



Goldschmidt 2008

Oral and Poster Presentations

Wednesday July 16th, 2008



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Wednesday 16th July AM Room H2

02b: Surface Geochemistry and Processes on Mars

Session chaired by Penny King & Nick Tosca

10:00 **Keynote:** A ~3.5By Record of Water-Limited, Acidic Weathering on Mars

A404 Hurowitz J

10:30 Emplacement of Regional High-Silica Deposits on Mars

A498 Kraft M, Michalski J, Rampe E & Sharp T

10:45 An Experimental Approach to Clay Mineral Formation on Mars

A952 Tosca N, Milliken R & Wyatt M

11:00 Phosphate Alteration on Mars

A357 Hausrath E, Golden DC, Morris R & Ming D

11:15 Sulphate Formation on Mars by Radiolytic Oxidation of Sulphide Minerals

A531 Lefticariu L, Pratt L & Onstott TC

11:30 A Potential Mineral Paleo-Humidity Measure for Martian Hydrated Evaporite Minerals: First Results

A173 Coleman M, Rohrssen M & Mielke R

11:45 Analysis of Chloride Salt Deposits on Mars

A314 Glotch T, Osterloo M, Hamilton V, Bandfield J, Baldrige A, Christensen P, Tornabene L, Anderson FS, Che C & Seelos F

12:00 **Invited:** Br/Cl Partitioning in Chloride Minerals in the Burns Formation on Mars

A592 Marion G, Kargel J & Catling D

12:15 **Invited:** Boron Isotopes in the Nakhilites: Implications for Crustal Fluids on Mars

A889 Spivak-Birndorf L, Wadhwa M & Williams L



Wednesday 16th July AM Room H1

03f: Hydrothermal Impact on the Early Precambrian Seawater Composition as Recorded by Banded Iron Formations, Black Shales, and Other Proxies

Session chaired by Andrey Bekker, Axel Hofmann & Beate Orberger

- 10:00 **Invited:** Revisiting the Oxygen Isotopic Composition of the Archean Ocean
A659 *Muehlenbachs K*
-
- 10:15 Coupled Oxygen and Hydrogen Isotope Exchange in Archean Igneous Rocks: Constraints on the Seawater and the Hydrosphere
A327 *Gregory RT, Richards IJ, Ferguson KM & Banerjee S*
-
- 10:30 K-Si-Metasomatism of 3.4-3.3 Ga Volcanoclastic Sediments: Implications for Archean Seawater Evolution
A808 *Rouchon V & Orberger B*
-
- 10:45 Sulfidic Organic-Rich Shales in the Archean Low-Sulfate Ocean: Evidence for Transient Oxygenated Conditions, Enhanced Volcanism, or Low Sedimentation Rates?
A69 *Bekker A, Hofmann A, Rumble D & Rouxel O*
-
- 11:00 Oxidative Weathering and The Fe-S Balance of the Late Archean Ocean
A784 *Reinhard C, Raiswell R, Anbar A & Lyons T*
-
- 11:15 **Keynote:** Paleorecords of Hydrothermal Fluid Flow and the Composition of Early Precambrian Oceans
A1027 *Wing B*
-
- 11:30 Hydrothermal Fe(II) Oxidation during Phase Separation: Relevance to the Origin of Algoma-Type BIFs
A280 *Foustoukos D & Bekker A*
-
- 11:45 Rare Earth Element Evidence for Redox Structure Evolution
A753 *Planavsky N, Rouxel O, Bekker A & Lyons T*
-
- 12:00 The Role of Fe-Oxides and Quartz in the Sequestration of Carbonaceous Matter in 2.72 Ga Banded Iron Formations, Dhawar Craton, India
A708 *Orberger B, Wirth R, Wagner C, Noret A, Massault M, Gallien JP, Jayananda M, Rouchon V, Quirico E & Montagnac G*
-
- 12:15 Crustal Versus Hydrothermal Sources to 2.7-2.3 Ga Seawater: Constraints from Os Isotopes and Re, Mo Abundances in Black Shales
A463 *Kendall B, Hannah J, Yang G, Stein H, Creaser R, Anbar A & Arnold G*
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Wednesday 16th July AM Room H3

