

Goldschmidt 2011

Oral and Poster Presentations

Wednesday August 17th 2011

Wed

Summary & Highlights

08:30	<p>Plenary <i>Floor 2 / Congress Hall</i> Edouard Bard Collège de France <i>'Geochemical Profiles to Study the Last Deglaciation and its Impact on Rivers'</i></p>
09:10	<p>Awards Dana Medal 2001 (MSA): Ross Angel Shen-su Sun Award: Honglin Yuan Early Career Award (IAG): Leah Morgan Geochemical Journal Award: Jun-ichi Matsuda, Takuya Matsumoto, Akihisa Suzuki <i>Full details page xxvii</i></p>
09:25	
09:30	Oral Sessions
12:30	<p>Lunch <i>Floor 3 / Forum Hall Foyer (Boxed lunches)</i> <i>Floor 1 / Restaurant Zoom (Buffet lunches)</i></p>
14:00	Oral Sessions
17:00	<p>Poster Session <i>Floors 1, 2, 3, 4 / Congress Hall Foyer</i></p>
18:30	Conference Music Event
20:00	

	Chamber Hall	Club A	Club B/C	Club D	Club E	Club H	Conference Hall	Forum Hall	Meeting Hall I
	10h	02e	06a / 06b	03d	04f / 04c	05a / 05f	21f	17c	16e / 16h / 16a
09:30	Stefansson	Rubie	Wu	Liu	Lissenberg	Downes	Russell	Reeburgh	Fortner
09:45	Yu		Li	Yaxley	Turner		Layne		Masion
10:00	Rosenqvist	Wood	Selverstone	Ionov	Gonnermann	McLennan	Smit	Knab	Tuoriniemi
10:15	Zhu	Badro	Dolejs		Pietruszka	Usui	Evans	Bar -Or	Legros
10:30	Zhang	Wade	Scambelluri	Kopylova	Handley	Mikouchi		Marlow	Tella
10:45	Rosenbauer	Hin	Bobos	van der Meer	McGee	Bouvier	Dutrow	Freeman	Terzano
11:00	Richard	Nielsen	Brounce	Luguet	Rubin	Cartwright	Matthews	Meister	
11:15	Bertier	Fitoussi	Whan	Luchs		Magna	Wagner	Joshi	Goren
11:30	Lewan	Samuel	Troll	Longo	Jackson	Spray	Kleine	Segarra	Moraetis
11:45		Stevenson	Plank	Shu	Shimoda	Kylander -Clark	Bowman	Blees	Albuquerque
12:00	He	Bottke	Stamper	Ziberna	Hemond	Hacker	Nabelek	Dörsch	Nordstrom
12:15	Bourdret	Frank	Parat	Pickles	Meleney	Dragovic	Stober	Althoff	

	Meeting Hall IV	Meeting Hall V	North Hall	Panorama Hall	Small Hall	Small Theatre	South Hall	Terrace 1	Terrace 2
	08a	08h	13d / 13f	15d / 15e	18e	20g / 20h	11c	14c / 14d	07g / 07h
09:30	Stolpe	Black	Chin	Guzman	Eglinton	Dubrovinsky	Cockerton	Allègre	Rau
09:45	Ciglenečki	Schuth	Lau	Koschinsky			Fuchs	Salama	Köhler
10:00	Hildebrand	Behrends	Myhre	Amend	Magill	Borchert	Botcharnikov	Crowe	Lackner
10:15	Gislason	Harries	Storelvmo		Gelinas	Simon	Zajacz	Babechuk	
10:30	Stipp	Cai	Ichoku	Lin	Bradley	Tailby	Hurtig	Georgiev	Lubansky
10:45	Maillot	Gehin		Wegener	Saenz	Mosselmans	Zežin	Pollington	Washbourne
11:00	Fritzsche	Hug	de Leeuw	Price	Pedentchouk	Kogiso	Laurenz	Ikeda	Jilbert
11:15	Mäkie	Polubesova	Ceburnis	Steen	Luo	Edwards	Adlakha	Taylor	Mucci
11:30	Voegelin	Boland	Meskhidze	Pester	Wilkie	Daniel	Che	Keller	Goldberg
11:45	Veeramani	Sparks	Ovadnevaite	Adkins	van der Meer	Schwarz-Schampera	Deditius	Hembury	Izon
12:00	Cismasu	Rui	Russell	Hain	Romero Viana	Anderson	Evrard	Lenton	Tejada
12:15	Jonsson	Byrne	Rinaldi		Wang	Patten	Moncada		Weyer

