

Dr. Atul K. Varma
LIST OF PUBLICATIONS

International Journals

1. 1. Varma, A.K.,2005.Kinetic studies of carbon dioxide sequestration on coal samples with Intelligent Gravimetric Analyser. ICCP News,No.36,pp 57-58.
2. Varma, A K 2002. Thermogravimetric investigations in prediction of coking behaviour and coke properties derived from inertinite rich coals. Fuel, vol. 81, No. 10,pp 1321-1334.
3. Varma, A K 1996. Facies control on the petrographic composition of inertitic coals. International Journal of coal Geology, V. 30 (1996) 327-335 (special volume Coalification and Coal Petrology).
4. Varma, A K 1996. Influence of petrographical composition on coking behaviour of inertinite rich coals. International Journal of Coal Geology, V. 30 (1996), 337-347 (Special volume on Coalification and coal Petrology).
5. Gabzdyl, W. and Varma, A K 1992. Mean reflectance of Vitroplast – a significant character of hydrogenation residue. Fuel, V. 71. pp 476-479.
6. Gabzdyl W. and Varma, A K 1993. Thermogravimetric studies in prediction of coal behaviour during coal liquefaction. Journal of Thermal Analysis, V. 39, pp. 31-40.
7. Varma, A K 1990.Warunki geologiczne występowania i charakterystyka petrograficzno-chemiczna węgla indyjskich,Pprezegląd Górniczy, v. 46, nr, 7-8, pp. 1-13.
8. Varma, A K 1992. Petrology of the residues after Hydrogenation of inertinitic coals. Prace Komisji Naukowych, PAN zeszyt nr. 16, p. 108.
9. Varma. A K 1989. Geological petrographic characters of coals from Jharia and Raniganj coalfields in India. Prace Komisji Naukowych, Zeazyt nr. 14. Polaska Academia Nauk, p. 44.

National Journals

10. Varma, A K 1998. Relevance of hydrogenation residue petrography in liquefaction of coals from Upper Silesian coal basin, Poland, In Recent Researches in Economic Geology, V. 1 (Coal and Organic Petrology). Pp 36-47.

11. Singh, P., Varma, A. K. and Saxena, V. K., 2003. Petrographic characterization of various coal seams belonging to different geological periods. Journal of Mines, Metals & Fuels, Vol. 51, Nos. 1& 2, 28-31 pp

Books Reviews

12. Varma, A K, 1998. Coalbed methane and coal geology, Geological Society, London, published in the Journal of Geological Society of India, p 716-717 (v 51no. 5).
13. Varma, A K, 2000. Organic petrology by G H Taylor et al (1998). Gebrüder Bornträger, Berlin, Stuttgart. Published in Gondwana Research v.3 No. 2 pp 284-286 Japan.
14. Varma, A K, 2002. Proceedings of National Seminar on Recent Advances in Geology of coal and lignite basins of India Eds. A B Dutta, S N Mitra, P K Raha, N C Chakraborti, S N Banerjee, Spl. Pub. 54, Geo, Surv. Ind. 2001, v. 59, 592-596.
15. Varma, A.K., 2005. Progress of Coal Petrology in India (author: H. S. Pareek, Memoir 57, Geological Society of India, 2004), Gondwana Research v.8, No.2 pp 296-297.

Conference Report

16. Singh, B.D. and Varma, A.K., 2004. CSCOP-TSOP 2002-Emerging concepts in Organic Petrology and Geochemistry, Canada [including Dr. Archie G. Douglas Symposium]. Palaeobotanist, v.52, 137-139.

Technical Report:

17. Panigrahi, D.C., Bhattacharjee, R.M. and Varma, A.K., 2005. Research project report on studies on problems of spontaneous heating in coal pillars and development techniques for its prevention, early detection and control. Funded from Coal S&T Grant of Ministry of Coal- MT/109-ISM Part) 1-233pp.

List of Research Papers published in seminars/ workshops:

a) International:

1. Gabzdyl, W. and Varma, A K 1991. Influence of petrographical factors on hydrogenation of inertinite rich coals from the Upper Silesian Coal Basin of Poland. Proceedings of 1991 International Conference on Coal Science, Newcastle upon Tyne, UK, pp. 719-722.

