

1st December 2009

SHORT COURSE

on

NEW DEVELOPMENTS IN MAGMATIC Ni-Cu AND PGE DEPOSITS

8.00-8.30 AM

Introduction of Speakers to the Delegates by Convener-ISMO

Release of Short Course book by Prof. S. Acharya, Ex-V.C –Utkal University

Venue: IMMT Meeting Hall

Sl.no	Time	Title of the Lecture	Speaker
1	8.30-10.00	Fundamentals of Magmatic sulfide deposits	Prof Tony Naldrett
2	10.00-10.30	Tea break	
3	10.30-11.30	Application of Isotopes to Ore Deposition	Prof Edward M Ripley
4	11.30-12.30	Komatiite-related deposits	Prof Tony Naldrett
5	12.30-13.30	Lunch Break	
6	13.30-15.00	Conduit-related deposits (Noril'sk, Eagle, Voisey's Bay)	Prof Edward M Ripley
7	15.00-15.30	PGE in Layered Intrusions-I	Prof Tony Naldrett
8	15.30-16.00	Tea break	
9	16.00-17.00	PGE in Layered Intrusions-2	Prof Tony Naldrett
10	17.00-18.00	Question period- Discussion	

Registration: 7.30 - 8.00 AM

All delegates attending Short course to complete the registration by 8 AM on 1st December 09 or on 30th Nov evening at IMMT, in view of the above tight schedule of Short Course.

Venue: IMMT, Auditorium

2nd December-2009

International Symposium on Magmatic Ore deposits -2009

Registration: 8.30 - 9.30 AM

Inaugural Function: 9.30 - 10.30AM

Chief Guest: Prof Tony Naldrett

Guest of Honour: Prof Edward M Ripley

10.30-11.00 AM: High TEA

Technical session – I

11:00-13.00

Key Note Lectures

Venue: IMMT Auditorium

Sl.No.	Title	Authors	Affiliation
1.	Platinum-group Elements in the chromitites of the Bushveld Complex: New evidence on how the PGE got there	Tony Naldrett ¹ , Judith Kinnaird ¹ , Chris Stanley ² , Allan Wilson ¹ , Stewart McQuade ³ , and Gordon Chunnett ⁴	1-School of Geosciences, The University of the Witwatersrand, South Africa 2- Department of Mineralogy, Natural History Museum, UK 3- Private consultant, Johannesburg, South Africa (formerly with Samancor) 4-Anglo Platinum, Johannesburg, South Africa
2.	Magmatic Cu-Ni-PGE mineralization associated with magma conduits in the Proterozoic Midcontinent Rift System, USA: Geochemical constraints on the origin of the Eagle deposit, upper Michigan	Edward M. Ripley ¹ , Xin Ding ¹ , Chusi Li ¹ , and Dean Rossell ²	¹ Department of Geological Sciences, Indiana University, Bloomington, IN 47405 USA; ² Kennecott Exploration Company, 224 North 2200 West, Salt Lake City, UT 84116 USA email: ripley@indiana.edu
3.	Recovery practices of PGMs from PGE bearing ores and the Indian PGE scenario	Dr G.V. Rao	IMMT, Bhubaneswar viswesh53@gmail.com
4.	Determination of platinum group elements (PGE) and Au in Ni-Cu-Co sulphide deposits by collision/reaction cell inductively coupled plasma	M.Satyanarayanan ^{1,2} , Nancy Leawood ¹ and P.J.Sylvester ¹	¹ CREAIT Network, Micro-Analysis Facility, Innovation Centre Memorial University, St. John's, NL, Canada, A1C 5S7 ² National Geophysical Research Institute (Council of Scientific and Industrial Research) Uppal Road, Hyderabad 500606. (E-mail: m_sat2001@yahoo.com)

	mass spectrometer (ICP-MS)		
5.	Platinum Group Element (PGEs) Exploration Studies in India - An Overview	Dr V. Balaram	NGRI, Hyderabad Email: balaram1951@yahoo.com
6.	European metals supply on global perspective	Prof. Elias Ekdahl	Director General, Geological Survey of Finland (GTK) P.O. Box 96, FI-02151 Espoo, Finland elias.ekdhal@gtk.fi

Lunch Break [13:00 -14:00]

