



## 35TH INTERNATIONAL GEOLOGICAL CONGRESS

### T32.11 - Redox texture of the Archean atmosphere and ocean

*Date* Thursday, 01 September 2016

*Time* 08:00 *to* 10:00

*Chair*

*Room* Hall 4B4

Times		Paper # Title	Speaker	
08:00	08:30	5158 A decade of progress in studies of Archean oxygenation	Prof. Timothy Lyons	Keynote
08:30	08:45	1648 Biogeochemical cycling of Fe, S, C, N, and Mo recorded in DXCL black shales suggests existence of oxygenated ocean 3.2 billion years ago	Prof. Kosei Yamaguchi	
08:45	09:00	4330 Evidence from molybdenum isotopes for a transient and localized nature of free aquatic oxygen around 3 Ga	Prof. Jan Kramers	
09:00	09:15	1934 Species-specific Fe-isotopes on Palaeoproterozoic BIF and their implications	Mr. Paul Oonk	
09:15	09:45	5476 Oxygen-based redox systems in dynamic Archean oceans	Prof. Nicolas Beukes	Keynote
09:45	10:00	5417 U-Pb age for the Ongeluk Basalts: implications for GOE and global glaciations	Dr. Wouter Bleeker	

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10:30	10:45	5466 Resolving history of the early Paleoproterozoic time reveals patterns similar to those in the late Neoproterozoic	Dr. Andrey Bekker
10:45	11:00	4350 Stagnant-lid tectonics during the Archaean and delayed onset of plate tectonics	Dr. Vinciane Debaille
11:00	11:15	5390 On the remarkable similarity of the Archaean geological evolution of the Singhbhum and Kaapvaal cratons	Mr. Axel Hofmann
11:15	11:30	5223 Development of the depleted mantle reservoir and growth of the continental crust begins at ~ 3.8 Ga.	Prof. Jeff Vervoort
11:30	11:45	2360 Major element composition of Early Enriched Reservoir: Constraints from 146Sm-142Nd system and melting experiments of primitive peridotite	Ms. Nozomi Kondo
11:45	12:00	5305 Amphibole-dehydration melting for Hadean protocrust	Prof. Xiaolei Wang

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14:00	14:15	3575 The evolution of Archean cratonic roots: a geophysical perspective	Dr. Walter Mooney
14:15	14:30	3603 A volcanic plateau origin of the Barberton granitoid-greenstone terrain	Prof. Martin Van Kranendonk
14:30	14:45	2381 Granite-greenstone relationships in the oldest mafic rocks of the Barberton Greenstone Belt, South Africa	Mrs. Kathrin Schneider
14:45	15:00	3293 Zircon ages and Hf-O isotopes of the Stolzberg and Honingklip plutons in the southern Barberton Granitoid-Greenstone Terrane, South Africa: Implications for tectonic processes	Dr. Hao Wang
15:00	15:15	695 High-grade metamorphism and crustal melting at ca. 3.2 Ga in the eastern Kaapvaal craton, southern Africa	Prof. Alfred Kröner
15:15	15:30	3285 Zircon Hf-O isotopic evidence for generation and reworking of ancient crust in Swaziland	Dr. Jin-Hui Yang

<b>Times</b>		<b>Paper #</b>	<b>Title</b>	<b>Speaker</b>	
16:00	16:30	5256	The Earth at 4.1 billion years	Prof. Mark Harrison	Keynote
16:30	16:45	1880	The Archean Dharwar craton, southern India: A wide time window to accretionary orogenesis, continental growth and assembly of micro-blocks	Prof. Jayananda Mudlappa	
16:45	17:00	4086	3.3 Ga Intraplate Volcanic-Plutonic System of the Gavião Block, São Francisco Craton, Brazil: Implications for Paleoproterozoic Crustal Growth	Dr. Stefano Zincon	
17:00	17:15	3865	A Transition from Stagnant to Mobile Lid Tectonics Between 4.0 and 2.55 Ga Is Recorded in Continental Crust of the Wyoming Craton, USA	Dr. David Mogk	
17:15	17:30	4717	SIMS dating of the Neoarchean to Eoarchean Saglek block, Labrador	Dr Daniel Dunkley	
17:30	17:45	290	Archean magmatism and crustal evolution in the northern Tarim Craton: insights from zircon U-Pb-Hf-O isotopes and geochemistry of ~2.7 Ga orthogneiss and amphibolite in the Korla Complex	Dr. Rongfeng Ge	

