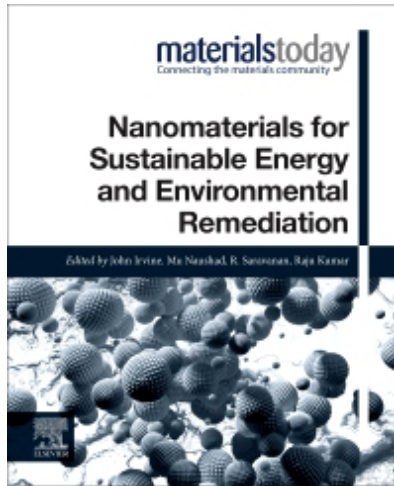




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Nanomaterials for Sustainable Energy and Environmental Remediation

1st Edition

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Editors: Mu. Naushad, R. Saravanan, Raju Kumar

Paperback ISBN: 9780128193556

eBook ISBN: 9780128193563

Imprint: Elsevier

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Description

Nanostructured materials, especially, 1D, 2D and 3D nanostructures, and their engineered architectures are being increasingly used due to their potential to achieve sustainable development in energy and environmental sectors, providing a solution to a range of global challenges. A huge amount of research has been devoted in the recent past on the fine-tuning of nano-architectures to accomplish innovations in energy storage and conversions, i.e., batteries, supercapacitors, fuel cells, solar cells, and electrochromic devices, bifunctional catalysts for ORR and OER, gas to fuels, liquid to fuels, and photocatalysts, corrosion, electrochemical sensors, and pollution and contaminants removal.

Nanomaterials for Sustainable Energy and Environmental Remediation describes the fundamental aspects of a diverse range of nanomaterials for the sustainable development in energy and environmental remediation in a comprehensive manner. Experimental studies of various nanomaterials will be discussed along with their design and applications, with specific attention to various chemical reactions involving and their challenges for catalysis, energy storage and conversion systems, and removal of pollutants are addressed. This book will also emphasise the challenges with past developments and direction for further research, details pertaining to the current ground - breaking technology and future perspective with multidisciplinary approach on energy, nanobiotechnology and environmental science

Key Features

- Summarizes the latest advances in how nanotechnology is being used in energy and environmental science

- Helps materials scientists and engineers make selection and design decisions regarding which nanomaterial to use when creating new products and devices for energy and environmental applications

Readership

Academics and R&D industry researchers in the fields of materials science and engineering

Details

No. of pages: 402

Language: English

Copyright: © Elsevier 2020

Published: 27th March 2020

Imprint: Elsevier

Paperback ISBN: 9780128193556

eBook ISBN: 9780128193563

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