14:00-16:00

Technical session – II

[Venue: Meeting Hall]

Sl. No	Title	Authors	Affiliation
1.	Nature of PGE mineralization associated with Sukinda ultramafic complex, Orissa.	D. Mohanty and A.K. Sen	Department of Earth Sciences, IIT Roorkee, Roorkee 247 667, India
2.	PGE occurrences of Boula-Nuasahi Ultramafic Complex in association with chromitites; its comparison to the Bushveld complex, South Africa	S.K.Nayak	OMC, Bhubaneswar
3.	Exploration for PGE in Baula-Nuasahi Ultramafic Complex – An Indian Model	S.N.Mohapatra	GSI, Bhubaneswar snmaha@yahoo.com to be presented in place of 3
4.	Investigation of the Archean chromite deposits and gabbroic-breccia hosted PGE mineralization in the Nuasahi and Sukinda massifs (India) using field geology and bulk rock geochemistry	Sarifa Khatun ¹ , Sisir K. Mondal ² , V. Balaram	Dept. Of Geological sciences, Jadavpur University, Kolkatta Nordic Center for Earth Evolution, Geological Museum, Natural History Museum of Denmark, University of Copenhagen, Oster Voldgade 5-7 DK-1350, Copenhagen, Denmark NGRI, Uppal Road, Hyderabad
5.	Petrography And Characterisation of Fe – Ni- Cu-PGE Ore	M. L. Dora, K. K. K. Nair and M. Mohan	Geological Survey of India, Central Region, Nagpur-6
6.	Study on PGE bearing sulphides associated with the youngest lava flow from Hulajanti area Mangalwedha taluka Solapur	R. R. Patil ¹ & R. N. Vanarote ²	¹ School of Earth Sciences, Solapur University, Solapur. ² Research Student, School of Earth Sciences, Solapur University, Solapur. rupavanarote@yahoo.com
7	PGE –bearing peridotites from	S.P.Singh ² , V.Balaram ¹ ,	¹ NGRI, Hyderabad ² Department of Geology. Bundelkhand

	Pindar village of Madawara Igneous Complex, Bundelkhand Massif, Central India	M.Satyanarayanan ¹ , K.V.Anjaiah ¹ , Aditya Kharya ²	University, Jhansi – 284001, Uttar Pradesh, India
8.	PGE – Au-Ag hosted rocks of Ikauna area, district Lalitpur, U.P: it's implicatin to be a PGE deposits of india	P. K. Singh & S. A. Farooqui	Directorate of Geology & Mining, U.P. Khanij Bhawan, 27/8, Ram Mohan Rai Marg Lucknow-226001, U P., INDIA Email – padum_singh@rediffmail.com ,
9.	PGE mineralisation in Mettuppalayiam mafic-ultramafic complex, Tamilnadu	J. Prabhakar, R. Vijay Kumar, K. Balasubramanian, N.P. Nathan and V. Chandrasekaran	Geological Survey of India, OP: TNPK, Chennai. Prabha1711@yahoo.com
10.	Petrography and Characterisation of PGE Ores In Chettiyampalayiam Block In Sittampundi Anorthosite Complex, Tamil Nadu	N. P. Nathan ¹ , R. Vijay Kumar ¹ , A.Balukkarasu ¹ and V. V. Sesa Sai ²	¹ Geological Survey of India, Op:Tamil Nadu & Pondicherry, Chennai ² Geological Survey of India, North Eastern Region, Shillong E-mail : npnathan55@yahoo.co.in

Tea Break [16:00 - 16:15]

16:15-18:15

Technical session – III

[Venue: Meeting Hall]