02e: Timing and Conditions of Core Formation in the Primitive Earth

Session chaired by **Caroline Fitoussi & Mathieu Touboul**

- 09:30 Keynote:** Core Formation in the Earth and the Terrestrial Planets
Rubie D, Frost D, O'Brien D, Nimmo F, Morbidelli A & Palme H
-
- 10:00 Invited:** Core Formation and Volatile Element Addition to the Earth
Wood B & Rehkämper M
-
- 10:15 Invited:** A Multidisciplinary Study of Core Composition
Badro J
-
- 10:30** Metal-Silicate Partitioning of Mo and W at High Pressures and Temperatures: Applications to Core Formation on Earth and Mars
Wade J & Wood BJ
-
- 10:45** Experimental Constraints on Molybdenum Isotope Fractionation between Metal and Silicate Liquids
Hin RC, Burkhardt C, Schmidt MW, Bourdon B & Kleine T
-
- 11:00** Large Vanadium Isotope Difference between Silicate Earth and Meteorites
Nielsen S, Prytulak J, Wood B & Halliday A
-
- 11:15** Silicon Isotope Evidence Against an Enstatite Chondrite Earth
Fitoussi C & Bourdon B
-
- 11:30 Invited:** The Breakup and Chemical Equilibration of Metal Diapirs in Terrestrial Magma Oceans
Samuel H
-
- 11:45 Invited:** Metal-Silicate Mixing during Impact-Driven Planet Accretion – Implications for the Age of the Moon
Dahl T & Stevenson D
-
- 12:00 Invited:** Understanding Late Accretion on the Earth, Moon, and Mars
Bottke W, Walker R, Day J, Nesvorny D & Elkins-Tanton L
-
- 12:15** Secular Depletions in Highly Siderophile Elements Recorded in >3.6 Ga Komatiites
Frank E, Maier W & Mojzsis S
-

03d: Cratonic Mantle Processes: Insights from Diamonds and Xenoliths

Session chaired by Maya Kopylova & Paolo Nimis

- 09:30 Comparative Sr-Nd-Pb-Hf-Os Isotopic Systematics of Xenolithic Peridotites from Yangyuan, North China Craton
Liu J, Carlson R, Rudnick R, Walker R, Wu F & Gao S
-
- 09:45 Redox Profile through the Siberian Craton: Fe K-Edge XANES Determination of Fe³⁺/Fe²⁺ in Garnet from Peridotite Xenoliths of the Udachnaya Kimberlite
Yaxley G, Berry A, Kamenetsky V, Woodland A, Paterson D, de Jonge M & Howard D
-
- 10:00 **Keynote:** Peridotite Xenolith Inferences on the Formation and Evolution of the Central Siberian Cratonic Mantle
Ionov D, Doucet L-S, Carlson R, Pokhilenko N, Golovin A & Ashchepkov I
-
- 10:30 Diamondiferous Conglomerate Preserves Evidence for Kimberlite and the Deep Cratonic Root of the Mesoproterozoic Southern Superior Craton
Kopylova M, Afanasiev V, Bruce L & Ryder J
-
- 10:45 The Age and Origin of the Limpopo Sub-Continental Lithospheric Mantle
van der Meer Q, Klaver M, Reisberg L, Davidheiser B & Davies G
-
- 11:00 Re-Os and Lu-Hf Dating in Letlhakane Peridotite Xenoliths (Botswana)
Luguet A, Behrens M, Herwartz D & Pearson G
-
- 11:15 Chronological and Thermal History of the Lithospheric Mantle Underneath the Gibeon Kimberlite Field, Namibia
Luchs T, Brey G & Gerdes A
-
- 11:30 Geochemistry of Xenoliths from the Gibeon Kimberlite Province, Namibia
Longo M, Nimis P, Ziberna L, Marzoli A, Zanetti A & Franz L
-
- 11:45 Ultra-Depleted Eclogites: Residues of TTG Melting
Shu Q & Brey G
-
- 12:00 Geochemistry of Mantle Microxenoliths from Zagadochnaya Kimberlite (Yakutia, Russia)
Ziberna L, Nimis P, Zanetti A, Sobolev NV & Marzoli A
-
- 12:15 Experimental Investigation of Garnet-Cpx Geobarometers in Eclogites
Pickles J, Blundy J, Sweeney R & Smith C
-

