

NEW RESEARCH IN SUSTAINABLE DEVELOPMENT

Edited by

Dr. Sapna Nehra
Associate Professor
Nirwan University Jaipur, Rajasthan

Dr. Ravi Kant Modi
Professor & Dean
Department of Commerce and Management
Nirwan University Jaipur, Rajasthan

Published by



Nirwan University Jaipur
Near Bassi-Rajadhok Toll, Village- Jhar
Agra Road, Jaipur – 303305 Rajasthan

© Authors

This book, or any part thereof must not be reproduced or reprinted in any form, whatsoever, without the written permission of authors except for the purpose of references and review.

Edition: 2024

ISBN: 978-81-975412-4-7

Price: 1395/-

Published by:
Nirwan University Jaipur
Rajasthan-303305

Printed by:
Inspira
Jaipur-302018

Disclaimer

The originality and authenticity of papers in this volume and the opinions and facts expressed therein are the sole responsibility of the authors.

Nirwan University Jaipur, Rajasthan & the editor of this volume disclaim the responsibility for originality, authenticity and any statement of facts or opinions by the authors.

Contents

Preface.....	i
About the Editors.....	iii
Contributors.....	v
Chapter 1 Water Resource Management: Challenges and Opportunities for Sustainable Development.....	1
<i>Ramesh Chandran K and Sapna Nehra</i>	
Chapter 2 Potential of Nanocellulose as A Sustainable Replacement of CNTs in Water Purification Methods.....	38
<i>Anusha Srinivas, Ramesh Chandran K, Sreeja P C and Sapna Nehra</i>	
Chapter 3 Renewable Energy Technologies for Sustainable Development.....	61
<i>Sreeja P C and Sapna Nehra</i>	
Chapter 4 Greening the Energy Sector: The Role of Ammonia in the Hydrogen Economy.....	93
<i>Rashmi Singh and Ajay Singh Verma</i>	
Chapter 5 Dynamics Determinants of Green Banking Practices in Meeting Sustainable Development Goals: A Sem Analysis.....	118
<i>Ravi Kant Modi</i>	
Chapter 6 Eco-Conscious Commerce: Bridging Green Marketing and Sustainable Development.....	136
<i>Barkha Rani, Peeyush Kumar Kamlesh and Ravi Kant Modi</i>	
Chapter 7 Photogalvanic Cells for Sustainable Development: A Renewable Energy Perspective.....	153
<i>Rajendra Kumar</i>	

Preface

Sustainable Development Requires Human Ingenuity. People are the Most Important Resource.

Dan Shecht man

In recent years, the urgent call for sustainable development has intensified, driven by the undeniable impacts of climate change, resource depletion, and social inequality. This collection, "New Research in Sustainable Development," aims to explore innovative approaches and solutions that address these pressing challenges. Our understanding of sustainability has evolved significantly, incorporating interdisciplinary perspectives that span environmental science, economics, social justice, and technology. The contributions in this book reflect the latest research and emerging trends, offering insights into how we can create resilient systems that benefit both people and the planet. Each chapter presents valuable findings that indicate sustainable development. Chapter 1 describes the challenges and opportunities that come in the way of sustainability in the form of water resource management. Further, explore the advancement in water quality management. Chapter 2 discussed how bioadsorbent could be a better source of water purification over carbon nanotubes.

Chapter 3 focuses on renewable energy technologies to conserve natural resources, from deterioration. Chapter 4 explains how ammonia can boost the hydrogen sector resulting in the greenhouse sector. Also indicates that by 2050, the transportation

industry could potentially utilize an astounding 100 million metric tons of NH_3 yearly.

Chapter 5 discussed green banking practices to achieve sustainable goals. Chapter 6 elaborated on the implication of E-Commerce can develop a holistic approach in marketing which aims at delivery of environmental sustainability, social responsibility, and future valuation. In Chapter 7 the photogalvanic cells represent a promising technology with significant potential to drive sustainable development and address pressing energy and environmental challenges. We hope this book serves as a resource for researchers, policymakers, educators, and anyone committed to making a positive impact on our planet.

Sapna Nehra

Ravi Kant Modi

About the Editors



Dr. Sapna Nehra earned her M.Sc., Ph.D. From Banasthali Vidyapith and she has taught at various Universities. Currently, she has been working as Associate Professor, at Nirwan University Jaipur. She is guiding five Ph.D. scholars. Dr. Nehra has contributed twelve research papers with SCI and Scopus indexing and thirty-six book chapters. She has reviewed several manuscripts of ACS, Elsevier, and Springer. Dr. Nehra is also the editor of the CRC Press book and presented her work at numerous national and international conferences.

She was awarded with Excellence award for promoting research and innovation at an international conference (2023) by NMIET Bhubaneswar, Odisha. She has delivered many invited lectures and radio talks. She has served as an organizing secretary for many conferences, workshops, and FDPs.



Dr. Ravi Kant Modi is currently working as an Professor & Dean in the Department of Commerce and Management, Nirwan University Jaipur, Rajasthan, India. He is a distinguished faculty member bringing with him an extensive 13 years of teaching experience. His dedication to research has been recognized through the prestigious Young Researcher Award, bestowed upon him on September 5, 2021. As an author, He has contributed to the academic community through his textbooks and edited books. Moreover, he has published over 40 papers in renowned National and International journals, including notable Scopus journals. His expertise in research is further exemplified by his position as an editorial board member for reputable journals. Recently he has awarded best paper presentation award (Silver Medal) in the 75th All India Commerce Conference at Udaipur.

Contributors

Ramesh Chandran K

School of Basic and Applied Sciences, Nirwan University Jaipur,
Rajasthan 303305, India

Innovation Centre, Mane Kancor Ingredients Private Limited,
Cochin, Kerala – 683573, India

Anusha Srinivas

School of Basic and Applied Sciences, Nirwan University Jaipur,
Rajasthan 303305, India

Innovation Centre, Mane Kancor Ingredients Private Limited,
Cochin, Kerala – 683573, India

Sreeja P C

School of Basic and Applied Sciences, Nirwan University Jaipur,
Rajasthan 303305, India

Innovation Centre, Mane Kancor Ingredients Private Limited,
Cochin, Kerala – 683573, India

Rashmi Singh

Department of Physics, Institute of Applied Sciences &
Humanities, G.L. A. University, Mathura, Uttar Pradesh, India.

Ajay Singh Verma

Division of Research & Innovation, School of Applied and Life Sciences, Uttarakhand University, Dehradun, Uttarakhand, India.

Ravi Kant Modi

School of Commerce & Management, Nirwan University Jaipur, Rajasthan 303305, India

Rajendra Kumar

School of Basic and Applied Sciences, Nirwan University Jaipur, Rajasthan 303305, India

Sapna Nehra

School of Basic and Applied Sciences, Nirwan University Jaipur, Rajasthan 303305, India

Peeyush Kumar Kamlesh

School of Basic & Applied Sciences, Nirwan University Jaipur, Rajasthan 303305, India