
Contents

1	Biohydrogen: Next Generation Fuel	1
	Anoop Singh and Dheeraj Rathore	
2	Biohydrogen Production Potential of Different Biomass Sources	11
	Hidayet Argun, Pelin Gokfiliz, and Ilgi Karapinar	
3	Biohydrogen Production from Agricultural Biomass and Organic Wastes	49
	Nicholas E. Korres and Jason K. Norsworthy	
4	Trends and Challenges in Biohydrogen Production from Agricultural Waste	69
	Lucile Chatellard, Antonella Marone, Hélène Carrère, and Eric Trably	
5	Exploiting Biohydrogen Pathways of Cyanobacteria and Green Algae: An Industrial Production Approach	97
	Anubha Kaushik and Mona Sharma	
6	Characterization and Screening of Algal Strains for Sustainable Biohydrogen Production: Primary Constraints	115
	Ramkrishna Ghosh, Punyasloke Bhadury, and Manojit Debnath	
7	Challenges in the Design and Operation of an Efficient Photobioreactor for Microalgae Cultivation and Hydrogen Production	147
	Surajbhan Sevda, Sourish Bhattacharya, Ibrahim M. Abu Reesh, S. Bhuvanesh, and T.R. Sreekrishnan	
8	Sustainability of Biohydrogen Production Using Engineered Algae as a Source	163
	Khorcheska Batyrova and Patrick C. Hallenbeck	
9	Biohydrogen Production from Microalgae: An Enzyme Perspective	181
	Ayse Kose and Suphi S. Oncel	

10 Biohydrogen Production Scenario for Asian Countries	207
Rupam Kataki, Rahul S. Chutia, Neon J. Bordoloi, Ruprekha Saikia, Debashis Sut, Rumi Narzari, Lina Gogoi, G.N. Nikhil, Omprakash Sarkar, and S. Venkata Mohan	
11 Waste-to-Hydrogen Energy in Saudi Arabia: Challenges and Perspectives	237
R. Miandad, M. Rehan, O.K.M. Ouda, M.Z. Khan, K. Shahzad, I.M.I. Ismail, and A.S. Nizami	
12 Biohydrogen Economy: Challenges and Prospects for Commercialization	253
Mona Sharma and Anubha Kaushik	
13 Comparative Environmental Life Cycle Assessment of Biohydrogen Production from Biomass Resources	269
Christina Wulf, Lisa Thormann, and Martin Kaltschmitt	
14 Biohydrogen: Global Trend and Future Perspective	291
Ratan Singh, Anoop Singh, and Dheeraj Rathore	
Index.....	317

Biohydrogen Production: Sustainability of Current
Technology and Future Perspective

Singh, A.; Rathore, D. (Eds.)

2017, XVIII, 320 p. 44 illus., 36 illus. in color., Hardcover

ISBN: 978-81-322-3575-0