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	2449 Zircon Hf isotope and its tectonic implications on crustal growth and evolution of the Western Block, North China Craton	Ms. Xiaolan He
	1731 Neoarchean subduction recorded in the northern margin of the Yangtze Craton, South China	Dr. Shao-Bing Zhang Dr. Yong-Fei Zheng
	3151 The Archaean crustal evolution of the Bundelkhand Craton, northern India: Constraints from zircon U-Pb-Hf isotope data and whole-rock geochemistry of granitoids	Dr. Parampreet Kaur
	2437 Igneous protoliths of the Uivak gneiss, Saglek block, northern Labrador	Dr. hab. Monika A. Kusiak
	2556 Deformation history of the Qianlishan Complex: Implications for the tectonic evolution of the Khondalite Belt in the North China Craton	Mr. Hengzhong Qiao
	1513 Continental Arc Volcanism in the Late Archaean: Evidences from a greenstone belt, Western Dharwar Craton, South India	Mr. SUJIT KUMAR TRIPATHY
	1744 Archean to Paleoproterozoic crustal evolution of Ordos block basement, North China Craton: evidence from detrital zircon U-Pb age and Hf-isotopes of Mesoproterozoic sandstones	Prof. Chengli Zhang
	291 TTG and potassic granitoids in the eastern North China Craton: Making a Neoarchean upper continental crust during micro-continental collision and post-collisional extension	Mr. Chao Wang
	3212 Hydrous conditions in the Archean as evidenced from primary magmatic amphibole in meta-pyroxenite from the high-grade metamorphic Central Zone, Limpopo Complex, Southern Africa	Mr. Mpho Keeditse
	4297 A comparative study of chromian spinels in Archean serpentinized ultramafic rocks from the Limpopo Complex and Barberton greenstone belt, southern Africa	Dr. Kazuyasu Shindo
	5056 Cr stable isotopic signatures of 2.32 to 2.9 Ga old marine chemical sediments	Ms. GÜLÜM Albut
	2066 Crustal growth and UHT metamorphism during Precambrian collision orogeny: results of petrothermomechanical modeling	Prof. Alexey Perchuk
	1611 The geological significance of the rediscovered fuchsite quartzite with abundant Eoarchean detrital zircons in eastern Hebei Province, China	Mr. Hang Chu
	4107 Structural geology and geochronology of Archaean rocks in the Tonota area, NE Botswana	Prof. Stephen McCourt
	1461 Sedimentology, Stratigraphy and Depositional Environments of the 3.2 Ga Mapepe Formation in the BARB5 drill core, Barberton Greenstone Belt, South Africa	Ms. Nadja Drabon
	1033 Source heterogeneity for the 2.3-2.2 Ga Yuanjiacun banded iron formation in China: Implications for the Nd cycle in Earth's early oceans	Dr. Changle Wang

<b>Times</b>		<b>Paper # Title</b>	<b>Speaker</b>
08:00	08:15	5294 Chronology of the oldest supracrustal sequences in the Palaeoarchaeon Barberton Greenstone Belt, South Africa and Swaziland	Prof. Alfred Kroener
08:15	08:30	5154 New apatite U-Pb thermochronological constraints on the development of granite-gneiss domes in the Mesoproterozoic eastern Pilbara craton	Mr. Scott MacLennan
08:30	08:45	3807 Archaean volcano-sedimentary cyclicity in komatiite flow sequences at Schapenburg, Barberton Mountain Land, South Africa	Prof. Carl Anhaeusser
08:45	09:00	976 Origin of basaltic magmas from the Neoproterozoic Qingyuan greenstone belt in the Eastern Block, North China Craton: Implications for geodynamic evolution	Dr. Zhuang Li
09:00	09:15	5138 Archean volcano-sedimentary sequences in the Chitradurga schist belt, Dharwar craton, southern India	Dr. Madhusoodhan Satish-Kumar
09:15	09:30	5247 Carbonaceous cherts of the Daitari Greenstone Belt, Singhbhum Craton, India: A well preserved record of early life.	Mr. Jaganmoy Jodder
09:30	10:00	4183 Geology, petrology and geodynamic evolution of the Paleoproterozoic Onverwacht Group, Barberton greenstone belt, South Africa	Dr. Eugene Grosch
			Keynote