(Session 03d continues on Wednesday 17th PM on page 233)

04c: Plumes, Mid-Ocean Ridges, and
Plates: Examining their Dynamics and
Interactions with Observations and Models

Session chaired by Kaj Hoernle, Anthony
Koppers, William Sager & Christoph Beier

- 11:30 A "hotspot Highway" in the S. Pacific
*Jackson M, Hart S, Konter J, Koppers A, Staudigel H, Kurz M,
Blusztajn J & Sinton J*
-
- 11:45 Effect of Thickness of Oceanic Lithosphere on Chemical
Composition of OIBs: Implication for Origin of the South
Pacific Magmatism
Shimoda G
-
- 12:00 Central Indian Ridge Versus Réunion Hotspot: Do
Interaction Processes Account for on and off Axis
Geochemical Observations?
Hemond C, Janin M, Murton B, Füre E, Hilton D & Dymant J
-
- 12:15 Diverse Mantle Sources for Ninetyeast Ridge Volcanoes
*Meleney P, Frey F, Pringle M, O'Brien E, Huang S,
Nobre Silva I & Weis D*
-

(Session 04c continues on Wednesday 17th PM on page 234)

04f: Time Scales of Melt Generation, Extraction, and Transport from the Mantle to the Earth's Surface

Session chaired by Fidel Costa, Aaron Pietruszka, Mary Reid & Elisabeth Widom

- 09:30 Pervasive Reactive Melt Migration Through the Lower Oceanic Crust: Implications for the Evolution of Mid-Ocean Ridge Basalt
Lissenberg CJ, MacLeod CJ, Howard KA & Godard M
-
- 09:45 **Invited:** Direct Evidence for the Nature and Timing of Sub-Arc Mantle Metasomatism
Turner S, Caulfield J, Turner M, van Keken P, Maury R, Sandiford M & Proteau G
-
- 10:00 Mantle-To-Surface Magma Dynamics at Mauna Loa and Kilauea, Hawai'i
Gonnermann HM, Poland M, Foster JH, Brooks B, Wolfe CJ & Miklius A
-
- 10:15 Slow Mantle Upwelling on the Margin of the Hawaiian Plume Based on ^{230}Th - ^{238}U Disequilibria at Loihi Seamount
Pietruszka A, Hauri E, Carlson R & Garcia M
-
- 10:30 Insights into the Galápagos Plume from Uranium-Series Isotopes of Recently Erupted Basalts
Handley H, Berlo K, Beier C, Turner S & Saal A
-
- 10:45 Monogenetic, but not Monotonous: Basaltic Eruptions in the Auckland Volcanic Field, New Zealand
McGee L, Smith IEM, Millet M-A, Beier C, Lindsay J & Handley H
-
- 11:00 **Keynote:** Do Erupted Mafic Lavas Accurately Reflect Mantle Magmatic Timescales?
Rubin K
-

Session 04c follows this session in this room. For details see page 202.

05a: The Origin of Planetary Crusts

Session chaired by Audrey Bouvier & James Day

- 09:30 **Keynote:** Comparative Planetology – What are the Factors Controlling the Nature of Terrestrial Planetary Crusts?
Downes H
-
- 10:00 Relationships between the Composition of Planetary Crusts and their Sedimentary Records
McLennan S
-
- 10:15 **Invited:** Experimental and Numerical Investigations of the Formation of Felsic Asteroidal Crust
Usui T, Jones J & Senshu H
-
- 10:30 **Invited:** Kirschsteinite Exsolution Lamellae in Olivine from Young Angrites: Implications for their Thermal History
Mikouchi T, Miyamoto M & McKay G
-
- 10:45 The Formation of the Angritic Crust
Bouvier A, Brennecka G, Sanborn M & Wadhwa M
-
- 11:00 Howardite Noble Gases as Indicators of Asteroid Surface Processing
Cartwright JA, Mittlefehldt DW, Herrin JS & Ott U
-
- 11:15 **Invited:** Lithium – Light Metallic Traveller through Crusts of the Earth and Beyond
Magna T
-
- 11:30 Differentiation of Impact-Melt Sheets: Evidence from Manicouagan with Implications for the Moon
Spray J, O'Connell-Cooper C & Thompson L
-

Session 05f follows this session in this room. For details see page 205.

