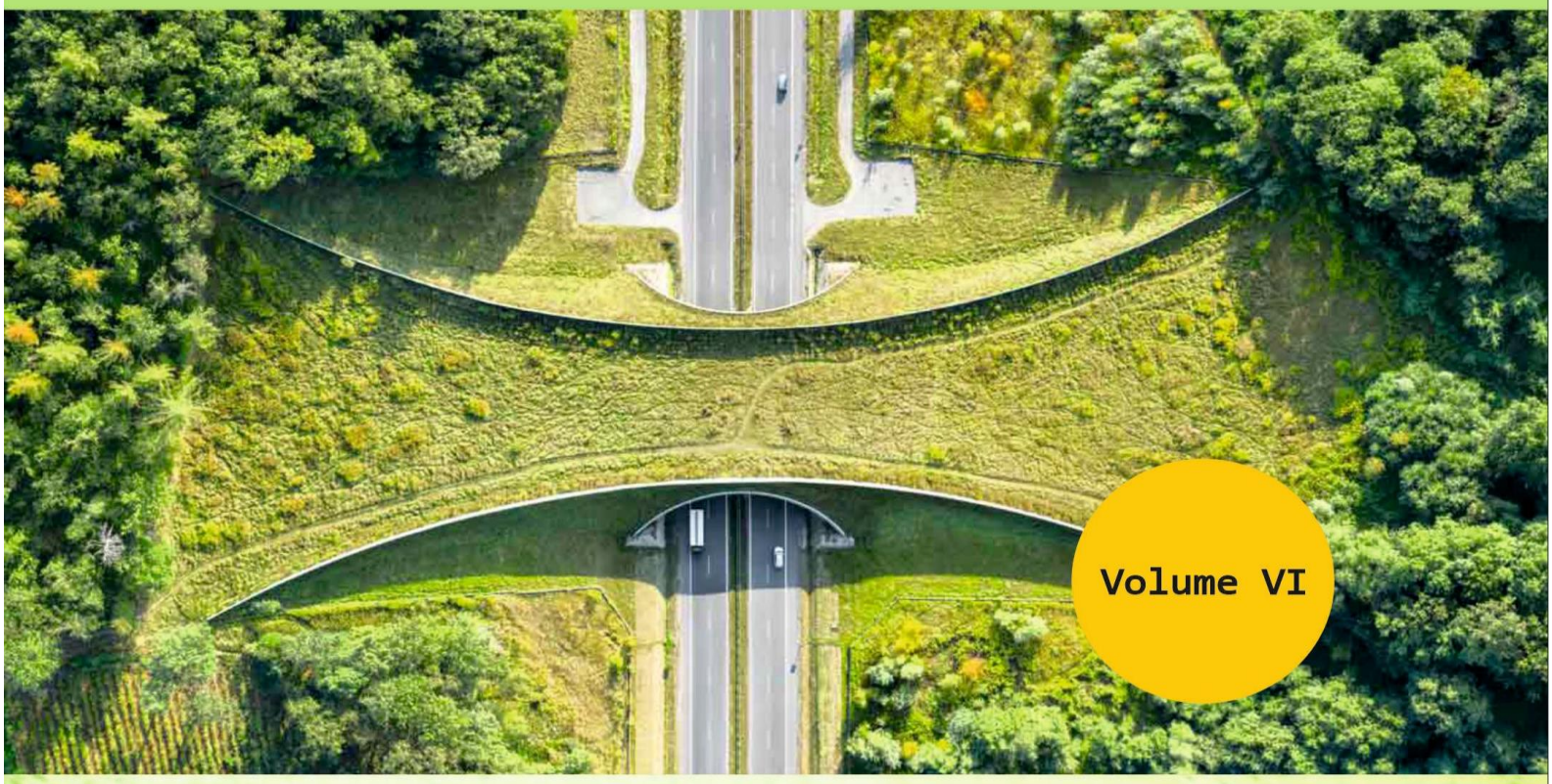
Bridging Sustainable Solutions in a Multidisciplinary Approach



Dr. S. Ravichandran
Dr. Jyoti Rajput
Dr. Suneetha T. B.
Dr. Zeliha Selamoglu

BRIDGING SUSTAINABLE SOLUTIONS IN A MULTIDISCIPLINARY APPROACH

Volume VI

Editors

Dr. S. Ravichandran
Professor, Department of Chemistry,
Lovely Professional University, Jalandhar, Punjab.

Dr. Jyoti Rajput
Professor in Physics,
Lovely Professional University, Jalandhar, Punjab.

Dr. Suneetha T. B.
Associate Professor and Head,
Department of Biotechnology.

Dr. Zeliha Selamoglu
Professor, Medical Biology Department,
Nigde Ömer Halisdemir University, Turkey.

Kripa-Drishti Publications, Pune.

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Edited By: **Dr. S. Ravichandran, Dr. Jyoti Rajput, Dr. Suneetha T. B., Dr. Zeliha Selamoglu**

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A/ 503, Poorva Height, SNO 148/1A/1/1A,
Sus Road, Pashan- 411021, Pune, Maharashtra, India.
Mob: +91-8007068686
Email: editor@kdpublications.in
Web: https://www.kdpublications.in

PREFACE

"**Bridging Sustainable Solutions in a Multidisciplinary Approach**" is our collective effort to bring together diverse perspectives, knowledge, and methods to tackle the complex issues of sustainability. This book is meant to be a guide and inspiration for researchers, practitioners, policymakers, and students who are passionate about creating innovative and lasting solutions for a sustainable future. Sustainability is a multifaceted goal that demands insights from environmental science, engineering, economics, social sciences, and more. This book stems from the understanding that isolated approaches are insufficient; we need a collaborative, multidisciplinary strategy to address the interconnected challenges we face.