04e: 4D Structure of the Continental Crust: Greenstones to Granulites

Session chaired by Nigel Kelly, Andreas Moeller & John Percival

- 10:00 **Keynote:** High to Low Temperature Geo- and Thermochemistry and the Reactivation and Stability of Continental Lithosphere, Western Canadian Shield
A275 *Flowers R*
-
- 10:30 Rates of Metamorphism in Collisional Orogeny
A244 *Engi M, Janots E, Rubatto D, Berger A, Gregory C, Allaz J & Schwarz J-O*
-
- 10:45 Thermochronological Constraints to Two-Stage Indosinian Extrusion of the HP-UHP Terranes in the Dabie-Sulu Orogen, Central China
A544 *Li S*
-
- 11:00 Regional Isotopic Patterns in Granitic Rocks of Southern Tibet and Evolution of Crustal Structure during the Indo-Asian Collision
A211 *DePaolo D, Weaver K, Mo X, Zhao Z & Harrison TM*
-
- 11:15 Geochemistry of Volcanic and Plutonic Rocks from the Southern Musoma-Mara Greenstone Belt: Implication for the Evolution of the Tanzania Craton
A622 *Messo C, Yamashita K, Kobayashi K, Makishima A, Sakaguchi C & Nakamura E*
-
- 11:30 **Invited:** Archean TTG Petrogenesis – The U/Pb-O-Hf Isotopic Perspective
A375 *Hiess J, Bennett V, Nutman A, Williams I & Eggins S*
-
- 11:45 *In situ* Dating of Metamorphic Zircon, Kapuskasing Structural Zone: Crustal Refinement of a Late Archean LIP
A72 *Benn K & Kamber B*
-
- 12:00 Multi-Stage Zircon Growth during a Single Partial Melting Event – Insights from REE Partitioning
A462 *Kelly N, Harley S & Hinton R*
-
- 12:15 Zoned Garnets and the Duration of Metamorphic Events
A127 *Caddick M & Thompson AB*
-



Wednesday 16th July AM Room H4

08e: The Role of Fluids in Diamond Growth and Resorption

Session chaired by Maya Kopylova & Emma Tomlinson

- 10:00 **Keynote:** Origins of Diamond Forming Fluids – Constraints from a Coupled Sr-Nd-Pb Isotope and Trace Element Approach
A479 *Klein-BenDavid O, Pearson DG, Nowell GM, Ottley C & Cantigny P*
-
- 10:30 **Invited:** Syngenetic Nanometer-Size Fluid/Glass Inclusions in Metamorphic Microdiamond: Implication to Genesis of Metamorphic Microdiamond from Potassic Fluid/melt
A405 *Hwang S-L, Shen P, Chu H-T & Yui T-F*
-
- 10:45 Fluids Role in Formation of Microdiamonds from Ultrahigh Pressure Metamorphic Terranes
A221 *Dobrzhinetskaya L & Wirth R*
-
- 11:00 **Invited:** Experimental Modeling of Chloride-Bearing Diamond-Related Liquids: A Review
A817 *Safonov O, Perchuk L, Litvin Y, Chertkova N & Butvina V*
-
- 11:15 Near-Infrared Spectroscopic Determination of Salinity and Internal Pressure of Fluid Inclusions in Cuboid Diamonds
A444 *Kagi H*
-
- 11:30 Metasomatic Processes Recorded in Fibrous Diamonds
A950 *Tomlinson E, Muller W, Hinton R, Klein BenDavid O, Pearson G & Harris J*
-
- 11:45 Mineralogy of Natural Diamond-Forming Fluids
A490 *Kopylova M, Navon O, Dubrovinsky L & Khachatryan G*
-
- 12:00 Resorbed Diamond Surfaces: A Tool to Investigate Oxidizing Fluids
A260 *Fedortchouk Y & Canil D*
-
- 12:15 The Formation of Enigmatic Carbonados from Komatiite – Related Fluids: A Model
A141 *Cartigny P*
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Wednesday 16th July AM Room H5

