Dr. Krishna Kant Dwivedi

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Overview:

Dr. Krishna Kant Dwivedi is an Assistant Professor in the Department of Mechanical Engineering at the SRM Institute of Science & Technology, Ramapuram Campus Chennai, India. Prior to joining SRMIST Ramapuram, he was a Post-doctoral Fellow at Department of Mechanical Engineering, Indian Institute of Technology Madras, India. He also worked as the Visiting Research Fellow at CSIR- Central Mechanical Engineering Research Institute Durgapur, India. He holds a PhD in Mechanical Engineering from National Institute of Technology Durgapur, India. Prior to this, he obtained his Bachelor's and Master's Degrees in Mechanical Engineering from RGPV Bhopal, India.

Dr. Dwivedi's research interest lies in the multi-scale studies (both experimental & numerical) of thermochemical conversion technologies, degradation reaction kinetics, heat transfer in solids and fluids, fluidized bed system. In his research carrier so far, he has published number of papers in International Journals, Conferences and Symposiums.

Areas of Research:

Gasification, Pyrolysis, Gas-solid reactors, Carbon capture and storage technology

Awards and Achievements:

- ✓ Post-Doctoral Fellowship, IIT Madras (2020)
- ✓ Ph.D Research Fellowship, Ministry of Education, Govt. of India (2015)

Scholar Profiles:

Web of Science: https://www.webofscience.com/wos/author/record/2052897

Publons: https://publons.com/researcher/3090176/krishna-kant-dwivedi/

Google Scholar: https://scholar.google.com/citations?user=DjwGetIAAAAJ

Scopus Author: https://www.scopus.com/authid/detail.uri?authorId=57205515465

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Journal Reviewer:

https://publons.com/researcher/3090176/krishna-kant-dwivedi/peer-review/

- ✓ Applied Energy (Elsevier)
- ✓ Applied Thermal Engineering (Elsevier)
- ✓ Fuel (Elsevier)
- ✓ Powder Technology (Elsevier)
- ✓ Renewable Energy (Elsevier)
- ✓ International Journal of Hydrogen Energy (Elsevier)
- ✓ Combustion Science and Technology (Taylor & Francis)
- ✓ Journal of Mechanical Science and Technology (Springer)
- ✓ Energy resources Part A: Recovery, Utilization and Environmental Effects (Taylor & Francis)
- ✓ Thermal Science & Engineering Progress (Elsevier)

Peer Reviewed Journals:

[1] **K. K. Dwivedi**, A. K. Pramanick, M. K. Karmakar, P. K. Chatterjee (2022), 'Synergistic effect on co-pyrolysis mechanism and kinetics of waste coal blended with high-rank coal and biomass', Journal of Thermal Analysis and Calorimetry, Vol. 147, pp. 8323- 8343, https://doi.org/10.1007/s10973-021-11123-4

[2]**K. K. Dwivedi**, A. K. Pramanick, M. K. Karmakar, P. K. Chatterjee (2020), 'Three dimensional CFD simulation and experimental validation of particle segregation in CFB riser', International Journal of Numerical Methods for Heat & Fluid Flow, Vol. 31 No. 4, pp.1144-1171. https://www.emerald.com/insight/content/doi/10.1108/HFF-04-2020-0197/full/html

[3] **K. K. Dwivedi**, P. Shrivastav, M. K. Karmakar, A. K. Pramanick, P. K. Chatterjee (2019), 'A comparative study on Pyrolysis Characteristics of bituminous coal and low rank coal using thermogravimetric Analysis (TGA),' International Journal of Coal Preparation and Utilization,1(39),pp.1-11. https://doi.org/10.1080/19392699.2019.1566130

[4] **K. K. Dwivedi**, S., Dutta, C., Loha., M. K. Karmakar, P. K. Chatterjee (2021), 'A numerical study on the wall erosion impact and gas-particle hydrodynamics in circulating fluidized bed riser', Thermal Science and Engineering Progress, 22, pp. 100852. https://doi.org/10.1016/j.tsep.2021.100852

[5] **K. K. Dwivedi**, Prabhansu, M. K. Karmakar, P. K. Chatterjee (2020), 'Thermal degradation, characterization and kinetic modeling of different particle size coal through TGA', Thermal Science and Engineering Progress, 18, pp. 100523. https://doi.org/10.1016/j.tsep.2020.100523

[6] **K. K. Dwivedi**, P. K. Chatterjee, M. K. Karmakar, A. K. Pramanick, (2019), 'Pyrolysis characteristics and kinetics of Indian low rank coal by using thermo-gravimetric analysis', International Journal of Coal Science and Technology, 6(2), pp. 102-112. https://doi.org/10.1007/s40789-019-0236-7

[7] **K. K. Dwivedi**, M. K. Karmakr, A. K. Pramanick, P. K. Chatterjee, (2019), 'A brief review on hydrodynamic behaviour analysis of coal gasification in a circulating fluidized bed gasifier,' International Journal of Heat and Technology, 37(3), pp. 792-802.

[8] **K. K. Dwivedi**, A. K. Pramanick, M. K. Karmakar, P. K. Chatterjee, (2019), 'Experimental study and characterization of coal gasification in a circulating fluidized bed gasifier,' IOP Science: Materials Science and Engineering, 577, pp. 1-9.

[9] **K. K. Dwivedi**, P. K. Chatterjee, M. K. Karmakar, A. K. Pramanick, (2018), 'Experimental study on Pyrolysis of coal by Thermo-gravimetric Analysis (TGA) under Different temperature Conditions,' Journal of Energy and Environmental Sustainability, 5, pp.49-52.

Book Chapters:

[1] **K. K. Dwivedi**, A. K. Pramanick, M. K. Karmakar, P. K. Chatterjee (2020), 'Waste coal conversion: A potential solution toward waste to energy', Handbook of Advanced Approaches V2, Chapter 8, Elsevier Publication (in press).

[2] **K. K. Dwivedi**, Prabhansu, A. K. Pramanick, M. K. Karmakar, P. K. Chatterjee (2020), 'Indian subbituminous and low rank coal gasification experiments in a circulating fluidized bed gasifier under air atmosphere,' Advances in Mechanical Engineering, Chapter-70, Springer Nature Singapore Pte Ltd, pp. 777-784, https://doi.org/10.1007/978-981-15-0124-1_70

[3] **K. K. Dwivedi**, Prabhansu, A. K. Pramanick, M. K. Karmakar, P. K. Chatterjee (2020), 'Waste coal utilization in India: a review,' Urban Mining and Sustainable Waste Management, Chapter-6, Springer Nature Singapore, pp. 91-98, https://doi.org/10.1007/978-981-15-0532-4_11

[4] Prabhansu, S. Ganguli, **K. K. Dwivedi**, P. Chandra, M. K. Karmakar, P. K. Chatterjee (2020) 'Hydrodynamics of a CFB gasifier with two different cross sections in the riser,' Advances in Mechanical Engineering, Chapter-68, Springer Nature Singapore Pte Ltd, pp. 753-762. https://link.springer.com/chapter/10.1007/978-981-15-0124-1_68

[5] Prabhansu, **K. K. Dwivedi**, M. K. Karmakar, P. K. Chatterjee (2020), 'Status of sewage treatment in Bihar and needs for improvement,' Recent Trends in Waste Water Treatment and Water Resource Management, Chapter-8, Springer Nature Singapore, pp. 23-31.