Synthesis Lectures on Chemical Engineering and Biochemical Engineering

SYNTHESIS COLLECTION OF TECHNOLOGY

Javid A. Parray · Wen-Jun Li

Microbial and Enzyme-Based Technology for Plastic Biodegradation

Springer

Synthesis Lectures on Chemical Engineering and Biochemical Engineering

This series publishes short books on all aspects of chemical engineering, covering the analysis or design of chemical processes to effectively convert materials into more useful materials or energy. The books will focus on fundamental aspects necessary for chemical engineering design including chemistry, math, physics, and sometimes biology to improve the quality of life by inventing, optimizing, and economizing new technologies and products.

Javid A. Parray · Wen-Jun Li

Microbial and Enzyme-Based Technology for Plastic Biodegradation

Springer

Javid A. Parray
State Key Laboratory of Desert and Oasis Ecology, Xinjiang Institute of Ecology and Geography
Chinese Academy of Sciences
Urumqi, China

Department of Environmental Science
GDC Eidgah
Cluster University Srinagar
Srinagar, Jammu and Kashmir, India

Wen-Jun Li
School of Life Sciences
Sun Yat-sen University
Guangzhou, China

ISSN 2327-6738 ISSN 2327-6746 (electronic)
Synthesis Lectures on Chemical Engineering and Biochemical Engineering
ISBN 978-3-031-84436-2 ISBN 978-3-031-84437-9 (eBook)
https://doi.org/10.1007/978-3-031-84437-9

This Springer imprint is published by the registered company Springer Nature Switzerland AG
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

Acknowledgment

I am writing to express our sincere and profound gratitude to the Director of the Xinjiang Institute of Ecology and Geography, Chinese Academy of Science, Xinxiang, Urumqi, China, for their support under the CAS President's International Fellowship Initiative (PIFI) for Project number—2024PVB0057 Dr. Javid A. Parray under the supervision of Prof. (Dr.) Wen-Jun Li. The Key-Area Research and Development Program of Guangdong Province (2022B0202110001) also supported this work. Finally, we are grateful to Prof. Li and his team, Dr. Yong-Hong Liu, Dr. Osama Mohamad, Dr. Wasim Sajjad, Dr. Rashidin Abdugheni and Associate Profs. Bao-Zhu Fang and Suai Li, and Murad Muhammad. Their unwavering encouragement and support were instrumental in completing our study. We would also like to extend our heartfelt appreciation to the administrative staff of the Xinjiang Institute, whose often behind-the-scenes efforts were crucial in facilitating our research process. Their efficiency in managing logistical aspects considerably eased my journey and allowed us to focus on the core objectives of our project.

Moreover, we acknowledge the importance of the collaborative spirit evident within the institute, which fostered an environment ripe for learning and innovation. The interactions and discussions with fellow researchers enriched our understanding and inspired new perspectives that enhanced the overall quality of our findings. The proactive sharing of knowledge by all team members exemplifies a commitment to academic excellence that is truly commendable. As we reflect on this project's journey, we recognize the profound impact of mentorship and guidance on our academic pursuits. Professor Li's insightful feedback and encouraging words at every stage motivated us to strive for excellence, reminding us of the importance of perseverance in research.

In conclusion, this collaborative effort is a testament to the power of partnership and collective endeavour within the scientific community. We look forward to future collaborations and hope to contribute to the ongoing quest for knowledge and advancement in our respective fields. Our shared commitment to scientific inquiry will undoubtedly pave the way for even more outstanding achievements in the future.

Javid A. Parray
PIFI–CAS fellow