10d: Links between Plutonic and Volcanic Systems

Session chaired by Drew Coleman, Jonathan Miller & Jorge Vazquez

- 10:00 **Keynote:** The Volcanic-Plutonic Connection
A42 Bachmann O & Bergantz G
-
- 10:30 **Invited:** From Intrusions to Magma Chambers: Conditions for the Accumulation of Magma in the Upper Crust
A27 Annen C
-
- 10:45 Thermal Models of Incremental Pluton Emplacement
A202 Davis J & Coleman D
-
- 11:00 **Invited:** Differentiation of Mantle-Derived Calc-Alkaline Magmas at Mid to Lower Crustal Levels: Experimental and Petrologic Constraints
A966 Ulmer P, Muntener O & Alonso Perez R
-
- 11:15 Comparing the Compositional Patterns of Volcanic and Plutonic Rocks Using the NAVDAT Database
A631 Mills RD, Glazner A & Coleman D
-
- 11:30 Linking Jurassic Plutonism and Ignimbrite Volcanism in California
A58 Barth A, Fohey N, Wooden J, Mazdab F & Carter C
-
- 11:45 Zircons from Mount St. Helens: Implications for Magma Storage
A166 Claiborne L, Miller CF, Clynne M, Wooden J & Mazdab F
-
- 12:00 Single-Grain and/or *in situ* U-Pb and Hf-Isotope Study to Unravel Long-Lived Calc-Alkaline Magma Complex
A742 Peytcheva I, von Quadt A, Schaltegger U, Tacheva E & Heinrich C
-
- 12:15 Eocene Volcanism in the Central Anatolian Crystalline Complex: Geochemical Indications for a Change from Post-Collision to Extension
A318 Goncuoglu MC & Geneli F
-



Wednesday 16th July AM Room H6

10e: Mechanisms and Time Scales of Crustal Assimilation

Session chaired by Wendy Bohrsen, David Peate & Michael Rowe

- 10:00 **Keynote:** Styles of Interaction between Mafic Magma and Continental Crust
A1032 *Wolff J, Ramos F & Rowe M*
-
- 10:30 Is Assimilation of Sedimentary Basement Responsible for the Temporal Geochemical Variations of Etna Magmas?
A989 *Vroon P, Wijbrans J, Groen M, de Groot K, de Zwaan C & van der Wagt B*
-
- 10:45 Andesites as Mixtures of Crystals and Evolved Melts Derived from Multi-Component Crustal and Mantle Sources: Evidence from Ruapehu, New Zealand
A761 *Price R, Smith I & Gamble J*
-
- 11:00 Crustal Contamination of Mantle-Derived Magmas within the Edifice of Piton de la Fournaise Volcano
A749 *Pietruszka A, Hauri E, Blichert-Toft J & Albarède F*
-
- 11:15 Timescales of Crustal Assimilation at Intra-Oceanic Arcs: U-Series and Geochemical Constraints from Lopevi Volcano, Vanuatu, SW Pacific
A348 *Handley H, Turner S, Smith I & Stewart R*
-
- 11:30 A Melt Inclusion Investigation of Crustal Contamination: A Case Study at Paricutin Volcano
A810 *Rowe M, Peate D, Ukstins-Peate I & Housh T*
-
- 11:45 Melt Inclusions as a Recorder of Crustal Assimilation Processes
A732 *Peate DW, Thompson J, Ukstins Peate I, Rowe M & Kent A*
-
- 12:00 Selective vs. Bulk Assimilation and the Restricted Chemical Variability of Igneous Rocks
A313 *Glazner A, Mills RD & Coleman D*
-
- 12:15 Zoning in Olivine Xenocryst in Hydrous Systems
A245 *Erdmann S, Scaillet B & Dungan M*
-



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Wednesday 16th July AM Room L3

12b: Experiments and Observations Bearing on the Behaviour of Chalcophile and Siderophile Elements in Magmatic Systems

Session chaired by James Brenan & Pedro Jugo

- 10:00 Inclusions of Immiscible Sulfide Melts in Olivine Phenocrysts from Mantle-Derived Magmas
A616 McNeill A, Danyushevsky L, Kamenetsky V, Feig S & Crawford T
-
- 10:15 Distribution of PGE in the Layered Mafic Dufek Intrusion, Antarctica
A350 Hanemann R, Viereck-Goette L & Mukasa SB
-
- 10:30 **Invited:** Siderophile and Chalcophile Elements in Sulphides from the Morokweng LL Meteorite and Implications for Platinum-Group Element Deposits
A57 Barnes S-J, Prichard H, Cox RA, Fisher P, Maier W, McDonald I & Andreloi M
-
- 10:45 **Invited:** Platinum Group Element Geochemistry of Large Igneous Provinces
A844 Scoates J, Greene A & Weis D
-
- 11:00 **Invited:** Magmatic-Hydrothermal Fractionation of Fe-Ni-Cu-PGE Mineralization in the Sudbury Igneous Complex
A536 Leshner CM, Golightly JP, Huminicki MAE & Gregory S
-
- 11:15 Effect of fS_2 on Pd Solubility in Silicate Melts – Implications for PGE Enrichment Processes in Sulfide Melts
A519 Laurenz V, Fonseca ROC & Ballhaus C
-
- 11:30 **Invited:** The Solubility of Os and Ir in Sulphide Melts: Implications for Os Heterogeneity in the Earth's Mantle
A277 Fonseca R, Mallmann G, Campbell I & O'Neill H
-
- 11:45 Solubility of Os, Ir and Au in Molten Silicate at High P-T, Low fO_2 Conditions
A113 Brenan J & McDonough W
-
- 12:00 **Keynote:** Enrichment of the PGE in Magmatic Sulfide Melt
A49 Ballhaus C, Laurenz V & Fonseca R
-



