

CONTENTS

<i>Foreword</i> .....	5
<i>Plenary Lecture</i> .....	
<i>W.A. Wakeham, M.J Assael, The dangerous nexus of process simulation, molecular modelling and physical reality</i> .....	9
<i>Biomass conversion processes: technologies and thermodynamic modeling</i> .....	
<i>J.A.P. Coelho, S. Boyadjieva, R.M. Filipe, M.P. Robalo, G.St. Cholakov, R.P. Stateva, Supercritical CO<sub>2</sub> extraction of feed stocks to generate high added value bio-products ..</i>	25
<i>R.M. Filipe, J.A.P. Coelho, M.P. Robalo, G.St. Cholakov, R.P. Stateva, Modelling the kinetics of supercritical CO<sub>2</sub> extraction of biomass</i> .....	30
<i>S.M. Stefanov, D.L. Fetzer, A.C. Rieder, M.L. Corazza, R.P. Stateva, Extraction and characterization of Burdock extracts (leaves, seeds and roots) with compressed solvents technologies</i> .....	35
<i>M.L. Corazza, E.L.N. Escobar, D.T. Melfi, L.P. Ramos, Extraction of lipids from waste biomass using compressed solvents: Kinetic and thermodynamic aspects</i> .....	39
<i>P. Paramos, M.L. Corazza, H.A. Matos, Studies on extraction from Avocado's waste biomass to generate process design alternatives of valuable products</i> .....	46
<i>G. Santzouk, S. Santzouk, I. Gerodimou, D. Tsaoulidis, M. Dormousoglou, Opuntia ficus indica (Prickly pear): extraction and characterization of products with anti-age and antioxidant activity</i> .....	52
<i>P. Hernández-Pérez, A. Bonilla-Petriciolet, R.P. Stateva, Phase stability analysis of multicomponent systems using alternative stochastic optimization methods</i> .....	56
<i>F.J. Villalobos-Delgado, L. di Bitonto, C. Pastore, H.E. Reynel-Ávila, D.I. Mendoza-Castillo, A. Bonilla-Petriciolet, Green solvent extraction of lipids from sewage sludge of wastewater treatment plants</i> .....	61
<i>Biorefinery and biofuels</i> .....	
<i>M. Errico, C. Pastore, An economically viable two-step process for biodiesel production from waste cooking oils</i> .....	67
<i>L.P. Ramos, M.J. Suota, G. Pavanelli, M.L. Corazza, The role of biomass pretreatment for sustainable biorefineries</i> .....	70
<i>D. Tsaoulidis, F. Farooqui, E.G. Ortega, P. Angeli, Scale-up studies for intensified production of biodiesel from used cooking oil</i> .....	77
<i>O. Becerra-Pérez, S. Georgopoulos, H.E. Reynel-Avila, D.I. Mendoza-Castillo, M. Papadaki, A. Bonilla-Petriciolet, Recovery of bioalcohols with potential as biofuels using an energetically sustainable separation strategy</i> .....	81
<i>L. di Bitonto, H.E. Reynel-Ávila, D.I. Mendoza-Castillo, A. Bonilla-Petriciolet, C.J. Durán-Valle, C. Pastore, Synthesis, characterization and applications of carbon-based calcium catalysts deriving from avocado seeds for biodiesel production from waste cooking oil</i> .....	85
<i>D. Chaos-Hernández, H.E. Reynel-Avila, D.I. Mendoza-Castillo<sup>2</sup>, A. Bonilla-Petriciolet, Evaluation of the synthesis routes for the preparation of heterogeneous catalysts obtained from coconut shell and its application in the biodiesel production</i> .....	89
<i>A. Criado, M. Martín, Integrated facility for the use of oranges as a source for power, chemicals and juice</i> .....	93
<i>Valorization of biomass waste streams</i>	
<i>L. di Bitonto, H.E. Reynel-Avila, D.I. Mendoza-Castillo, C. Pastore, A. Bonilla-Petriciolet, Mexican biomass wastes: valorization for potential application in bioenergy</i> .....	99
<i>A. Angelini, L. di Bitonto, E. Zikou, S. Santzouk, G. Santzouk, M.C. Roda-Serrat, M. Errico, C. Pastore, Assessing of potential of Aronia berries residue after juice extraction as a feedstock for platform molecules production</i> .....	103
<i>M.C. Roda-Serrat, T.A. Andrade, M. Errico, Optimization of the Anthocyanins extraction process from Aronia berries pomace</i> .....	106

G. Santzouk, S. Santzouk, I. Gerodimou, P. Angeli, M. Dormousoglou, Red grape skin and seeds: extraction and characterization of flavonoids (anthocyanins) and wine production waste biomass valorization .....	108
G. Naydenova, D. Yankov, Butyric acid production by fermentation of waste hydrolysates .....	111
I. Efthimiou, M. Dormousoglou, D. Vlastos, M. Papadaki, Towards improved valorisation of ( <i>Betula pendula</i> ): preliminary study of the genotoxic, antigenotoxic and cytotoxic potential of a commercial aqueous silver birch leaf extract .....	115
D. Sengupta, M. El-Halwagi, R.P. Stateva, S. Santzouk, M. Papadaki, On the way to circular economy: a systems approach towards sustainable <i>Arctium Lappa</i> valorization via valuable medicinal products extraction .....	119
D.I. Mendoza-Castillo, H.E. Reynel-Ávila, A. Bonilla-Petriciolet, C. Pastore, L. di Bitonto, Avocado seeds valorization as adsorbents of priority pollutants from water .....	124
L.L. Diaz-Muñoz, H.E. Reynel-Avila, L. Di Bitonto, D.I. Mendoza-Castillo, C. Pastore, A. Bonilla-Petriciolet, The potential use of calcium-doped flamboyant char as a heterogeneous catalyst in triglycerides transesterification .....	128
INSTRUCTIONS TO THE AUTHORS .....	133