

List of Publications

Referred Journals

2010

1. **Paikaray S.** and Peiffer S., 2010. Rapid mineralogical transformation of schwertmannite in presence of dissolved Fe²⁺: Mobility and effect of adsorbed arsenic. *Acta Mineralogica-Petrographica* 6, 348-348.
2. **Paikaray S.** and Peiffer S., 2010. Dissolution kinetics of sulfate from schwertmannite under variable pH conditions *Mine Water and The Environment* (In press).
3. **Paikaray S.**, Göttlicher, J. and Peiffer S., 2010. Removal of As (III) from acidic waters using schwertmannite: Surface speciation and effect of synthesis pathway. *Chemical Geology* (In press).
4. **Paikaray S.**, Göttlicher, J. and Peiffer S., 2010. Does atmospheric O₂ influence on As^{III} oxidation by schwertmannite? *Science of the Total Environment* (under review).
5. **Paikaray S.**, Göttlicher, J. and Peiffer S., 2010. Surface controls on As(III) retention by schwertmannite. *Journal of Hazardous Material* (under review).

2009

1. **Paikaray S.** and Peiffer S., 2009. The effect of Fe(II) on schwertmannite transformation and its interference with As. *Geochemica et Cosmochemica Acta* 73, A986.

2008

1. **Paikaray, S.**, Banerjee, S. and Mukherjee, S., 2008. Geochemistry of shales from the Paleoproterozoic to Neoproterozoic Vindhyan Supergroup: implications on provenance, tectonics and paleoweathering. *Journal of Asian Earth Sciences* 32, 34-48.
2. **Paikaray, S.**, Banerjee, S. and Mukherji, S., 2008. Surface characteristics of shales and implication on metal sorption. *Environmental Chemistry Letters* 6, 91-94.
3. **Paikaray, S.** and Bishwapriya A., 2008. Geotechnical investigation of Naitwar-Mori Hydro-Electric Project, Dist. Uttarkashi, Uttaranchal, India. *Records of Geological Survey of India* 140, 136.
4. **Paikaray, S.** and Bishwapriya A., 2008. Geotechnical investigation of Jakhol-Sankri Hydro Electric Project, Dist. Uttarkashi, Uttaranchal, India. *Records of Geological Survey of India* 140, 134-135.
5. **Paikaray, S.**, Banerjee, S. and Mukherji, S., 2008. Geochemistry of lower Vindhyan shales and its implications on provenance and tectonics. *Indian Journal of Geology* 78, 143-157.

2007

1. **Paikaray, S.**, Banerjee, S. and Mukherji, S., 2007. Microfabric analysis of Proterozoic Vindhyan shales from central India and their paleogeographic implications. *Indian Journal of Petroleum Geology* 16, 53-60.
2. Srivastava M., Bishwapriya A. and **Paikaray S.**, 2007. Geological investigations for Bansagar Project, Mirzapur District, U.P. and Sidhi District, M.P. *Records of Geological Survey of India* 139, 68-69.

2006

1. **Paikaray, S.**, Banerjee, S., and Mukherjee, S., 2006. Paleo-redox indicators for the Precambrian black shales of the Vindhyan Supergroup: applications and limitations. *Indian Journal of Earth Sciences* 33, 25-33.

2. Banerjee, S., Dutta, S., **Paikaray, S.** and Mann, U., 2006. Stratigraphy, sedimentology and bulk organic geochemistry of black shales from the Proterozoic Vindhyan Supergroup (central India). *Journal of Earth System Sciences* 115, 37-47.

2005

1. **Paikaray, S.**, Banerjee, S. and Mukherji, S., 2005. Sorption behavior of heavy metal pollutants onto shales and correlation with shale geochemistry. *Environmental Geology* 47, 1162-1170.
2. **Paikaray, S.**, Banerjee, S. and Mukherji, S., 2005. Sorption of arsenic on to Vindhyan shales: Role of pyrite and organic carbon. *Current Science* 88, 1580-1585.
3. **Paikaray, S.**, Banerjee, S., Kundu, A. and Mukherji, S., 2005. Major element composition of Vindhyan shales and its importance in provenance interpretations. *Indian Journal of Geochemistry* 20, 3-17.
4. **Paikaray, S.**, Banerjee, S. and Mukherji, S. 2005. Shales and geoscience research: Examples from Vindhyan Supergroup-A review. *Shilalipi* 2, 17-21.