Wednesday 16th July AM Room W6

14b: Geochemical Aspects of CO₂ Sequestration

Session chaired by Per Aagaard & Eric Oelkers

- 10:00 Experimental Study of Biomineralization Processes Relevant to CO₂ Geological Sequestration
A233 *Dupraz S, Parmentier M, Ménez B & Guyot F*
-
- 10:15 Microbially Enhanced Carbonate Mineralization and the Geologic Containment of CO₂
A636 *Mitchell AC, Phillips AJ, Kaszuba JP, Hollis WK, Cunningham AB & Gerlach R*
-
- 10:30 Quantifying the Precipitation and Dissolution of CO₂ within Geological Carbon Storage Analogues
A309 *Gilfillan S, Ballentine C, Sherwood Lollar B, Stevens S, Schoell M & Cassidy M*
-
- 10:45 Comparison of Isotopic Trends Revealing the Fate of Injected CO₂ in Two Geological Storage Projects in Mature Oilfields in Canada
A607 *Mayer B, Raistrick M, Johnson G, Nightingale M, Shevalier M, Taylor S, Hutcheon I & Perkins E*
-
- 11:00 Combining Experimental Studies and Kinetic Modelling to Investigate the Carbonation of Ca-Bearing Silicates
A200 *Daval D, Martinez I, Corvisier J, Findling N, Goffé B & Guyot F*
-
- 11:15 The Onset of Calcium Carbonate Nucleation: A Computational Study
A219 *Di Tommaso D & de Leeuw N*
-
- 11:30 H₂CO_{3(s)}: A New Candidate for CO₂ Capture and Sequestration
A953 *Tossell J*
-
- 11:45 Calcite Dissolution Kinetics in Saline Waters
A269 *Finneran D & Morse J*
-
- 12:00 CO₂-basalt Interaction – Numerical Simulation and Experimental Study
A894 *Stefansson A & Gysi A*
-
- 12:15 Experimental Analysis of Supercritical CO₂-Brine-Rock Interactions Using a Flow-Through Reactor
A351 *Hansen L, Skidmore M & Brox T*
-



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Wednesday 16th July AM Room W1

15c: Hydrothermal Systems in Ultramafic Rocks

Session chaired by Wolfgang Bach & Dionysis Foustoukos

- 10:00 **Keynote:** Lost City: Serpentinization and Life
A460 *Kelley DS, Brazelton W & Baross J*
-
- 10:30 **Invited:** The Abiotic Production of Hydrocarbons at the Lost City Hydrothermal Field
A764 *Proskurowski G, Lilley M, Seewald J, Früh-Green G, Olson E, Lupton J, Sylva S & Kelley DS*
-
- 10:45 **Invited:** Boron Isotope Systematic of Marine Hydrothermal Fluids: New Insights from the Lost City Hydrothermal System (MAR 30°N)
A101 *Boschi C, Dini A, Früh-Green GL, Zandomenighi G, Kelley DS & Meier BH*
-
- 11:00 Are Li, B and Sr-Isotopes Tracers for Serpentinization?
A985 *Vils F, Tonarini S, Seitz H-M, Kalt A & Pelletier L*
-
- 11:15 Isotopic Evidence of Microbial Methane in Ultrabasic Reducing Waters at a Continental Site of Active Serpentinization in N. California
A652 *Morrill P, Johnson O, Cotton J, Eigenbrode J, Nealson K, Sherwood Lollar B & Fogel M*
-
- 11:30 Ancient Analogs for Ultramafic-Hosted Vents: Water-Rock-Derived Energy for Deep Subsurface Chemosynthesis
A648 *Moran JJ, Slater G, Tille S, Voglesonger K & Sherwood Lollar B*
-
- 11:45 Modeling the Chemical Evolution of an Ultramafic Oceanic Hydrothermal System: Insights from Reactive Transport Simulations
A18 *Alt-Epping P & Diamond LW*
-
- 12:00 Serpentinite Phase Relations as a Monitor of Hydrogen Production
A479 *Klein F & Bach W*
-
- 12:15 Habitability of Serpentinizing Systems for Methanogenic Microorganisms: An Energy Balance Model
A383 *Hoehler T, Alperin M, McCollom T & Rogers K*
-