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10:30	10:45	4390	The origin of granular chert in the BARB3 drill core from the 3.4 Ga Buck Reef Chert, Onverwacht Group, Barberton Greenstone Belt, South Africa	Ms. Mmasetena Anna Molekwa
10:45	11:00	5016	Carbonates from the ~3.4 Ga old Buck Reef Chert of South Africa: testing potential microbial activity in an Archean hydrothermal system	Mr. Francesco Greco
11:00	11:15	4710	Sulfate in the Paleoproterozoic Oceans: insight from barite deposits and their surrounding sedimentary rocks in the Barberton Greenstone Belt	Dr. Paul Mason
11:15	11:30	3803	The tectonic evolution of the main gold-producing region of the Barberton greenstone belt, South Africa	Prof. Carl Anhaeusser
11:30	11:45	4028	The source of sulfur in the Mesoproterozoic gold deposits of the Barberton Greenstone Belt, southern Africa	Dr. Andrea Agangi
11:45	12:00	3641	Neoproterozoic mineral systems in the lower continental crust of the North Atlantic Craton, Greenland	Dr. Jochen Kolb

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	4068 Geophysical Analysis of the Paleoproterozoic Bui Greenstone Belt, Western Ghana; the Constraints of Conductivity on the Belt using an EM Inversion Technique	Ms. Abigail Ayikwei
	5022 Multiple Sulfur Isotope evidence of an Archean age for the deposition of Jacobina Basin, São Francisco Craton, Brazil	Mr. Guilherme Teles
	2336 Geochronology of mantle and crustal processes of Archaean rocks of the Kola region (Fennoscandian Shield)	Dr. Nikolay Kudryashov
	4027 Geology and Gold Mineralization of a Newly Identified Mafic-Ultramafic Sequence in the Archean Busia-Kakamega Greenstone Belt, Western Kenya	Mr. Takalani Netsianda
	671 Komatiite from Mesoarchaeal Badampahar-Gorumahisani greentone belt, Singhbhum craton, eastern India: Petrogenetic affinity with 'Barberton type'	Mr. Pawan Yadav
	4593 On using the Kaapvaal Craton to naturalise the International Chronostratigraphic Chart for the Precambrian	Dr. Christopher Hatton
	3260 Detrital pyrite: a revised classification scheme and application to placer gold deposits	Ms Giuliana Costa
	4917 3.2 Ga sedimentary environment implied from heterogeneity of sulfur isotopic compositions of barite beds in Pilbara, Western Australia	Mr. Tsubasa Miki
	5482 Preliminary results on the petrogenesis and metallogenesis of Archaean rare metal granitic pegmatites along the southern margin of the Zimbabwe craton	G.S Chagondah
	5388 A mineralogical-geochemical study of Mesoarchaeal quartz-pebble conglomerates from the Pongola Supergroup and implications for U/Au placer deposits	Mr. Axel Hofmann
	3879 Geochemical characterisation of the mafic/ultramafic rocks from the BARB-3 drilling site in the Barberton Greenstone belt	Mrs. Nina Bellot
	1409 Formation and evolution of the Huangling basement in Yangtze craton, South China	Prof. Junqi Wei
	3917 Contrasting geochemical characteristics in adjacent units of Archean greenstones in the Chitradurga schist belt, Southern India	Mr. Yoshihiro Enya
	3673 A 4-D model of the Archaean Crustal Evolution of the Fennoscandian Shield	Dr. Aleksandr Slabunov



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14:00	14:30	878 Early Life and Ancient Gold	Prof. Hartwig Frimmel	Keynote
14:30	14:45	822 Archean life on land	Dr. Gregory Retallack	
14:45	15:00	866 The Mid-Archaean Pongola Supergroup: volcanism, sedimentation and early life development on Earth's oldest stable continental margin	Prof. Allan Wilson	
15:00	15:15	5222 Kaapvaal, Superior and Wyoming: nearest neighbours in supercraton Superia	Dr. Wouter Bleeker	
15:15	15:30	3938 Geology of the Archean Busia-Kakamega Greenstone Belt, Western Kenya	Dr. Tim Sharp	