The Department of Chemical Engineering, National Institute of Technology Karnataka, Surathkal, India was started in the year 1965 with the assistance of UNESCO, MHRD-Government of India, and the Government of Karnataka and is consistently ranked as one of the top chemical engineering departments in India by the National Board of Accreditation. The department has completed 50 years of its glorious service to the cause of Chemical Engineering Education, Research and Industrial collaboration, and celebrated Golden Jubilee Year in 2015. In order to commemorate this important milestone, International Conference on Advances in Chemical Engineering (ICACE)—2015 was organized during December 20–22, 2015.

Chemical engineering is a branch of science that combines physical sciences (physics and chemistry) and life sciences (molecular and synthetic biology) with applied mathematics and economics to synthesize and transform chemicals, materials, and energy from various feedstocks. Essentially, chemical engineers conceptualize novel and innovative processes and implement large-scale industrial operations to produce chemicals and materials suited to every need of the society, including food, chemicals, energy, environment, and information. ICACE-2015 conference provided a platform for deliberating advances in chemical engineering as well as allied fields, through invited lectures delivered by researchers of national and international repute, and paper and poster presentation by participants from academia, research organizations, and industries.

ICACE-2015 had solicited technical and research submissions related to Industrial Biotechnology and Biochemical Engineering. Bioprocessing of renewable resources to useful products is a sustainable approach and has the wherewithal to solve some of the challenging issues facing humanity. We had an overwhelming response to our call for paper submission, and all the submitted papers were screened and selected by the technical committee on the basis of originality, significance, coherence of data and clarity. Altogether 53 papers were received; out of which 37 papers were selected for oral presentation in the conference. The papers
presented during the conference were again subjected to peer-review and plagiarism check. Based on the outcome, 26 papers have been selected for publication in this book.

We would like to thank Dr. Keyur Raval for helping us in the peer-review process. Our heartfelt thanks to Dr. Kalaivani, Mrs. Jaya Mary, and Mr. Basavaraj Nainegli for their editorial assistance. We are highly grateful to NITK administration, TEQIP, and technical committee members for their cooperation. The efforts by faculty, staff, students, and alumni of NITK Surathkal in organizing ICACE-2015 are greatly appreciated. We are grateful to all those who have contributed directly and indirectly for the success of this event. We hope that all the readers will find this book volume useful and productive.

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