Wednesday 16th July AM Room W5

16e: Cosmogenic Nuclide Constraints on Surface Process Rates and Styles

Session chaired by John Gosse, Arjun Heimsath, Susan Ivy-Ochs, Tim Jull, Nat Lifton & Joerg Schaefer

10:00 New Production Rate Estimates for *in situ* Cosmogenic ^{14}C
A231 Dugan B, Lifton N & Jull AJT

10:15 Pleistocene Landscape Evolution of a Passive Margin in Response to Climate Change
A231 Dunai T, Eitel B & Stuart F

10:30 **Keynote:** Multiple-Cosmogenic-Nuclide Isochron Methods
A47 Balco G, Rovey C & Granger D

11:00 Delineating Exposure Histories of Exposed Rocks Using Nuclear Physics
A512 Lal D

11:15 Exposure Dating Meets History: Precise ^{10}Be Dating of Very Young Surfaces
A269 Finkel RC, Schaefer JM & Schwartz R

11:30 *In situ* Cosmogenic ^{14}C from Surfaces at Secular Equilibrium
A552 Lifton N

11:45 Eroding Australia: Slowly
A363 Heimsath A, Chappell J, Hancock G, Fink D & Fifield K

12:00 Cosmogenic Chlorine-36 Calibration of Potassium Production Rates
A594 Marrero S, Phillips F, Stone JO & Borchers B

12:15 *In situ* Cosmogenic ^{36}Cl Production Rate Calibration from Ca and K in Lava Flows
A831 Schimmelpfennig I, Benedetti L, Pik R, Burnard P, Blard PH, Dunai T & Bourlès D



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Wednesday 16th July AM Room W2

17c: Global Climatic Transitions and Abrupt Events: Signatures and Mechanisms

Session chaired by Mark Pagani & Andy Ridgwell

- 10:00 **Keynote:** Records of Past Climate Events: A Hitchhiker's Guide to the Earth System
A1071 Zeebe R
-
- 10:30 **Invited:** Neoproterozoic Carbonates: An Isotopic Archive of Ocean Acidification?
A452 Kasemann S, Abell R, Prave A, Fallick A & Hawkesworth C
-
- 10:45 Constraints on the Carbon Cycle Changes during the PETM
A834 Schmidt DN, Ridgwell A, Kasemann S & Thomas E
-
- 11:00 In Search of the Deglacial Carbonate Preservation Maximum: Why is it Missing?
A619 Mekik F, Anderson R & Ridgwell A
-
- 11:15 Abrupt Increase of Nitrous Oxide Production in the Indo-Pacific at the Onset of the Bölling Warm Period
A290 Galbraith E, Schmittner A & Jaccard S
-
- 11:30 Modeling Phosphorus Cycling and Carbon Burial during Cretaceous Oceanic Anoxic Events
A958 Tsander I, Slomp C, Kraal P & Van Cappellen P
-
- 11:45 The Marine Sulfate-Oxygen Isotope Record of the Early Toarcian Anoxic Event
A679 Newton RJ, Kafousia N, Reeves E, Wignall P & Bottrell S
-
- 12:00 Integrated Biomarker Records Reveal Complex and Dramatic Changes in High Latitude Climate during the Paleogene
A349 Handley L, Hollis C, Crouch E, Schouten S, Huber M, Morgans H, Pearson P, Sinninghe Damsté J, Burgess C & Pancost R
-
- 12:15 The Role of CO₂ during the Eocene-Oligocene Climate Transition
A716 Pagani M, Liu Z & Huber M
-



