

Mookherjee made outstanding contributions to the complex sulfide-sulfosalt mineralogy of the Rajpura-Dariba polymetallic sulfide deposits, including optical/XRD/crystal-chemical descriptions of many rare sulfosalt minerals. One of these turned out to be a new Pb-Ag-Tl-Sb sulfosalt phase, which he named as *Rayite*, after his teacher, late Prof. S.K. Ray. His understanding of ore microscopy came in handy in this endeavour. He was a member of the International Association of the Genesis of Ore Deposits (IAGOD), and acted as the Vice-Chairman of the Working Group on Ores and Metamorphism (WGOM).

Mookherjee often used say – there are three types ore geologists– those who look at the ores in field (and through microscope), those who cook the ores (in laboratory) and finally those who think about the ores. Mookherjee certainly had seen wide variety of ores, both in India and abroad. More importantly he seriously thought about the ores, from all possible angles. Such serious thinking went a long way in the publication of his book “Ore Genesis – A Holistic Approach” in 1999 that is considered as a treatise in Ore Geology, which filled the vacuum after publication of the Stanton’s book (*Ore Petrology*, 1972). Going through the pages of this comprehensive contribution, the readers are reminded, not only of Mookherjee’s in-depth and scrupulous knowledge of the subject but also his unmatched style of English. Mookherjee was an insatiable reader and a conscientious writer. Apart from ores in particular, geology (and science) in general, English always remained his passion. He published many center-spread articles in the

*Statesman* and the *Times of India*, on various societal issues. Later in 2005, he compiled some of them and published in the form of a book entitled “*Indian Society and Science: viewed from the Interface*”. In the last chapter in this book (*Reminiscences of a Geologist*), Mookherjee quotes from the famous book by Thomas Kuhn (*The Structure of Scientific Revolutions*), which says ‘science progresses, not by gradual accumulation of knowledge but by radical changes of paradigm or worldview, following periods of *normal science* when the characteristic activity is the comparatively humdrum one of puzzle-solving’. Dr. Nigel Cook, Chairman, IAGOD and Chief Editor of *Ore Geology Reviews* wrote a condolence message to this correspondent when informed about the demise of Prof. Mookherjee. Nigel’s e-mail says – ‘This is very sad news indeed. Although I never met him personally, I had enormous respect for Professor Mookherjee not only because of his major contribution to our subject through the large volume of science he produced and published, but because he dared to challenge and speak out when he disagreed with established dogma. He will be very much missed’. Perhaps these lines substantiate Prof. Mookherjee’s scientific thoughts – in line with – the ‘Kuhn philosophy’. Yes, Prof. Mookherjee, we all will miss you. We pray to the Almighty for your soul to rest in peace.

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## ASOKE MOOKHERJEE — A TRIBUTE

Prof. Dr. Asoke Mookherjee, F.N.A. passed away in Kolkata on the 15<sup>th</sup> February, 2006 after a long ailment. I saw no mention of this event in any Kolkata daily so far. Perhaps, geologists have fallen from grace in this new world of sound bytes and scams. I was his contemporary in Presidency College, and again as Emeritus Scientist of CSIR. We literally wrote our books in adjacent work spaces - his encyclopedic sweep of the whole subject of Ore Genesis which will remain a reference manual for decades in India and mine on the craft of searching for mineral deposits, a midjet in contrast in both bulk and coverage.

Our 1954 M.Sc batch or Presidency College Geology had made a record of sorts – seven with first class. Asoke had stood first and the last name was Dipak (D.K. Ray of GSI). Many of us had joined GSI as Geological Assistants and went to the 1955 GSI Training Camp. Dr. M.K. Roy

Chowdhury was the officer-in-charge. Asoke and myself were tent mates; and I still recall the sight of late B. Laskar rushing towards the jungle at Rakha Mines camp at 11 pm with a petromax in hand to see the advancing elephant clearly. Needless to tell that Asoke and myself were both running in the opposite direction along with other trainees, two very nervous youngsters at the beginning of their career. On our return, Asoke was posted with late Sailesh Chakravarty in M.P. for mapping in the manganese field. John Straczek was the overall co-ordinator. This USGS man treated the Indians with scant civility. Of course, Asoke was far down the ladder to get the heat.