We have gathered contributions from leading experts around the world, each bringing unique insights into crucial areas such as renewable energy, sustainable urban development, resource management, social equity, and environmental policy. Through cutting-edge research and real-world case studies, this book showcases the potential for innovative solutions. The variety of perspectives and methods highlights the necessity of a holistic approach to sustainability.

The chapters in this book balance theoretical foundations with practical applications, bridging the gap between academic research and real-world implementation. By presenting rigorous analysis and compelling stories, we emphasize the importance of systems thinking, interdisciplinary collaboration, and adaptive strategies in addressing 21st-century sustainability challenges. We hope this book will be a valuable resource for anyone committed to advancing sustainable practices and policies. Whether you're an experienced professional or new to the field, we aim to inspire and equip you to contribute effectively to global sustainability efforts.

As we embark on this journey toward a more sustainable future, it is our hope that "**Bridging Sustainable Solutions in a Multidisciplinary Approach**" will both inform and inspire action. Let's work together to create pathways that ensure the well-being of our planet and future generations. We extend our deepest gratitude to all contributors for their invaluable insights and to our readers for their dedication to making a positive impact. We would also like to express our heartfelt gratitude to our publisher **Mrs. Rajani Adam** for her immense love and moral support and timely help in bringing out the book in a decent form. Our hope is that this book serves not only as a source ofinformation but also as a catalyst for meaningful action. We believe that the readers will find the insights and perspectives contained herein both enlightening and motivating for meaningful change and a testament to the power of multidisciplinary collaboration in achieving sustainable solutions.

Dr. Ravichandran
Dr. Jyoti Rajput
Dr. Suneetha T.B.
Dr. Zeliha Selamoglus

CONTENT

ABOUT THE EDITORS

Dr. S. Ravichandran is currently working as Professor in the Department of Chemistry at Lovely Professional University, Jalandhar, Punjab. He completed his Ph.D. in 2006 from Madurai Kamaraj University, Madurai (Tamilnadu) and M.Sc. from Pondicherry University, Pondicherry. He has qualified in GATE with a score of 95 percentile conducted by Ministry of Human Research and Development in the year 1998. He has 18 years of Teaching and Research experiences and published 175 International papers. He has published 14 patents and 12 Textbooks and 50 book chapters. He has received many prestigious awards like Bharat Shiksha Ratan award, Lifetime achievement, Academic Excellence and Incredible Researcher award etc., He has been serving as Editor-in Chief and Editorial board members in many reputed journals. He has been a Life membership in Indian Science Congress Association, Kolkata. His current interest is to focus on the development of novel greener methodology for a Sustainable Development.

Dr. Jyoti Rajput received her Ph.D. degree from NIT Jalandhar, Punjab in 2019. She is currently working as Professor of Physics at Lovely Professional University, Punjab. Her research focused areas deal with laser induced electron acceleration in vacuum and plasma (DLA, LBWA, PBWA), harmonic generation and THz radiation. She has published around 35 research articles in various international SCI journals and presented her research work at various international conferences/workshops. She is also a member of different renowned associations/societies e.g., PSSI, ISCA etc. She has been an active reviewer of esteemed international journals. She has delivered many international invited speakers research talks at eminent conferences. She was awarded the prestigious young researcher of the year award 2022 by Institute of Scholars, Govt. of India. She has been the editorial board member of many reputed journals. She has authored 2 international research books and edited 1 international and 3 National books.

Dr. Suneetha T. B. currently working as an Associate professor and Head, Department of Biotechnology, Acharya Institute of Technology, has more than 25 years of experience in teaching and research. She has awarded the state level best project award from Karnataka State Council Science and Technology consecutively for the last 3 years. She has got projects from BIRAC SITARA. She has been selected for the final round of national level AICTE prototype model contest and AICTE Chatra Vishwakarma award contest. She has published over 30 scientific research papers in International and National refereed Journals in the areas of Chemical Engineering, Phytochemistry, Toxicology, Environmental research work. She is the recipient of best papers awards for her research work on Bovine mastitis. She is a life member IIChe, ISTE, ECSI, ZWSI and IAENG. Dr. She has been honored with Karnataka Suvarna shri award and Golden Educationist of India Award for excellence in education. She has been actively involved in accreditation process also.

Dr. Zeliha Selamoglu holds the distinguished position of Professor within the Medical Biology department at Nigde Ömer Halisdemir University, Turkey. She obtained her Doctorate in Biology from Inonu University. She has published over 295 peer-reviewed journal articles and having H-index of 45. She has lent her expertise to various editorial boards across multiple academic journals. Her scholarly pursuits revolve around diverse themes within the realm of medical biology. She has conducted extensive inquiries into the anti hypertensive effects of organoselenium compounds. Furthermore, her research delves into the biological activities of natural protective agents, vital for the detoxification of hazardous chemicals. Her research interests are Medical Biology, Molecular Biology, Biochemistry, Biotechnology, Oxidative stress, Antioxidants, Antiaging and Cancer.

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A-503 Poorva Heights, Pashan-Sus Road, Near Sai Chowk,
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