Wednesday 16th July AM Room L1

18h: Molecular-Scale Chemical and Biogeochemical Processes Affecting the Mobility of Metal and Radionuclide Contaminants in the Subsurface: Metals Characterized in Field Environments and Metal Complexation

Session chaired by Rizlan Bernier-Latmani & Brad Tebo

- 10:00 Stability of Uranium Incorporated into Fe(hydr)oxide Structures Under Fluctuating Redox Conditions
A900 *Stewart BD, Nico P & Fendorf S*
-
- 10:15 Newly Recognized Hosts for Uranium in the Hanford 300 Area Vadose Zone
A909 *Stubbs J, Elbert D, Veblen L, Zhang S & Veblen D*
-
- 10:30 Coffinite and Ningyoite from Natural Nuclear Reactor in Bangombé, Gabon
A968 *Utsunomiya S, Deditius A, Pointeau V & Ewing R*
-
- 10:45 The Corrosion of Depleted Uranium Penetrators in Grassland Soils
A350 *Handley-Sidhu S, Worsfold PJ & Keith-Roach MJ*
-
- 11:00 Cr Behavior after Oxidation by Mn-Oxides along a Weathering Profile in New Caledonia
A254 *Fandeur D, Juillot F, Fritsch E, Olivi L, Morin G, Brown, Jr GE, Webb S & Ambrosi J-P*
-
- 11:15 REE Fractionation during the Precipitation of Hydrous Ferric Oxides from Anoxic Lake Water
A108 *Bozau E & Stärk H-J*
-
- 11:30 Sequestration Mechanisms and Sources of Rhenium in Lacustrine Sediments, Eastern Canada
A149 *Chappaz A, Gobeil C & Tessier A*
-
- 11:45 Radionuclides, Organic Complexing Agents and Solid Phases: Exploring their Interactions
A785 *Reinoso-Maset E, Worsfold PJ & Keith-Roach MJ*
-
- 12:00 Thorium Complexation with Humic Acid: Results from Ligand Competition Experiments
A898 *Stern J, Sonke J & Salters V*
-
- 12:15 A CD-MUSIC Surface Complexation Database for Modeling Oxyanion Sorption on Iron Oxyhydroxides
A986 *Vlassopoulos D, Serrano S, Kinniburgh DG & Parkhurst DL*
-



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Wednesday 16th July AM Room L2

18j: Using Gases as Indicators for Transport and Reaction Processes in Ground Water and the Vadose Zone

Session chaired by M. Jim Hendry, Rolf Kipfer & Ulrich Mayer

- 10:00 **Keynote:** The Geological Storage of CO₂: Quantification of Natural Gas/Groundwater Interaction
A49 *Ballentine CJ, Gilfillan S, Holland G, Zhou Z, Sherwood Lollar B & Cassidy M*
-
- 10:30 Atmospheric Noble Gas Signatures in Deep Michigan Basin Brines as Indicators of a Past Thermal Event
A578 *Ma L, Castro C & Hall C*
-
- 10:45 Stable Isotope Composition of Gaseous and Dissolved Oxygen in the Subsurface
A367 *Hendry M, Wassenaar L & Lis G*
-
- 11:00 Excess Air as a Proxy for Hydrostatic Pressure?
A483 *Klump S, Cirpka OA & Kipfer R*
-
- 11:15 **Invited:** Dissolved Gas and Isotopic Tracers of Denitrification
A872 *Singleton M, Moran JE, Esser B, McNab W, Carle S & Cey B*
-
- 11:30 Methane Oxidation in a Crude Oil Contaminated Aquifer
A20 *Amos R, Bekins B, Cozzarelli I, Voytk M, Kirshtein J, Delin G & Blowes D*
-
- 11:45 Controls and Rates of Acid Production in Elemental Sulphur Blocks
A85 *Birkham T, Hendry J & Barbour L*
-
- 12:00 **Invited:** Concentration Fronts in the Dissolution of Entrapped Gas
A164 *Cirpka O & Klump S*
-
- 12:15 Oxygen Mass Transfer from Trapped Gas Phase and its Biogeochemical Consumption
A711 *Oswald S & Balcke G*
-