2. Varma, A K 1997. Microstructural and microtextural investigations of cokes derived from inertinite rich coals. Proceedings ICCS 97. 9th International Conference on Coal Science held at Essen, Germany during September 7-12, 1997 (Ed. A Ziegler, K H.van Heek, J Klein and W. Wangzl), Vol II, pp 607-700 DGMK Tagungsberichte, 9703
3. Varma, A K 1993. Reflectance studies of hydrogenation residue derived from inertinitic coals. Proceedings of 7th International Conference on Coal Science, Banff, Alberta, Canada, Vol I, pp 582-585
4. Varma, A K 1992 Influence of petrographical composition on coking behaviour of inertinite rich coals, 29th international Geological Congress, Kyoto, Japan, Abstracts, vol 3, 82.
5. Varma, A K 1992. Facial controls of petrographic composition of inertinitic coals. 29th International Geological Congress, Kyoto, Japan, Abstracts, Vol 3, p 825.
6. Varma, A K 1996. Petrographic investigations of liquefaction residue obtained from inertinite rich coals. Abstracts volume 2 of 3, 30th International Geological Congress, 4-14. August 1996. Beijing, China, p. 887.
7. Varma, A K 1996. Thermogravimetric studies in prediction of coking behaviour of inertinite rich coals. Abstracts volume 2 of 3, 30th International Geological Congress, 4-14, August 1996. Beijing, China, p. 890.
8. Varma, A K 1994. Geological and petrological controls on coal liquefaction. Proceedings of the International symposium on coal and organic petrology. Fukuoka, Japan, Nov. 16-18, 1994. pp 70-73.
9. Varma, A K 1995. International rich coals as source for petroleum. First International Petroleum Conference and Exhibition (petrotech-95). Abstract volume, p. 269.
10. Mazumdar, S and Varma, A K 2000. Sorption isotherm for coal bed methane exploration – a case study from Jharia coal Basin, Bihar, India In.

D C Panigrahi (Ed) Mine Environment and ventilation. 145-149 pp
Oxford & IBH.

11. Varma, A K, Singh, P and Singh, A K 2002. Petrographic conditions for coal bed methane exploration in Barakar Formation coal seams of East Bokaro and North Karanpura coalfields, Jharkhand, India , International conference on “Emerging concepts in Organic petrology & Geochemistry,A1.3.4, 31st August-4th September, 2002, Banff , Alberta, Canada .
12. Varma, A K,. Saxena, V K and Choudhary,A. 2001.Petrographic characterisation of coal seams from Karharbari, Barakar and Raniganj Formations- Studies from Giridih and Jharia Coalfields, Jharkhand, India, ICCAMB- 2001. International conference on challenges in Coal and Mineral Beneficiation, December 7-8, Dhanbad (India), Tata MC Graw-Hill publishing company , New Delhi, pp. 195-202.
13. Varma,A K and Mazumdar, S. 2001. Cleat pattern and petrographic investigations of some coal seams in Jharia coalfield, India for coal bed methane. In: Coal bed Methane prospects and potentialities , Proc. vol. Int. Sem,1999, SAAEG(South Asian Association of Economic Geologists), pp 131-140.
14. Singh, P., Varma, A. K. and Saxena, V.K. 2002. Petrographic characterisation of various coal seams belonging to different geological periods. Submitted for presentation and publication at International Conference on “Processing on Gondwana coals challenges and solutions” to be held at Kolkatta during February 21-22,2003.
15. Varma, A. K., 2000, Thermogravimetric investigations in prediction of coking properties and coke structures of inertinite rich coals, 31st International Geological Congress Rio de Janeiro.
16. Varma, A. K., 2000. Mineral phases in hydrogenation residue, 31st International Geological Congress Rio de Janeiro.
17. Varma, A.K. and Kumar, M., 2004. Petrographic aspects of coal combustion. 2nd International Geological Congress held from 20-28th August 2004 at Florence, Italy (abstract published).
18. Shalini, Gautam, V.K., Saxena, V.K., Sharma, T. and Varma, A.K., 2005. Influence of moisture and stamping on coke strength, In: Proc. International Seminar on Mineral Processing Technology [MPT-2005]

- held at Indian School of Mines, Dhanbad during January 2005, Tata McGraw-Hill Publishing Company Limited, New Delhi, 325-332.
20. Varma, A.K., Kumar, B.N., Saxena, V.K. and Sarkar, A. 2005. Petrographic controls for solvent extraction of coal, In: Proc. International Seminar on Mineral Processing Technology [MPT-2005] held at Indian School of Mines, Dhanbad during 6-8 January 2005, Tata McGraw-Hill Publishing Company Limited, New Delhi, 319-324.
 19. Varma, A.K., Mishra, S. 2005. Geological and petrographic characterisation for phosphorous distribution in some coal seams of Jharia coalfield, Jharkhand, India. 57th Annual Meeting of the International Committee for Coal and Organic Petrology-ICCP. Abstracts. 18-23rd September, 2005, Patras, Greece. pp22.

