

# Contents

<b>1 Introduction</b> . . . . .	1
Stephen Van Dien	
<b>2 Gene Expression Engineering</b> . . . . .	7
Nicholas J. Morse and Hal S. Alper	
<b>3 Heterologous Pathway Engineering</b> . . . . .	31
Wei Niu, Jiantao Guo and Steve Van Dien	
<b>4 Leveraging Gene Synthesis, Advanced Cloning Techniques, and Machine Learning for Metabolic Pathway Engineering</b> . . . . .	53
Kedar G. Patel, Mark Welch and Claes Gustafsson	
<b>5 Tolerance of Microbial Biocatalysts to Feedstocks, Products, and Environmental Conditions</b> . . . . .	73
Mian Huang, George Peabody and Katy C. Kao	
<b>6 Biobased Technology Commercialization: The Importance of Lab to Pilot Scale-up</b> . . . . .	101
James P. Wynn, Robert Hanchar, Susanne Kleff, David Senyk and Tonya Tiedje	
<b>Index</b> . . . . .	121

Metabolic Engineering for Bioprocess Commercialization

Van Dien, S. (Ed.)

2016, V, 122 p. 10 illus., 6 illus. in color., Hardcover

ISBN: 978-3-319-41964-0