

Polymer Photovoltaics

Materials, Physics, and Device Engineering

RSC Polymer Chemistry Series

Editor-in-Chief:

Professor Ben Zhong Tang, *The Hong Kong University of Science and Technology, Hong Kong, China*

Series Editors:

Professor Alaa S. Abd-El-Aziz, *University of Prince Edward Island, Canada*

Professor Stephen Craig, *Duke University, USA*

Professor Jianhua Dong, *National Natural Science Foundation of China, China*

Professor Toshio Masuda, *Shanghai University, China*

Professor Christoph Weder, *University of Fribourg, Switzerland*

Titles in the Series:

- 1: Renewable Resources for Functional Polymers and Biomaterials
- 2: Molecular Design and Applications of Photofunctional Polymers and Materials
- 3: Functional Polymers for Nanomedicine
- 4: Fundamentals of Controlled/Living Radical Polymerization
- 5: Healable Polymer Systems
- 6: Thiol-X Chemistries in Polymer and Materials Science
- 7: Natural Rubber Materials: Volume 1: Blends and IPNs
- 8: Natural Rubber Materials: Volume 2: Composites and Nanocomposites
- 9: Conjugated Polymers: A Practical Guide to Synthesis
- 10: Polymeric Materials with Antimicrobial Activity: From Synthesis to Applications
- 11: Phosphorus-Based Polymers: From Synthesis to Applications
- 12: Poly(lactic acid) Science and Technology: Processing, Properties, Additives and Applications
- 13: Cationic Polymers in Regenerative Medicine
- 14: Electrospinning: Principles, Practice and Possibilities
- 15: Glycopolymer Code: Synthesis of Glycopolymers and their Applications
- 16: Hyperbranched Polymers: Macromolecules in-between of Deterministic Linear Chains and Dendrimer Structures
- 17: Polymer Photovoltaics: Materials, Physics, and Device Engineering

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

Polymer Photovoltaics Materials, Physics, and Device Engineering

Edited by

Fei Huang

*South China University of Technology, Guangzhou, PR China
Email: msfhuang@scut.edu.cn*

Hin-Lap Yip

*South China University of Technology, Guangzhou, PR China
Email: msangusyip@scut.edu.cn*

Yong Cao

*South China University of Technology, Guangzhou, PR China
Email: yongcao@scut.edu.cn*



RSC Polymer Chemistry Series No. 17

Print ISBN: 978-1-84973-987-0

PDF eISBN: 978-1-78262-230-7

ISSN: 2044-0790

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