Sl. No.	Title	Authors	Affiliation
1.	Geochemistry of the PGE Mineralized Petrological units of the Hanumalapur Segment of the Channagiri Mafic-Ultramafic Complex, Western Dharwar Craton, South India	T. C. Devaraju ¹ , T. T. Alapieti ^{2*} , R. J. Kaukonen ² , T. L. Sudhakara ³ and K. S. Anatha murthy ³	¹ “Rajamangala”, Saptapur, Haliyal Road, Dhrwad 580 001, India ² Department of Geosciences, University of Oulu, Oulu, FI-90014, Finland ³ Department of Applied Geology, Kuvempu University, Jnanasahyadri 577 451, India
2.	Petromineragraphy of the magmatic rocks from the Andaman Islands, India: Their potentiality for Cr-Cu-Ni-PGE mineralization	R. Dhana Raju	Dept. of Atomic Energy, Hyderabad 6-3-124, Hastinapuri, Sainikpuri P.O., Secunderabad – 500 094 e-mail:rdhanaraju@yahoo.co.in
3.	Petrology of PGE and gold mineralization associated with mafic-ultramafic complex of Kaiga-Mothinamakki-Biroligudda-Suryakalyani Gudda areas, Uttar Kannada dist., Karnataka, India	R. Ananthanarayana, S. Balakrishnan and D.K. Sahoo	Geological Survey of India, Bangalore
4..	Platiniferous arsenopyrite from Boula-Nausahi igneous complex, Orissa, India	Mrs. N.Charchi ¹ , J.K. Mohanty ¹ & A.K. Paul ²	¹ IMMT, Bhubaneswar ² Dept. of Geology, Utkal Univ.

5.	PGE Geochemistry of Marine Black Shales from Precambrian-Cambrian (PC-C) boundary, Mussoorie Syncline, Lesser Himalaya, Uttarakhand, India	Sariput S. Sawant, Balaram, V., Subba Rao D.V., * Azmi R.J. and Anjaiah K.V.	NGRI, Hyderabad *Wadia Institute of Himalayan Geology, Dehra Dun-248 001 E-mail: saripoot@yahoo.com
6.	PGE Geochemistry of Kimberlites from Anatapur area, Dharawar Craton, Southern India	Parijat Roy* and V. Balaram	NGRI, Hyderabad Email: parijatroy@yahoo.co.in
7.	Platinum Group Element Geochemistry of Boggulakonda Gabbro, East Of Cuddapah Basin, Andhra Pradesh (India)	K.S.V.Subramanyam, U.V.B. Reddy* and V.Balaram	NGRI, Hyderabad Department of Applied Geochemistry, Osmania University, Hyderabad-500 007, India., konduri2003@yahoo.com
8.	Geochemical systematics, PGE and gold contents of sedimentary horizons of the lower Gondwanas from the Sattupalli coal field, Godavari Valley, India	P. K. Prachiti ¹ , G. Lakshminarayana ² , K. Raju ¹ , Tarun C. Khanna ¹ , C. Manikyamba ¹ , V. Balaram ¹	NGRI, Hyderabad ² Geological Survey of India, Bandlaguda, Hyderabad
9.	PGE distribution in the hornblendites of Gadwal greenstone belt, eastern Dharwar craton, India	Tarun C. Khanna, P. K. Prachiti, K. Raju, C. Manikyamba, V. Balaram, T. Gnaneswara Rao, A. Keshav Krishna	NGRI, Hyderabad
10.	Geochemistry of late-Archean Bhavani mafic/ultramafic complex, southern India: Implications for PGE metallogeny", as an attachment with this mail, for the forthcoming	M.Satyanarayanan ^{1,2} , V.Balaram ² , P.J.Sylvester ¹ , D.V.Subba Rao ² , S.N.Charan ² , Michael Shaffer ¹ , Ali Mohammed Dar ² and K.Anbarasu ²	¹ CREAIT Network, Micro-Analysis Facility, Inco-Innovation Centre Memorial University, St. John's, NL, Canada, A1C 5S7 ² National Geophysical Research Institute (Council of Scientific and Industrial Research) Uppal Road, Hyderabad 500606. (E-mail: m_sat2001@yahoo.com)

3rd December

9:00-11.00

Technical session – IV

[Venue: Meeting Hall]

