

Patents:

1. M. Ali Haider, Shelaka Gupta, **Ejaz Ahmad**, Md. Imteyaz Alam "A Process for the Production of Unsaturated C₉ Linear Ketones" (**Indian Patent Application Number: 2120/DEL/2015, Filed on 14/07/15), Granted**
2. K.K. Pant, **Shireen Quereshi**, Ejaz Ahmad, Suman Dutta, T.K. Naiya "Process of Preparation of Fuel Additives and Commodity Chemicals" Indian Patent Application # **201811017710**
3. K.K. Pant, Chandrakant Mukesh, Dinesh Gupta, **Ejaz Ahmad**, "Microwave assist one-pot liquefaction of lignocellulosic biomass to value added chemicals and biofuels using Brønsted ionic liquids and its deep eutectic solvent as catalyst as well as co-solvents" (IDF/03/2018/25)
4. K.K. Pant, K.D.P. Nigam, Prashant Jadhao, **Ejaz Ahmad**, "A Process of Producing Fuels and Recovering Metals from Waste Electrical and Electronic Equipment" Indian Patent Application#**201911029549**

Editorial Role:

1. Guest Editors, K.K. Pant, A.K. Dalai, **Ejaz Ahmad**, "Special Issue on Contemporary State of the Art in Biomass and Bio-Renewable Resources Conversion to Fuels and Chemicals" in **Materials Science for Energy Technologies Journal**, Elsevier, 2022
2. Special Mention (one paragraph) in editorial of **Special Issue of ACS "I&EC Research"** on Biorenewable Energy and Chemicals, 2019 **for assisting Prof. K.K. Pant in proposing and executing the SI.**

Books:

1. Editors, K.K. Pant, Sanjay Gupta, **Ejaz Ahmad** "Catalysis for Clean Energy and Environmental Sustainability Volume-I, Biomass Conversion and Biorefinery" Springer Nature, <https://doi.org/10.1007/978-3-030-65017-9>
2. Editors, K.K. Pant, Sanjay Gupta, **Ejaz Ahmad** "Catalysis for Clean Energy and Environmental Sustainability Volume-II, Petrochemical and Refining" Springer Nature, <https://doi.org/10.1007/978-3-030-65021-6>

Books Chapters:

1. K. A. Ahmad, M. H. Siddiqui, M. I. Alam, M. A. Haider, **Ejaz Ahmad***, "Keggin Heteropolyacid Catalysts: Synthesis, Heterogenization, and Application in Conversion of Biomass-derived Molecules" Book Chapter, in Royal Society of Chemistry, **Catalysis**, **2022**, **34**, **206–247**, *Corresponding Author
2. D. Banerjee, N. Kushwaha, **Ejaz Ahmad***, S. Quereshi, K.D.P. Nigam, "Eco-Design Strategies for Recycling of E-waste" Book Chapter, in Solid Waste Management: Chemical Approaches – Vol. 1, **CRC Press**, accepted, *Corresponding Author
3. N. Kushwaha, D. Banerjee, S. Quereshi, K. K. Pant, **Ejaz Ahmad***, "Insights into COVID-19 Waste Management: Sources, Composition, Disposal and Challenges" Book Chapter, in in Solid Waste Management: Chemical Approaches – Vol. 1, **CRC Press**, accepted, *Corresponding Author
4. S. Quereshi, **Ejaz Ahmad***, K. K. Pant "Comprehending the Application of 2D Materials in Biomass Conversion" Book Chapter, in Royal Society of Chemistry, **2021**, **33**, **214–243**, *Corresponding Author