2004

1. **Paikaray, S.**, Banerjee, S. and Mukherji, S., 2004. Facies analysis of the Koldaha Shale, Vindhyan Supergroup and its paleogeographic implications. *Indian Journal of Petroleum Geology* 13, 1-11.
2. **Paikaray, S.**, Banerjee, S., Jeevankumar, S. and Kundu, A., 2004. Proterozoic shales as possible source rocks in the Vindhyan basin, Son valley. *Proceedings of the Association of Petroleum Geologists (APG)*, Session VII. pp. 1-26.
3. **Paikaray, S.**, Banerjee, S. and Mukherji, S., 2004. Point of zero charge and pH - dependent surface charges on alkaline and acidic shale sorbents. *Proceedings of Indian Environmental Association*, pp. 1-8.

2003

1. **Paikaray, S.**, Banerjee, S., Jeevankumar, S. and Mukherji, S., 2003. Occurrences of black shales within the Vindhyan Supergroup, central India and its implications. *Indian Journal of Petroleum Geology* 12, 65-81.

Chapters in books

1. **Paikaray, S.** and Peiffer, S., 2010. Sorption and surface oxidation of As(III) by Fe-oxyhydroxysulfates in acidic medium. In: Jean, J.S., Bundschuh, J. and Bhattacharya, P. (eds), *Arsenic in Geosphere and Human Diseases*. CRC Press, 414-415.
2. **Paikaray, S.**, Mukherji, S. and Banerjee, S., 2005. The dominant role of kerogen in sorption of 1,2,4-Trichlorobenzene on shale sediments. In: Patel, N.C., Subbaiah, R., Chauhan, P.M., Patel, K.C. and Nadasana, J.N. (Eds.), *Sustainable Management of Water Resources*, Himanshu Publishers, New Delhi, pp.258-263.

Conferences abstracts and presentations

2010

1. **Paikaray, S.** and Peiffer, S., 2010. Rapid mineralogical transformation of schwertmannite in presence of dissolved Fe²⁺: Mobility and effect of adsorbed arsenic. IMA Budapest, Hungary, Aug 21-27, 2010.
2. **Paikaray, S.** and Peiffer, S., 2010. Sorption and surface oxidation of As(III) by Fe-oxyhydroxysulfates in acidic medium, As 2010, Taipei, Taiwan, May 17-21, 2010.

2009

1. **Paikaray S.** and Peiffer S., 2009. Oxidative adsorption of As(III) onto schwertmannite in acidic environments. As-2009 Leipzig, Germany
2. **Paikaray S.** and Peiffer S., 2009. The effect of Fe(II) on schwertmannite transformation and its interference with As. 19th Annual V M Goldschmidt Conference, Davos, Switzerland June 21-26 pg. A986.

2005

1. **Paikaray, S.**, Banerjee, S., Kundu, A. and Mukherji, S. 2005. Major element and zircon geochemistry of shales from Semri Group, Vindhyan Supergroup and implications on provenance and tectonics National seminar on Proterozoic Systems of India: Evolution and Economic Potential. pg. 27.

2004

1. **Paikaray S.**, Banerjee S. and Mukherji S. 2004. Origin of the pyritiferous Bijaygarh Shale in the Vindhyan basin and its implications; Abstract, 32nd International Geological Congress, Aug. 20-28, Florence, Italy. Part 2, pg. 879.
2. **Paikaray, S.**, Banerjee, S. and Mukherji, S., 2004. Facies and depositional setting of the Proterozoic Koldaha Shale, Semri Group, Vindhyan Supergroup. Abstracts. National seminar on Sedimentary basins, Resources and Environments and XXI convention of Indian Association of Sedimentologists, pg. 98-99.
3. **Paikaray, S.**, Jeevankumar S., Kundu A. and Banerjee S. 2004. Proterozoic shales as possible source rocks in the Vindhyan basin, Son valley. Abstract volume of the Association of Petroleum Geologists Conference, pg. 261-262.

2003

1. **Paikaray, S.** and Banerjee S. 2003. SEM observations of organic carbon rich Bijaygarh Shales, Vindhyan Supergroup (~1.8-0.6 Ga), Central India and their implications. Abstract, XXVI Annual Conference on Electron Microscopy and Allied fields, pg. 119-120.
2. **Paikaray, S.**, Banerjee S. and Mukherji S. 2003. Shales and soil as natural geosorbents for heavy metals; Abstract, 20th convention of Indian Association of Sedimentologists (IAS-XX), pg. 81-82.

2002

1. **Paikaray, S.** and Banerjee S. 2002. Environmental application of Vindhyan shales related to heavy metal and organic matter sorption, abstract, National seminar on coastal and off-shore sedimentary basins and their resource potential and XIX convention of Indian Association of Sedimentologists, 16-18th Dec, pg.71-72.