# Curriculum Vitae


**Name** **Dr. Mithilesh Kumar**
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## Education

| Exam / Degree | Board / University | Branch | Marks/ CGPA | Year |
|---|---|---|---|---|
| Ph.D | IIT BHU | METALLURGICAL ENGINEERING | 1992 | |
| M.Tech. | NIT JAMSHEDPUR | METALLURGICAL AND MATERIALS ENGINEERING | 8.76/10 | 1985 |
| B.E | BIT SINDRI | METALLURGY | 74.47 | 1983 |

## Research Areas

- Solid Fuels
- Direct Reduction of Iron Ore
- Power Generation from Biomass

## Academic Areas

- Metallurgical Thermodynamics and Kinetics (3-1-0)
- Sponge Iron Making (3-1-0)
- Fuel Technology (3-0-0)

## Professional Experience

- **Senior Research Fellow (SRF)**, in IIT BHU from 1986 to 1991
- **Quick Hire Scientist**, in RRL, Bhopal from 1992 to 1993
- **Research Associate**, in IIT BHU from 1993 to 1997

## Papers Published to International Journals

**INTERNATIONAL JOURNALS**

1. M.Kumar and R.C.Gupta, Properties of Acacia and Eucalyptus woods, Jl.Materials Science Letters,11,1992,pp.1439-1440.

2. M.Kumar and R.C.Gupta, Reactivity of wood chars produced by carbonizing Acacia and Eucalyptus woods, Trans.Indian Inst.Met., 43, 1990, pp.65-68.

3. M.Kumar,R.C.Gupta and T.Sharma, Influence of carbonization temperature on the Gasification of Acacia wood chars by carbon dioxide gas, Fuel Processing Technology 32, 1992, pp.69-76.

4. M.Kumar,R.C.Gupta and T.Sharma, Effects of carbonization conditions on the yield and chemical composition of Acacia and Eucalyptus wood chars, Biomass and Bioenergy, 3, 1992, pp.411- 417.

5. M.Kumar, R.C.Gupta and T.Sharma, X-ray diffraction studies of Acacia and Eucalyptood chars, Jl. Materials Science, 28, 1993, pp.805-810.

6. M.Kumar and R.C.Gupta, Electrical resistivity of Acacia and Eucalyptus wood chars ,Jl. Materials Science, 28, 1993, pp.440-444.

7. M.Kumar and R.C.Gupta, Calorific values of Acacia and Eucalyptus wood char Trans.Indian Inst.Met., 46, 1993, pp.319-321.

8. M.Kumar and R.C.Gupta, Scanning electron microscopic study of Acacia and Eucalyptus wood chars, Jl. Materials Science, 30,1995, pp.544-551.

9. M.Kumar and R.C.Gupta, Correlation of reactivity and properties of wood chars, Fuel, 73, 1994, pp.1805-06

10. M.Kumar and R.C.Gupta, Influence of carbonization conditions on gasification of Acacia and Eucalyptus wood chars by carbon dioxide, Fuel, 73, 1994, pp.1922-

11. M.Kumar and R.C.Gupta, Influence of carbonization conditions on physical properties of Acacia and Eucalyptus wood chars, Trans.Indian Inst. Met., 46,1993,pp.345-352

12. M.Kumar and R.C.Gupta, Carbonization study of Dhanbad non-coking coal, Trans. Indian Inst.Met., 47,1994,pp.103-109.

13. M.Kumar, Studies on abrasive wear of carburized mild steel, Trans.Indian Inst. Met.,1994, pp.417-420.

14. M.Kumar and R.C.Gupta, Studies on abrasive wear characteristics of carbon and low Alloy steels for better performance of farm implements, Jl.of Materials Science and Technology, 11, 1995, pp.91-96.

15. M.Kumar and R.C.Gupta, Influence of carbonization conditions and wood species on carbon dioxide reactivity of resultant wood char powder, Fuel Processing Technology, 38, 1994, pp.223-233.

16. M.Kumar and R.C.Gupta, Graphitization study of Indian Assam coking coal, Fuel Processing Technology, 43, 1995, pp.169-176.

17. M.Kumar and R.C.Gupta, Subabul: A wood species for electricity generation, Energy Sources, 18,1996, pp.807-812.

18. M.Kumar and R.C.Gupta, Demineralization study of Indian Assam coking coal By NaOH leaching, Energy Sources, 19, 1997, pp.715-

19. M.Kumar and R.C.Gupta, Influence of carbonization conditions on pyrolytic carbon deposition in Acacia and Eucalyptus wood chars, Energy Sources, 19, 1997,pp.295-300.