Sl.No.	Title	Authors	Affiliation
1.	Contrasting komatiite belts, associated Ni-Cu-deposit styles and assimilation histories	M.L. Fiorentini, S.W. Beresford, N. Rosengren, M.E. Barley	Marco Fiorentini Asst.Professor, Igneous Petrology & Mineral Systems Centre for exploration targeting Western Australia mfiorent@cyllene.uwa.edu.au
2.	PGE Potential in ultramafites of the Ramagiri Schist Belt, Andhra Pradesh, India	S. Bhattacharjee, S. T. Narahari and K. Chandra Shekhar	Petrology Division Geological Survey of India Southern Region, Hyderabad
3.	Prospect of platinum group of elements and base metal mineralization within ophiolite complex at Ziphy area, Phek dist., Nagaland, India	K. Arhomo Lotha	Joint Director, Directorate of Geology and Mining, Govt. of Nagaland, Diampur-797112 Ph. 03862-232715 (o) M:09862092118 geominenaga@gmail.com
4.	Sub-surface extension of a low-grade copper deposit, district Mahendragarh, Haryana	A.K. BAJAJ and A.K.Malaviya	Geological Survey of India
5.	Copper prospect in Kuthori granitoids of Mikir hills, Assam (inner)	D. Majumdar	Department of Applied Geology, Dibrugarh University, Assam 786 004, India. e-mail: dimaj101@yahoo.co.in
6.	Sulphide resource appraisal in and around Potin area, Lower Subansiri district, Arunachal Pradesh:	Bimal Kumar Tamuli	e-mail: tamuli_bimal@yahoo.com.au
7.	An overview of resource evaluation of magmatic ore deposits (Cr, Ni, Pt/Pd, Cu and V) with reference to Orissa	S. Tiu, G.V.G.K. Bhagavan	Regional controller of Mines & Senior Technical Assistant (Geology)
8.	Platinum group elements concentration in the Komatiites of Sigegudda greenstone belt, western Dharwar craton, India	C. Manikyamba, P. K. Prachiti, K. Raju, Tarun C. Khanna, V. Balaram, T. Gnaneswara Rao, A. Keshav Krishna	NGRI, Hyderabad
9.	Precious metal mineralization in the volcano-sedimentary rocks of Gadag greenstone belt, Western Dharwar Craton, India	D. Srinivasa Sarma, M.Rama Mohan, S.N.Charan & V.Balaram	NGRI, Hyderabad dasarma@ngri.res.in
10.	Preliminary field and Petrographic studies on mafic-ultramafic complex occurring in Betul mobile belt, Central Indian Tectonic Zone, India	Satinder Dhillon, Grumeet Kaur, V. Balaram, N. Kishore	Shelly_dhillon@rediffmail.com

11.15-13.15

Technical session - V

[Venue: Meeting Hall]

Sl.No.	Title	Authors	Affiliation
1.	The Ni-Cu mineralization from Lengshuiqing-Gaojiacun (SW China): Petrogenetic and metallogenetic insights	Marian Munteanu ¹ , Allan Wilson ¹ , Yong Yao ¹ , Gordon Chunnett ² and Yaonan Luo ³	1- School of Geosciences, University of the Witwatersrand, South Africa 2- Anglo American Platinum Corporation, South Africa 3- Sichuan Bureau of Geology and Mineral Resources, Chengdu, China
2	Indian chromite deposits from a global perspective	Ria Mukherjee ¹ and Sisir K. Mondal ²	¹ Department of Geological Sciences, Jadavpur University, Kolkata-700032, ² Nordic Center for Earth Evolution, Geological Museum, Natural History Museum of Denmark, University of Copenhagen, Øster Voldgade 5-7, DK-1350, Copenhagen, Denmark
3	Chromites of India: Their textural and mineralogical characteristics	R.K. Sahoo, J.K. Mohanty, A.K. Paul* and S.K. Das	Institute of Minerals and Materials Technology, Bhubaneswar * Retd. Prof., Dept. of Geology, Utkal University, Bhubaneswar
4.	Ultramafic –Mafic cumulates, Chromitites and volcanic provinces as potential targets for PGE exploration	M.V. Subha Rao	NGRI, Hyderabad
5.	Abyssal Peridotites and Podiform Chromitites of Manipur Ophiolite Complex, Indo-Myanmar Orogenic Belt, NE India: mineral chemistry and Ni-Ag-PGE mineralization	A. Krishnakanta Singh	Wadia Institute of Himalayan Geology, Dehradun – 248001 E-mail: kk_luwang@rediffmail.com
6.	Characteristics of chromitite in igneous complex along STZ around Moulabhanj – Mathakargola	D. Acharya, P.Singh and S. Acharya	Stewart Science College, Cuttack Sept. of Geology, Utkal University, 155, VIP Colony Bhubaneswar
7.	Controls of mineralization and deposit evaluation for Sukinda Chromite deposit	R K Upadhyay, R Mohanty and P Mallick	Tata Steel Limited rk.upadhyay@tatasteel.com
8.	Petrology, geochemistry and metallogeny of the chromiferous layered ultramafic-mafic-anorthosite complexes of khammam region in eastern Dharwar craton, Southern India	D.V.Subba rao, B. Govindarajulu, S. N. Charan, V. Balaram T. Gnaneswara Rao, M. Lilly Rani, and A. Sri Valli	NGRI, Hyderabad
9.	Incidence of Cr-Ni-V in ultramafic and mafic rocks from transitional zone around T.Narasipur, Southern Dharwar craton, Karnataka, India	Dr. K.C. Chandrashekharaiah	Geological Survey of India, operations: Karnataka and Goa, Kumaraswamy Layout, Bangalore-560 078
10.	Mode of occurrence of nickel,	B. Nayak*, A. K.	National Metallurgical Laboratory

