

Photocatalysis Applications

RSC Energy and Environment Series

Editor-in-Chief:

Professor Laurence M. Peter, *University of Bath, UK*

Series Editors:

Dr Heinz Frei, *Lawrence Berkeley National Laboratory, USA*

Dr Roberto Rinaldi, *Max Planck Institute for Coal Research, Germany*

Professor Tim S. Zhao, *The Hong Kong University of Science and Technology, Hong Kong, China*

Titles in the Series:

- 1: Thermochemical Conversion of Biomass to Liquid Fuels and Chemicals
- 2: Innovations in Fuel Cell Technologies
- 3: Energy Crops
- 4: Chemical and Biochemical Catalysis for Next Generation Biofuels
- 5: Molecular Solar Fuels
- 6: Catalysts for Alcohol-Fuelled Direct Oxidation Fuel Cells
- 7: Solid Oxide Fuel Cells: From Materials to System Modeling
- 8: Solar Energy Conversion: Dynamics of Interfacial Electron and Excitation Transfer
- 9: Photoelectrochemical Water Splitting: Materials, Processes and Architectures
- 10: Biological Conversion of Biomass for Fuels and Chemicals: Explorations from Natural Utilization Systems
- 11: Advanced Concepts in Photovoltaics
- 12: Materials Challenges: Inorganic Photovoltaic Solar Energy
- 13: Catalytic Hydrogenation for Biomass Valorization
- 14: Photocatalysis: Fundamentals and Perspectives
- 15: Photocatalysis: Applications

How to obtain future titles on publication:

A standing order plan is available for this series. A standing order will bring delivery of each new volume immediately on publication.

For further information please contact:

Book Sales Department, Royal Society of Chemistry, Thomas Graham

House, Science Park, Milton Road, Cambridge, CB4 0WF, UK

Telephone: +44 (0)1223 420066, Fax: +44 (0)1223 420247

Email: booksales@rsc.org

Visit our website at www.rsc.org/books

Photocatalysis

Applications

Edited by

Dionysios D Dionysiou

University of Cincinnati, Cincinnati, Ohio, USA

Email: dionysios.d.dionysiou@uc.edu

Gianluca Li Puma

Loughborough University, Loughborough, UK

Email: g.lipuma@lboro.ac.uk

Jinhua Ye

National Institute for Materials Science (NIMS), Tsukuba, Japan

Email: Jinhua.YE@nims.go.jp

Jenny Schneider

Leibniz University of Hannover, Hannover, Germany

Email: schneid@iftc.uni-hannover.de

Detlef Bahnemann

Leibniz University of Hannover, Hannover, Germany

Email: bahnemann@iftc.uni-hannover.de



RSC Energy and Environment Series No. 15

Print ISBN: 978-1-78262-709-8

PDF eISBN: 978-1-78262-710-4

EPUB eISBN: 978-1-78262-798-2

Two-volume set print ISBN: 978-1-78262-714-2

ISSN: 2044-0774

A catalogue record for this book is available from the British Library

© The Royal Society of Chemistry 2016

All rights reserved

Apart from fair dealing for the purposes of research for non-commercial purposes or for private study, criticism or review, as permitted under the Copyright, Designs and Patents Act 1988 and the Copyright and Related Rights Regulations 2003, this publication may not be reproduced, stored or transmitted, in any form or by any means, without the prior permission in writing of The Royal Society of Chemistry, or in the case of reproduction in accordance with the terms of licences issued by the Copyright Licensing Agency in the UK, or in accordance with the terms of the licences issued by the appropriate Reproduction Rights Organization outside the UK. Enquiries concerning reproduction outside the terms stated here should be sent to The Royal Society of Chemistry at the address printed on this page.

The RSC is not responsible for individual opinions expressed in this work.

The authors have sought to locate owners of all reproduced material not in their own possession and trust that no copyrights have been inadvertently infringed.

Published by The Royal Society of Chemistry,
Thomas Graham House, Science Park, Milton Road,
Cambridge CB4 0WF, UK

Registered Charity Number 207890

For further information see our web site at www.rsc.org

Printed in the United Kingdom by CPI Group (UK) Ltd, Croydon, CR0 4YY, UK