But he was wise enough to leave GSI and join the IIT, Kharagpur as a lecturer in the Department of Geology. With time, he rose both in rank and fame till he retired in 1991. Our courses converged at that point once again and till mid

2001, we were a constant sight in the campus of the Jadavpur University.

His students will, no doubt, write appropriate eulogies in his memory. I can only highlight two important features of his work. He was one of the pioneers in the study of metamorphism of sulphide minerals. The subject has still miles to go before a clarity in our understanding of Indian sulphide deposits of Singbhum, Rajasthan, M.P. and Karnataka with special reference to their paragenesis and trace element geochemistry emerges. His second major success was in indigenous development of fluid inclusion techniques. In our days, imports were scarce and not easy to fund. Contrary to general logic, we have subsequently built up a huge arsenal of hardware in geology laboratories

during the past two decades but fallen into the trap of rediscovering the wheel! The Indian mineral deposits have not yet been carefully described in modern terms. Mining has marched much ahead of our theoretical analysis.

We shared a common dream. Integrity of data collection and analysis. Asoke has left a generation of students trained in his field. They are carrying on the enquiries further. He used to emphasize the importance of the individual both in science and society and provided an example to others. I wish his values survive for long in these chaotic times.

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### SECOND COURSE ON APPLICATION OF GEOINFORMATICS IN DISASTER MANAGEMENT

Geological Survey of India (GSI) Training Institute in collaboration with ISRO proposes to conduct a training course on "Application of Geoinformatics in Disaster Management" for one month from 8th June 2006 to 7th July 2006, at Hyderabad. The Course will cover three modules viz: (i) Fundamentals of Remote Sensing, (ii) Introduction to GIS and (iii) Application of Geoinformatics in Disaster Management. The course content includes:

Overview of environmental disasters and natural disasters – causative factors, manifestations, analyses. Study of various environmental disasters – recognition, mapping, zonation etc.; landslides; earthquakes; cyclones; floods; mining hazards; soil and forest disasters. Application of remote sensing for disaster management and cartography. Application of Geoinformatics in disaster management - Generation of DEM from 1:25000 or larger scale topographic maps. ALTM, CARTOSAT and SAR data. Management - mitigation measures, prioritization etc. Case studies on individual disasters and Project work.

The Course is targeted for geoscientists of State/Central Government organizations, State Remote Sensing Centres, Institutes of Disaster Management, Faculty of Administrative Staff Colleges and Universities, Officers of Border Security Force/Army. Candidates should be postgraduate in Geology/Geography/Geoinformatics or graduates in Civil engineering, Environmental Engineering or should have equivalent degree in the relevant field. Candidates who are familiar with using Remote Sensing and GIS techniques will be preferred. There is no course fee. Limited fellowships are available. Interested candidates may send their application with the following details: (1) Name of the Organisation/Institute/University, (2) Name of the Candidate, (3) Designation, (4) Sex, (5) Date of Birth, (6) Academic qualification, (7) Area of Specialization and professional experience, (8) Relevance of training to the present job, (9) Computer background and (10) Address for communication.

**Format of certification from parent organization:** This is to recommend and forward application of Dr./Shri/Ms \_\_\_\_\_ of this institute/Department for the "Second Course on Application of Geoinformatics in Disaster Management" to be conducted by GSI Training Institute, from 8<sup>th</sup> June to 7<sup>th</sup> July 2006 under NNRMS programme by Indian Space Research Organisation

Place:

Date:

(Authorised signatory)

The completed application should be sent by 5<sup>th</sup> May 2006 to the Dy. Director General, GSI Training Institute, GSI Complex, Bandlaguda, Hyderabad – 500 068. **Phone:** 040-2455068; **Fax:** 040-24220680; **Email:** hyd2\_gsitihyd@ sancharnet.in. For more details, please visit the GSI website: www.gsi.gov.in

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