chromium and cobalt in the magnetite ores of Pokphur area, Nagaland, India	Vaish, S. D. Singh and K. K. Bhattacharyya	Jamshedpur -831007, India * E-mail: brn69@rediffmail.com
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14:15-16:15

Technical session – VI

[Venue: Meeting Hall]

Sl.No.	Title	Authors	Affiliation
1.	The Melonite-Merenskyite – Moncheite - Michenerite system in the Kevitsa polymetallic ore deposit, Northern Finland	Risto Kukonen	Dept. of geosciences, Linnanmaa, University of Oulu, Finland-90014 e-mail: risto.kukonen@oulu.fi
2.	A brief report on history of chromite & PGE search in Boula-Nuasahi Igneous Complex, Orissa	S.K. Nayak, S.K. Mohanty & P.K. Bose	OMC, Bhubaneswar
3.	Mineral synthesis and carbon dioxide adsorption on some Platinum Group Minerals	Heikki Miettunen ^a , Risto Kaukonen ^b , Tommi Kokkonen ^c , Satu Ojala ^a and Riitta L. Keiski ^a	heikki.miettunen@oulu.fi
4.	Contrasting behavior of IPG and PPG Elements: Evidence from solubility of Ir, Pt and Rh in Fe-sulfide melt	Kamal L. Pruseth	Institute Instrumentation Centre, Indian Institute of Technology, Roorkee, INDIA
5.	Recent Advances in the Determination of Platinum Group Elements (PGE) in their Exploration Studies	Dr V. Balaram	NGRI, Hyderabad
6.	Peculiarities of Analyses of PGE and Gold in Black Shales	N. Berdnikov, V. Balaram*, A. Cherepanov, D. Avdeev, N. Konovalova, G. Sukharulidze**	Institute of Tectonics and Geophysics FEB RAS, Khabarovsk, Russia * National Geophysical Research Institute, Hyderabad, India **Institute of Microelectronics Technology and High Purity Materials, Chernogolovka, Russia Email: balaram1951@yahoo.com
7.	Advanced analytical Techniques of Platinum group of Elements	D.Veerabhadraiah, Y.K. Shami, S.N. Ingalageri & H. Vijayarajulu	Geological Survey of India Bangalore Veerabhadraiah.demaiah@gsi.gov.in directorpetrology@gmail.com
8.	Vanadium bearing titaniferous magnetic iron ore in Archaean Mayurbhanj basic igneous complex, Orissa and its economic potential	S.K. Das	Institute of Minerals and Materials Technology, Bhubaneswar-751013
9.	Process mineralogy of low grade friable chromite ores of Sukinda, Orissa	S.K. Das, Ms. R. Mohapatra and R.B. Rao	Institute of Minerals and Materials Technology
10.	Genetic association of trace elements with special	F.N. Siddique, S.H. Bhat	¹ Assoc. Prof. Dept. of Geology A.M.U, Alligarh

	emphasis on Cu, Ni, and Cr in the Manganese ores of Vizianagram District, Andhra Pradesh		2 Research scholar, Dept. of Geology A.M.U, Alligarh
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Concluding Session : 16:30-17:30

[Venue: Meeting Hall]

**Chairman: Sri R.H. Sawkar
Hon. Secretary, Geological Society of India**