

Contents

Part I Biochemical Conversion

- 1 Evaluation of Growth and Lipid Profiles in Six Different Microalgal Strains for Biofuel Production** 3
Kashif M. Shaikh, Asha A. Nesamma, Malik Z. Abdin
and Pavan P. Jutur

Part II Chemical Conversion

- 2 Physicochemical Assessment of Pumpkin (*Cucurbita pepo* L.) Seed Oil as a Viable Feedstock for Biodiesel Production** 19
Bichitra Bikash, Nabajit Dev Choudhury, Dilip Kumar Bora
and Kalyan Kalita
- 3 Performance and Emission Parameters of Single Cylinder VCR Engine Fuelled with Argemone Biodiesel and Blend with Diesel Fuel** 29
Parmjit Singh, Sandeep Kumar Duran and Inderpreet Singh
- 4 Studies on Properties of Biodiesel Prepared from Microalgae (*Chlorella* sp.)** 53
S.V. Kelaiya and P.M. Chauhan
- 5 Ultrasound-Assisted Biodiesel Production Using KI-Impregnated Zinc Oxide (ZnO) as Heterogeneous Catalyst: A Mechanistic Approach** 67
Ritesh S. Malani, Sohan Singh, Arun Goyal
and Vijayanand S. Moholkar
- 6 Experimental Evaluation of Cottonseed Biodiesel as an Alternative Fuel for Diesel Engine** 83
Pankaj S. Shelke, Nitin M. Sakhare, Subhash Lahane and N.G. Patil

Part III Thermochemical

- 7 **Pyrolytic Characterization and Kinetic Analysis of *Camellia sinensis* (Tea) Seed Deoiled Cake** 97
Nabajit Dev Choudhury, Bichitra Bikash and Rupam Kataki
- 8 **Development of Nanobased Thermic Fluid: Thermal Aspects of New Energy System** 107
Shriram S. Sonawane and Vijay Juwar
- 9 **Strategies for Producer Gas Cleaning in Biomass Gasification: A Review** 115
Haresh V. Makwana, Darshit S. Upadhyay, Jayesh J. Barve and Rajesh N. Patel

Part IV Biomass Management

- 10 **Partial Replacement of Aggregates Using Agricultural Waste in Concrete Manufacturing** 131
Ranjeet Singh, Amit Arora, Gurmit Singh and Anand K. Tyagi
- 11 **Characterization of Wood Apple Shell Particles** 139
O. Shakuntala, G. Raghavendra and S.K. Acharya
- 12 **Governance of Sustainable Agriculture Schemes in India with Special Reference to Bio-fertilizer Project and Analysis** 147
Navreet and Ravneet Kaur

Part V Waste to Management

- 13 **Sequencing Batch Reactor Technique for Municipal Sewage Treatment with Carbon Credits** 159
R.R. Marlar, Vigneshwaran Aiyappan, S.S. Rao and S. Bajpai

Part VI Integrated System

- 14 **Convective Heat Transfer of Metal Oxide-Based Nanofluids in a Shell and Tube Heat Exchanger** 183
Nishant Kumar and Shriram S. Sonawane

Conference Proceedings of the Second International
Conference on Recent Advances in Bioenergy Research
ICRABR 2016

Kumar, S.; Sani, R.K.; Yadav, Y.K. (Eds.)

2018, VIII, 192 p. 83 illus., 63 illus. in color., Hardcover

ISBN: 978-981-10-6106-6