5. S. Quereshi, Prashant R. Jadhao, Ashish Pandey, **Ejaz Ahmad***, K. K. Pant "Overview of Sustainable Fuel and Energy Technologies" Book Chapter, in **Sustainable Fuel Technologies Handbook** by Elsevier, 2020, *Corresponding Author
6. A. Pandey, A. R. Mankar, **Ejaz Ahmad***, K. K. Pant "Deep Eutectic Solvents: A Greener Approach towards Biorefineries" Book Chapter, in **Lignin Biorefinery** by Elsevier, 2020, *Corresponding Author
7. **Ejaz Ahmad**, A. Vani, K. K. Pant "Overview of fossil fuel and biomass-based integrated energy systems: co-firing, co-combustion, co-pyrolysis, co-liquefaction and co-gasification" Book Chapter, in **Fuel Processing and Energy Utilization** by CRC Press, 2019, 15-30
8. **Ejaz Ahmad**, K. K. Pant "Lignin Conversion: A Key to the Concept of Lignocellulosic Biomass based Integrated Biorefinery" Book Chapter, in **Waste Biorefinery** by Elsevier, 2018, 409-444
9. S. Quereshi, **Ejaz Ahmad**, K. K. Pant, S. Dutta "Recent Advances in Production of Biofuel and Commodity Chemicals from Algal Biomass" in **Algal Biofuels** by Springer Publication, 2016, 393-419
10. M. I. Alam, S. Gupta, **Ejaz Ahmad**, M. A. Haider "Integrated Bio- and Chemo- Catalytic Processing for Biorenewable Chemicals and Fuels" in **Sustainable Catalytic Processes** by Elsevier, 2015, 157-177

Journal Publications:

1. Nidhi Kushwaha, Debarun Banerjee, Khwaja Alamgir Ahmad, **Ejaz Ahmad***, Nagaraj P. Shetti, Tejrav M. Aminabhavi, Kamal K. Pant, "Catalytic production and application of lignocellulosic biomass derived butyl butyrate as jet fuel blend- A Review", **Journal of Environmental Management**, 2022, 310, 114772
2. P. R. Jadhao, **Ejaz Ahmad**, Ahmad, K. K. Pant, K. D. P. Nigam "Advancement in the Field of Electronic Waste Recycling: Critical Assessment of Chemical Route for Generation of Energy and Valuable Products Coupled with Metal Recovery", **Separation and Purification Technology**, 2022, 289, 120773
3. G Velvizhi, K Balakumar, NP Shetti, **Ejaz Ahmad**, KK Pant, TM Aminabhavi "Valorization of lignocellulosic biomass to value-added products: Paving the pathway towards low-carbon foot print", **Fuel**, 2022, 313, 122678
4. G Velvizhi, K Balakumar, NP Shetti, **Ejaz Ahmad**, KK Pant, TM Aminabhavi "Integrated Biorefinery Processes for Conversion of Lignocellulosic Biomass to Value Added Materials: Paving a Path Towards Circular Economy", **Bioresource Technology**, 2022, 343, 126151
5. Khursheed B Ansari, Saeikh Zaffar Hassan, Rohidas Bhoi, **Ejaz Ahmad** "Co-pyrolysis of Biomass and Plastic Wastes: A Review on Reactants Synergy, Catalyst Impact, Process Parameter, Hydrocarbon Fuel Potential, COVID-19 Waste Management", **Journal of Environmental Chemical Engineering**, 2021, 9, 6, 106436
6. Vivek Narisetty, Rylan Cox, Rajesh Reddy Reddy Bommareddy, Deepti Agrawal, **Ejaz Ahmad**, Kamal Kishore Pant, Anuj Kumar Chandel, Shashi Kant Bhatia, Dinesh Kumar, Binod Parameswaran, Vijai Gupta,

Vinod Kumar *"Valorisation of Xylose to Renewable Fuels and Chemicals, an Essential Step in Augmenting the Commercial Viability of Lignocellulosic Biorefineries"*, **Sustainable Energy & Fuels**, 2022, 6, 29–65

