingsville, USA
Prof. Yu-Wen Chen	National Central University, Chinese Taipei
Prof. Zhengdong Cheng	Texas A&M University, USA
Prof. Ashish Dhawan	Midori Renewables Inc., USA
Dr. Juan García	Universidad Complutense de Madrid, Spain
Prof. P. Govindaswamy	Indian Oil Corporation Limited, India
Dr. Ismail Ibrahim	Mid Sweden University, Sweden
Prof. Ivan Kurtovic	New Zealand Institute for Plant & Food Research Limited, New Zealand
Dr. Satish Lakhapatri	Codexis, USA
Prof. Chin-Jung Lin	National Ilan University, Chinese Taipei
Prof. Massoud(Matt) Miri	Rochester Institute of Technology, USA
Dr. Zeeshan Nawaz	SABIC Technology Center, Saudi Arabia
Prof. Ali Asghar Rownaghi	Georgia Institute of Technology, USA
Dr. Lakshi Saikia	CSIR-North East Institute of Science and Technology, India
Dr. Jing Shang	Peking University, China
Prof. Md. Hasan Zahir	King Fahd University of Petroleum & Minerals, Saudi Arabia

Table of Contents

Volume 4 Number 3

July 2015

**Vapor Phase Ammoxidation of 4-Phenyl- o-Xylene into 4-Phenylphthalonitrile
on V–Sb–Bi–Zr/ γ -Al₂O₃ Oxide Catalyst**

G. A. Bagirzade, D. B. Taghiyev, M. R. Manafov.....59

Effect of Potassium on Sol-Gel Cerium and Lanthanum Oxide Catalysis for Soot Combustion

D. Salinas, G. Pecchi, V. Rodríguez, J. L. G. Fierro.....68

Effect of Cosolvent in a Nucleophilic Substitution Reaction Using Organoclay in Triphase Catalytic System

N. Shabestary^{*}, C. M. Chapple, D. T. Rensing, T. T. Doan, S. Khazaeli, M. J. Sabo, A. D. Beach.....78

Modern Research in Catalysis (MRC)

Journal Information

SUBSCRIPTIONS

The *Modern Research in Catalysis* (Online at Scientific Research Publishing, www.SciRP.org) is published quarterly by Scientific Research Publishing, Inc., USA.

Subscription rates:

Print: \$59 per issue.

To subscribe, please contact Journals Subscriptions Department, E-mail: sub@scirp.org

SERVICES

Advertisements

Advertisement Sales Department, E-mail: service@scirp.org

Reprints (minimum quantity 100 copies)

Reprints Co-ordinator, Scientific Research Publishing, Inc., USA.

E-mail: sub@scirp.org

COPYRIGHT

COPYRIGHT AND REUSE RIGHTS FOR THE FRONT MATTER OF THE JOURNAL:

Copyright © 2015 by Scientific Research Publishing Inc.

This work is licensed under the Creative Commons Attribution International License (CC BY).

<http://creativecommons.org/licenses/by/4.0/>

COPYRIGHT FOR INDIVIDUAL PAPERS OF THE JOURNAL:

Copyright © 2015 by author(s) and Scientific Research Publishing Inc.

REUSE RIGHTS FOR INDIVIDUAL PAPERS:

Note: At SCIRP authors can choose between CC BY and CC BY-NC. Please consult each paper for its reuse rights.

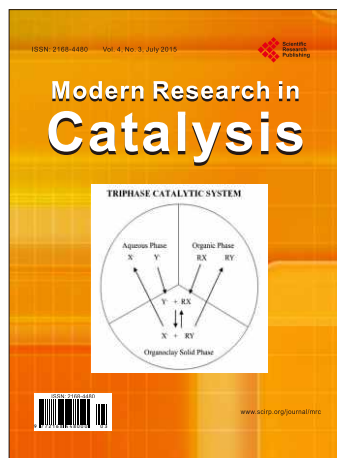
DISCLAIMER OF LIABILITY

Statements and opinions expressed in the articles and communications are those of the individual contributors and not the statements and opinion of Scientific Research Publishing, Inc. We assume no responsibility or liability for any damage or injury to persons or property arising out of the use of any materials, instructions, methods or ideas contained herein. We expressly disclaim any implied warranties of merchantability or fitness for a particular purpose. If expert assistance is required, the services of a competent professional person should be sought.

