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## Research output

### Manuscripts Published in Peer-reviewed Journals

[1] **Mohit Kumar**, Shivesh Sabbarwal, P.K. Mishra, S.N. Upadhyay., **2019**. Thermal Degradation Kinetics of Sugarcane Leaves (*Saccharum officinarum* L) using Thermo-gravimetric and Differential Scanning Calorimetric Studies **Bioresource Technology** 279, 262–270.

[2] **Mohit Kumar**, S.N.Upadhyay, P.K. Mishra., **2019**. A Comparative Study of Thermochemical Characteristics of Lignocellulosic Biomasses **Bioresource Technology Reports** 2019:100186. doi:10.1016/j.biteb.2019.100186.

[3] **Mohit Kumar**, P.K. Mishra, S.N. Upadhyay, **2019**. Pyrolysis of *Saccharum munja*: Optimization of Process Parameters using Response Surface Methodology (RSM) and evaluation of kinetic parameters. **Bioresource Technology Reports** 2019; 8:100332. doi:10.1016/j.biteb.2019.100332.

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[5] **Mohit Kumar**, S.N.Upadhyay, P.K. Mishra., **2020**. Effect of Montmorillonite Clay on Pyrolysis of Paper Mill Waste **Bioresource Technology** **2020:12316**. <https://doi.org/10.1016/j.biortech.2020.123161>

[6] **Mohit Kumar**, Shusheel Kumar Shukla, P.K. Mishra, S.N. Upadhyay **2020**. Analysis of thermal degradation of banana (*Musa balbisiana*) trunk biomass waste using iso-conversional models **Bioresource Technology** **310**,123393 <https://doi.org/10.1016/j.biortech.2020.123393>

[7] **Mohit Kumar**, Neha Srivastava, P.K. Mishra, S.N. Upadhyay. (2021) Thermal degradation of dry kitchen waste: Kinetics and product distribution, **Biomass Conversion and Biorefinery** **10.1007/s13399-021-01309-z**

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[9] **Mohit Kumar**, Durga Rai, Garvit Bhardwaj, P.K. Mishra, S.N. Upadhyay., (2021). Pyrolysis of Peanut Shell: Kinetic Analysis and Optimization of Thermal Degradation Process, **Industrial Crops & Products** [Under review]

[10] Dan Bahadur Pal, **Mohit Kumar**, P. K. Mishra, S. N. Upadhyay. (2021). Kinetics of Thermal Degradation of Mango, Jackfruit and Jamun Seeds kernel, **Biomass conversion and Biorefinery [Under revision]**

[11] **Mohit Kumar**, P.K. Mishra, S.N. Upadhyay., (2021). Pyrolysis of sugarcane (*Saccharum officinarum* L.) leaves: Product formation and characterization, **Biomass & Bioenergy [Under review]**

[12] **Mohit Kumar**, Rahul Yadav, P.K. Mishra, S.N. Upadhyay (2021). Effect of Chemical Treatment on Thermal Degradation Behavior of Litchi Seed Biomass **Journal of Environmental Management (Under review)**

[13] Tanya Gupta, **Mohit Kumar**, S.N. Upadhyay, P. K. Mishra, Amit K. Jaiswal (2021) Effect of Hot Water Extraction on Pyrolysis of Green Coconut Husk: Kinetics and Thermodynamic Parameters Analysis **Journal of Environmental Chemical Engineering [Under Review]**

[14] Mohit Kumar, S.N. Upadhyay, P. K. Mishra, Amit K. Jaiswal (2021) Advances in Thermochemical Conversion of Lignocellulosic Biomass into biofuel, **Book Chapter [Submitted]**

[15] **Mohit Kumar**, P.K. Mishra, S.N. Upadhyay., (2021) Recent trends of In-depth kinetic analysis of thermal degradation of lignocellulosic biomass. **Sustainable Energy & Fuel (Ready to submit).**

### **Manuscripts in advance stage of preparation**

1. **Mohit Kumar**, Garvit Bhardwaj, P.K. Mishra, S.N. Upadhyay., 2021 (manuscript under preparation)

2. **Mohit Kumar**, P.K. Mishra, S.N. Upadhyay., 2021 (manuscript under preparation)

3. **Mohit Kumar**, P.K. Mishra, S.N. Upadhyay., 2021 (Manuscript prepared)

### **Conference Presentations/workshop**

#### **International/National**

[1] **Mohit Kumar**, Nehal Govil, P.K. Mishra, S.N. Upadhyay. Thermochemical and biochemical characterization of thermally assisted acid treated rice husk for pyrolysis: Thermogravimetric Analysis. Oral presentation in „The 3rd National Conference on Materials for Energy Conversion and Storage” to be held 18- 20 October 2018 at **IIT (BHU) Varanasi, India**

[2] **Mohit Kumar**, Nehal Govil, P.K. Mishra. Thermochemical Characterization of Raw and Thermally Assisted Alkali Treated Rice Husk. Oral presentation „71th Annual

Session of Indian Institute of Chemical Engineers” CHEMCON–2018 to be held December 27 – 30, 2018 at **NIT Jalandhar**

[3] **Mohit Kumar**, P.K. Mishra, S.N. Upadhyay. Thermochemical Characterization and thermal degradation kinetic analysis of *Cajanus Cajan* using Thermogravimetric analysis, Poster presentation in „SEFCO-2019” to be held 9-12 May 2019 at **IIP Dehradun, Uttarakhand, India.**

[4] **Mohit Kumar**, Nehal Govil, P.K. Mishra, S.N. Upadhyay. Thermochemical Characterization and of Thermal Degradation Kinetic Analysis of Banana Trunk „The 4th International Conference on New Energy and Future Energy Systems” “NEFES 2019” to be held in 21-24 July at **Macau, China**

[5] **Mohit Kumar**, S.N. Upadhyay, P.K. Mishra. Effect of Montmorillonite on Pyrolysis of Paper Mill Waste: Kinetics, Reaction mechanism and Thermodynamic parameters. “NHBT-2019” to be held in 20-24 November, **Trivandrum- India**

[6] **Mohit Kumar**, Abhisek Mishra, Sweta Negi P.K. Mishra, S.N. Upadhyay. Preparation and Characterization of Zinc Oxide Nano composite Material, Oral presentation in „International Conference on Composite Materials and Structures” to be held at 27-29 December at **IIT Hyderabad, India**

[7] Participated in “Topic of pesticides” in CHEMOFLEXIA (Flex Exhibition), AITH Kanpur (2013)

[8] Attended a Workshop on “Inclusion in Smart city Planning of India of Renewable energy & Energy Efficiency (InSPIRE)” in IIT (BHU), 2016.

[9] Attended a seven days” workshop on **Smart Materials and Structures -Recent Trends in Industrial Applications (SMART— RTI, Sept. 2017)**, September 4 -11, 2017 in IIT (BHU).