20. M.Kumar and R.C.Gupta, Industrial uses of wood chars, Energy Sources, 20, 1998, pp.575.

21. M.Kumar,B.B.Verma and R.C.Gupta, Mechanical properties of Acacia and Eucalyptus wood chars, Energy Sources, 21, 1999, 675.

22. M.Kumar and R.Harishankar, Removal of ash from Indian Assam coking coal using NaOH and acid solutions, Energy Sources, 22, 2000, 187-

23. M.Kumar and S.Jena, Influence of carbonization conditions on the properties of Coconut shell chars, Energy Sources, 28, 2006, 423-431.

24. M.Kumar and S.K.Patel, Energy values and estimation of power generation potentials of some non-woody biomass species,Energy Sources,30,2008,765-77.

25. M.Kumar, S.Jena and S.K.Patel, Characterization of properties and reduction behaviour of iron ores for application in sponge ironmaking, Mineral Processing and Extractive Metallurgy Review, 29, 2008, 118-129.

26. M.Kumar and S.K.Patel, Characteristics of Indian non-coking coals and iron ore Reduction by their chars for directly reduced iron production, Mineral Processing and Extractive Metallurgy Review, 29, 2008, 258-273

27. M.Kumar and S.K.Patel, Assesment of reduction behaviour of hematite iron ore Pellets in coal fines for application in sponge ironmaking, Mineral Processing and Extractive Metallurgy Review, 30, 2009, 240-259

28. M.Kumar, P.Mohapatra and S.K.Patel, Studies on reduction kinetics of hematite iron ore pellets with non-coking coals for sponge iron plants, Mineral Processing and Extractive Metallurgy Review, 30,2009,372-392

29. M.Kumar, S.K.Patel and S.Mishra, Studies on characteristics of some shrubaceous non-woody biomass species and their electricity generation potentials, Energy Sources, 32, 2010, 786-795.

30. M.Kumar, S.Nath and S.K.Patel, Studies on the reduction-swelling behaviours of hematite iron ore pellets with non-coking coal, Mineral Processing & Extractive Metallurgy Review, 31, 2010, 256-268.

31. M.Kumar, S.K.Patel and P.F.Hamid, Characteristics of some forestry non-woody biomass species and estimation of their power generation potentials, Energy Sources , 33, 2011, 1616-1624.

32. M.Kumar and S.K.Patel, An assessment of electricity generation potentials of agricultural residues for power industries in India, Energy Sources , 33, 2011.

33. S.K.Patel and M.Kumar, Studies on the power generation potentials of woody biomass species, An International Jl. Of Advances in Thermal Sciences and Engineering, 1, 2010, 93-98.

34. M.Kumar, S.K.Patel and S.K.Singhania, Characteristics and power generation energetic of coal, cattle dung, rice husk and their blends, Energy Sources, 2011, In press.

35. M.Kumar, H.Baghel and S.K.Patel, Studies on the reduction and swelling behaviour of fired hematite iron ore pellets in coal for application in sponge iron plants, Mineral processing and Extractive Metallurgy Review, 2011, In Press

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36. M.Kumar and R.C.Gupta, Biomass as renewable and non-polluting reductant for ironmaking, Encology, 4, 1989, 1-8

37. M.Kumar and R.C.Gupta, Power generation from biomass, Encology, 6,1991,9-15

38. M.Kumar and R.C.Gupta, Studies on biomass energy for iron and steelmaking, Tools and Alloy Steels, 27, 1993, 313-318

39. M.Kumar and T.N.Singh, Desulphurization study of Assam coking coal by NaOH leaching, Indian Jl. of Engg. and Mat. Sci., 3, 1996, 171-173

40. M.Kumar and R.C.Gupta, Influence of carburization conditions on the abrasive wear of mild steel – An approach for the quality upgradation of farm implements, Tools and Alloy Steels, oct., 1996, 18-22

41. B.B.Verma, J.D.Atkinson and M.Kumar, Study of fatigue behaviour of 7475 Aluminium alloy, Bulletin of Mat. Sci.,

42. M.Kumar,R.Behera and S.K.Patel, Studies on erosive wear characteristics of carburized mild steel samples in plain soil-water slurry for application in agro-Industries, Jl.of Inst.Engineers,accepted for publication, 2010.

43. S.K.Patel and M.Kumar, Electrical power generation potential of paddy waste, Proceedings of the International conference on renewable energy: generation and application, held during 8-10 March 2010 at Al-Ain,U

44. S.K.Patel and M.Kumar, Power generation potential of biomass residue of Maize, New Frontiers in Biofuels, Edited by P.B.Sharma and N.Kumar, Scitech Publications ( India ) Pvt. Ltd., New Delhi, 2009, 473-479.