7. **Ejaz Ahmad**, Kamal K Pant, M A Haider *"Synthesis and application of TiO₂-supported phosphotungstic acid for ethyl levulinate production"*, **Materials Science for Energy Technologies**, 2022, 5, 189-196
8. A Negi, MI Alam, TS Khan, S Fatima, MA Haider, **Ejaz Ahmad*** *"Techno-economic analysis of a biorenewable route to produce trimellitic acid"*, **Materials Science for Energy Technologies**, 2022, 5, 45-51
9. Akshay R Mankar, **Ejaz Ahmad**, Kamal K Pant *"Insights into reductive depolymerization of Kraft lignin to produce aromatics in the presence of Pt/HZSM-23 catalyst"*, **Materials Science for Energy Technologies**, 2021, 4, 341-348
10. Vivek Narisetty, Yassin Amraoui, Alamri Abdullah, **Ejaz Ahmad**, Deepti Agrawal, Binod Parameswaran, Ashok Pandey, Saurav Goel, Vinod Kumar *"High yield recovery of 2, 3-butanediol from fermented broth accumulated on xylose rich sugarcane bagasse hydrolysate using aqueous two-phase extraction system"*, **Bioresource Technology**, 2021, 337, 125463
11. Goldy Shah, **Ejaz Ahmad**, K.K. Pant, VK Vijay *"Comprehending the Contemporary State of Art in Biogas Enrichment and CO₂ Capture Technologies via Swing Adsorption"* **International Journal of Hydrogen Energy**, 2020, 46, 9, 6588-6612
12. Prashant Jadhao, **Ejaz Ahmad**, K. K. Pant, KDP Nigam *"Environmentally Friendly Approach for the Recovery of Metallic Fraction from Waste Printed Circuit Boards using Pyrolysis and Ultrasonication"* **Waste Management**, 2020, 118, 150-160,
13. **Ejaz Ahmad***, T.S. Khan, M. I. Alam, K. K. Pant, M. A. Haider *"Understanding Reaction Kinetics, Deprotonation and Solvation of Brønsted Acidic Protons in Heteropolyacid Catalyzed Synthesis of Biorenewable Alkyl Levulinates"* **Chemical Engineering Journal**, 2020, 400, 125916, ***Corresponding Author**,
14. Richard Thomson, Philip Kwong, **Ejaz Ahmad**, K.D.P. Nigam *"Clean syngas from small commercial biomass gasifiers; a review of gasifier development, recent advances, and performance evaluation"* **International Journal of Hydrogen Energy**, 2020, 45, 41, 21087-21111,
15. S. Quereshi, **Ejaz Ahmad***, K. K. Pant, S. Dutta *"Insights into Microwave-Assisted Synthesis of 5-Ethoxymethylfurfural and Ethyl Levulinate in the Presence of Tungsten Disulfide"* **ACS Sustainable Chemistry & Engineering**, 2020, 8, 4, 1721-1729, **(Cover page article) *Corresponding Author**,
16. **Ejaz Ahmad**, M. I. Alam, K. K. Pant, M. A. Haider *"Insights into the synthesis of ethyl levulinate under microwave and nonmicrowave heating conditions"* **Industrial & Engineering Chemistry Research**, 2019, 58, 35, 16055-16064

17. Sonal, **Ejaz Ahmad**, Sreedevi Upadhyayula, K. K. Pant, "Biomass-derived CO₂ rich syngas conversion to higher hydrocarbon via Fischer-Tropsch process over Fe-Co bimetallic catalyst" **International Journal of Hydrogen Energy**, 2019, 27741-27748
18. S. Quereshi, **Ejaz Ahmad***, K. K. Pant, S. Dutta "Synthesis and Characterization of Zirconia Supported Silicotungstic Acid for Ethyl Levulinate Production" **Industrial & Engineering Chemistry Research**, 2019, 58, 35, 16045-16054, *Equal Author,
19. **Ejaz Ahmad**, N. Jäger, A. Apfelbacher, R. Daschner, A. Hornung, K. K. Pant "Integrated thermo-catalytic reforming of residual sugarcane bagasse in a laboratory scale reactor" **Fuel Processing Technology**, 2018, 171, 277-286,
20. S. Quereshi, **Ejaz Ahmad**, K. K. Pant, S. Dutta "Insights into the Metal Catalyzed Synthesis of Ethyl Levulinate from Biorenewable Feedstocks" **Catalysis Today**, 2017, 291, 187-194,
21. D. Gupta, **Ejaz Ahmad**, K. K. Pant, B. Saha "Efficient utilization of potash alum as a green catalyst for production of furfural, 5-hydroxymethylfurfural and levulinic acid from mono-sugars" **RSC Advances**, 2017, 7, 41973-41979
22. **Ejaz Ahmad**, M. I. Alam, K. K. Pant, M. A. Haider "Catalytic and Mechanistic Insights into the Production of Ethyl Levulinate from Biorenewable Feedstocks" **Green Chemistry**, 2016, **18**, 4804-4823, (Cover page article, Most Cited Article in Sustainable Segment of RSC journals 2019),
23. M. I. Alam, S. Gupta, A. Bohre, **Ejaz Ahmad**, T. S. Khan, B. Saha, M. A. Haider "Development of 6-acyl- α -pyrone as a Potential Biomass-derived Platform Molecule" **Green Chemistry**, 2016,**18**, 6431-6435, (Inside Cover Page Illustration),