Wednesday 16th July AM Room W4

19f: Advances in Microbe Radionuclide Interactions

Session chaired by Jon Lloyd & Yohey Suzuki

- 10:00 Geochemical and Microbial Controls of the Decomposition and Dispersion of Depleted Uranium in the Environment: Experimental Studies
A978 *Vaughan D, Alvarez R, Bryan N, Fomina M, Gadd G, Handley-Sidhu S, Keith-Roach M, Livens F & Lloyd J*
-
- 10:15 **Keynote:** Field-Scale Bioreduction of U(VI) to U(IV) in an Alluvial Aquifer: Evidence for Microbially Mediated Precipitation of Uranium Under Both Natural and Biostimulated Conditions
A568 *Long P*
-
- 10:30 **Invited:** Removal of Radionuclides into Biogenic Metal Phosphate Matrices: A Novel Remediation Strategy
A580 *Macaskie L, Mennan C, Paterson-Beedle M, Readman J & Hriljac J*
-
- 10:45 Stability of Natural Bacteriogenic Iron Oxides (BIOS) and their Role in Sr Cycling
A278 *Fortin D, Langley S, Gault A, Ibrahim A, Ferris FG & Clark ID*
-
- 11:00 Study of Processes Involving Selenite Immobilization in a Soil-Plant-Microorganisms System
A662 *Muller J, Abdelouas A, Grambow B, Thiry Y & Van Hees M*
-
- 11:15 **Invited:** Interactions of Actinides with Microorganisms and Organic Ligands
A701 *Ohnuki T, Ozaki T, Sakamoto F, Kozaki N, Nankawa T, Suzuki Y & Francis A*
-
- 11:30 Fate of Carbon-14 Organic Compounds Released from Sub-Surface Low-Level Radioactive Waste Repository
A668 *Nagaoka T, Yoshida N, Nakamura T & Miyauchi Y*
-
- 11:45 Redox Interactions of Technetium with Fe(II) Mineral Phases
A610 *McBeth JM, Morris K, Boothman C, Begg JDC, Burke IT, Charnock JM, Livens FR & Lloyd JR*
-
- 12:00 Molecular- and Nano-Scale Structure and Reactivity of Biogenic Uranium (IV) Oxide
A838 *Schofield E, Bargar J, Ulrich K-U, Mehta A, Bernier-Latmani R, Veeramani H, Sharp J, Conradson S, Clark D, Giammar D & Webb S*
-
- 12:15 Adsorption and Reduction of U(VI) in Soil from Dounreay, UK
A67 *Begg J, Burke I, Boothman C, Lloyd J & Morris K*
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Wednesday 16th July AM Room W3

20d: Advances in Chronological Methods Applied to Geological and Cosmochemical Problems

Session chaired by Martin Bizzarro & Antonio Simonetti

- 10:00 **Keynote:** Dating the First ~100 Ma of the Solar System: From the Formation of CAIs to the Origin of the Moon
A480 *Kleine T, Touboul M, Burkhardt C & Bourdon B*
-
- 10:30 **Invited:** High-Precision ^{26}Al - ^{26}Mg Dating Solid and Planetsimal Formation in the Young Solar System
A45 *Baker J*
-
- 10:45 Internal Isochron of CAI Using High Precision SIMS Mg Isotope Analyses
A477 *Kita NT, Ushikubo T, Fournelle J, Knight KB, Mendybaev RA, Davis AM & Richter FM*
-
- 11:00 **Invited:** Advances in Crustal Geochronology of Shales and Sulfide Minerals Using ^{187}Re - ^{187}Os
A188 *Creaser R, Kendall B & Morelli R*
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- 11:15 The El Salvador Cu Deposit, Chile: Insight from a Decade of Re-Os Data
A1106 *Zimmerman A, Stein H & Watanabe Y*
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- 11:30 Improving the Utility of Detrital Zircon Studies Through Chemical Abrasion
A392 *Horstwood M, Cottle J & Parrish R*
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- 11:45 Zircon U-Pb Age Discordance and Trace Element Alteration due to Deep, Post-Impact Flow; Implications for Planetary Chronology
A655 *Moser D, Davis W, Reddy S, Flemming R & Hart R*
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- 12:00 Laser Ablation MC ICP-MS U-Pb Zircon Dating Using Multiple Channeltron Ion Counting Detection
A492 *Kosler J, Fliegel D, Slama J & Pedersen R-B*
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- 12:15 LA-MC-ICP-MS Dating of Zircon Using Petrographic Thin Sections: An Investigation of Buried Archean Basement in Southern Alberta
A123 *Burwash R, Cavell P, Simonetti A, Chacko T, Luth R & Nelson D*
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