National Conferences:

20. Varma, A K 1997. Inertinite macerals and microlithotype characteristics of coals from limnic and paralic coals-National Seminar on "Recent Advances in Geology of coal and lignite basins of India", Dec 1997, p 26.
21. Varma, A K 1996. Relevance of hydrogenation residue petrography in coal liquefaction. Abstract volume, Xth Convention of Indian Geological Congress, Dhanbad Feb, 1-3, 1996, p 45.
22. Varma, A K 1998. Thermogravimetric studies in characterization of coals from Upper Silesian coal basin, Poland, paper submitted for publication and presentation at the 86th session of Indian Science Congress Association (Jan. 3-7, 1999).
23. Varma, A K 1996. Modern trends in organic petrology. Proceedings of the 83rd session of the Indian Science Congress, Patiala, 1996. Section of Earth System Sciences, pp. 19-20.
24. Varma, A K 1987. Role of tariff rate structure of minerals in industrialization- a case study of Singhbhum. Presented and published in the Abstract volume of National Symposium and Development of India's Mineral & fuel Resources : Geological and Environmental aspects, at Dhanbad, India.

25. Varma, A K 1992. Coal- a major source of future energy and a challenge to environmental, organised by Eco-Enviro., Chaibasa.
26. Varma, A K 1997. Impacts of coal fuel cycle on environment and their control. National Seminar on 'Geology and Environment' April 6-7, 1997 Vinoba Bhave University, Hazaribagh.
27. Varma, A K and Choudhary,A. 2001. Geological and petrographic investigations of some coal seams of Karharbari, Barakar, Raniganj Formations – case studies from Giridih and Jharia coalfields, Bihar Proc. Ind. Sc. Cong. 88th Session, New Delhi 3-7 January ,2001. Advance Abstracts VII, Section of Earth System Sciences, 16-18 pp.
28. Singh, P, Varma, A K and Sarkar, A. 2001. Fourier Transform Infra Red Spectroscopic investigations of coals with different lithotype composition. National Seminar on instrumental techniques in chemical analysis, Sept. 15-16, 2001, Deptt. of Applied Chemistry, Indian School of Mines, Dhanbad, pp 16.
29. Varma, A K and Singh, P. 2000. Review of CBM generation, accumulation and coal seam methane content determination. In: Geology and Mineral Resources of Bihar and Jharkhand, IGE Monograph 2, Patna, 2000 pp 248-256.
30. Sharan, A and Varma, A K 2000. Review of petrographic controls for solvent extraction. In: Geology and Mineral Resources of Bihar and Jharkhand, IGE Monograph 2, Patna, 2000, pp 280-287 .
31. Thakur, M and Varma A K 2000. Influence of mica lamprophyre intrusion on petrographic composition of some coal seams in Jharia coalfield, Bihar. In: Geology and Mineral Resources of Bihar and Jharkhand, IGE Monograph 2, Patna, 2000. pp 243-247.
32. Mohanty, D. and Varma,A.K.,2002. From Hazards to Resource : UCG & CBM. . National Seminar on Natural Hazards: Its Geological Implications in Hilly Regions, Organised by Deptt. of Geology,St. Xavier's College,Ranchi,Jharkhand,November,21-23,2002,Ranchi,Jharkhand,Abstract, 88-89pp.
33. Varma, A.K., Kumar, M., Sarkar, A. and Saxena, V.K.,2003. Petrographic controls of coal combustion. National Seminar on “ Coal Science and Technology, Vision 2020, April 20-21, 2003, CFRI, Dhanbad, p 59/sII-5.
34. Varma, A.K.2005.Petrographic investigations of fly ash and laboratory prepared Char.Workshop on characterization and utilization of fly ash WCUF 2005, April 18,2005, organized by Dept. of Applied Chemistry, Indian school of Mines, Dhanbad,,Abstract 18p.
35. Varma, A.K.2006. Use of high carbon fly ash petrography.Lecture-cum-Interaction session on “ High carbon ash-future perspectives”. organized by Dept. of Applied Chemistry, Indian school of Mines, Dhanbad, February,2,2006.