PRODUCTION INFORMATION

For manuscripts that have been accepted for publication, please contact:

E-mail: mrc@scirp.org



Modern Research in Catalysis

ISSN: 2168-4480 (Print) ISSN: 2168-4499 (Online)

<http://www.scirp.org/journal/mrc>

Modern Research in Catalysis (MRC) is an open access journal published quarterly. The goal of this journal is to provide a platform for scientists and academicians all over the world to promote, share, and discuss various new issues and developments in all aspects of Catalyst.

Editorial Board

Dr. Pedro Aguirre
Prof. Erdogan Alper
Dr. Subhash Banerjee
Prof. Apurba Bhattacharya
Prof. Yu-Wen Chen
Prof. Zhengdong Cheng
Prof. Ashish Dhawan

Dr. Juan García
Prof. P. Govindaswamy
Dr. Ismail Ibrahim
Prof. Ivan Kurtovic
Dr. Satish Lakhapatri
Prof. Chin-Jung Lin
Prof. Massoud(Matt) Miri

Dr. Zeeshan Nawaz
Prof. Ali Asghar Rownaghi
Dr. Lakshi Saikia
Dr. Jing Shang
Prof. Md. Hasan Zahir

Subject Coverage

All manuscripts must be prepared in English, and are subject to a rigorous peer-review process. Accepted papers will immediately appear online followed by printed in hard copy. The areas covered by Modern Research in Catalysis (MRC) include but are not limited to the following fields:

- Applications of Catalysts
- Catalysis by Nano-Materials
- Catalytic Function to Fundamental Chemical Processes at Surfaces and in Metal Complexes
- Catalytic Reactions
- Computational Catalysis
- Electrocatalysis
- Enzymatic Catalysis and Spectroscopic Methods for Structural Characterization
- Heterogeneous Catalysis
- Homogeneous Catalysis
- Novel Concepts in Surface Chemistry
- Organocatalysis
- Significant of Catalysis
- Supported Organometallic Catalysis
- Surface Chemistry
- Synthesis and Catalytic Function of Novel Inorganic Solids and Complexes
- Theoretical Methods of the Catalytic Processes

We are also interested in: 1) Short reports—2-5 page papers where an author can either present an idea with theoretical background but has not yet completed the research needed for a complete paper or preliminary data; 2) Book reviews—Comments and critiques.

Notes for Intending Authors

Submitted papers should not have been previously published nor be currently under consideration for publication elsewhere. Paper submission will be handled electronically through the website. All papers are refereed through a peer review process. For more details about the submissions, please access the website.

Website and E-Mail

<http://www.scirp.org/journal/mrc>

Email: mrc@scirp.org

What is SCIRP?

Scientific Research Publishing (SCIRP) is one of the largest Open Access journal publishers. It is currently publishing more than 200 open access, online, peer-reviewed journals covering a wide range of academic disciplines. SCIRP serves the worldwide academic communities and contributes to the progress and application of science with its publication.

What is Open Access?

All original research papers published by SCIRP are made freely and permanently accessible online immediately upon publication. To be able to provide open access journals, SCIRP defrays operation costs from authors and subscription charges only for its printed version. Open access publishing allows an immediate, worldwide, barrier-free, open access to the full text of research papers, which is in the best interests of the scientific community.

- High visibility for maximum global exposure with open access publishing model
- Rigorous peer review of research papers
- Prompt faster publication with less cost
- Guaranteed targeted, multidisciplinary audience



Website: <http://www.scirp.org>

Subscription: sub@scirp.org

Advertisement: service@scirp.org