05f: Calibrating the Thermo-Mechanical
Evolution of Continental Crust: Magmatism,
Metamorphism, Deformation, and Erosion

Session chaired by Ethan Baxter, Rebecca
Flowers, Stacia Gordon & Gregory Dumond

- 11:45 Deciphering the Evolution of Subducted Continental Crust:
Insights through Laser Ablation Split-Stream (LASS)
Petrochronology
Kylander-Clark A & Hacker B
-
- 12:00 **Invited:** Subduction and Exhumation of the UHP Western
Gneiss Region: Petrology, Structural Geology, and LASS
Petrochronology
Hacker B & Kylander-Clark A
-
- 12:15 Accelerating Garnet Growth and Related Dehydration at
Blueschist-Facies Conditions, Sifnos, Greece
Dragovic B, Baxter E & Caddick M
-

(Session 05f continues on Wednesday 17th PM on page 235)

06a: Recycling Agents in Subduction Zones: Fluids and Melts

Session chaired by Joerg Hermann,
Susanne Skora & Weidong Sun

- 09:30 Fluorine Partitioning between Hydrrous Minerals and Aqueous Fluid at 1 GPa and 770-850°C
Wu J & Koga K
-
- 09:45 Partitioning of Chlorine and Fluorine between Apatite and Felsic Silicate Melts at Subduction Zone Conditions
Li H & Hermann J
-
- 10:00 A Chlorine Isotope View of Mantle Metasomatism via Slab Fluids/Melts
Silverstone J & Sharp Z
-
- 10:15 Solubility of Fluorine and Chlorine in Nominally Anhydrous Mantle Minerals: Implications for Mantle Metasomatism and Arc Magmas
Bernini D, Dolejs D, de Koker N, Audetat A, Keppler H & Wiedenbeck M
-
- 10:30 Subducted Serpentinites are the Boron Reservoirs for Arc Magmatism
Scambelluri M & Tonarini S
-
- 10:45 Boron, Lithium and Nitrogen Isotope Geochemistry of K- and NH₄-Rich illite/Smectite Clays in Fossil Hydrothermal Systems
Bobos I
-

Session 06b follows this session in this room. For details see page 207.

06b: Arc Magmas from Slab to Eruption

Session chaired by Olivier Bachmann, Lorella Francalanci, Philipp Ruprecht & Paul Wallace

- 11:00 Effect of Differentiation on Fe Oxidation in Arc Basalts
Brounce M, Kelley K & Cottrell E
-
- 11:15 Occurrence of Reduction Induced Sulfide Saturation in Oxidised Arc Magmas
Whan T, Mavrogenes J & Arculus R
-
- 11:30 Crustal CO₂ Liberation at Merapi Volcano, Indonesia: An Earthquake Trigger?
Troll V, Hilton D, Jolis EM, Chadwick J, Schwarz-Kopf L, Zimmer M, Blythe L & Deegan F
-
- 11:45 Why do Mafic Arc Magmas Contain 4 wt% Water on Average?
Plank T, Kelley K, Zimmer M, Hauri E & Wallace P
-
- 12:00 Experimental Determination of the Hydrous Basalt Liquidus
Stamper C, Blundy J, Melekhova E & Arculus R
-
- 12:15 Crystal-Rich Basaltic Andesites of the Current Arenal Eruption in Light of Experiments with Crystal-Poor Basalt
Parat E, Streck M, Holtz F & Almeev R
-

(Session 06b continues on Wednesday 17th PM on page 236)

07g: Enhancing Mineral Weathering and Ocean Alkalinity to Consume CO₂ and Moderate Ocean Acidification

Session chaired by Tim Kruger, Dieter Wolf-Gladrow, Greg Rau & Josh West

09:30 Electrochemical Enhancement of Carbonate and Silicate Weathering for CO₂ Mitigation

Rau G & Carroll S

09:45 Enhanced Weathering – Not Only CO₂-Consumption

Hartmann J, Köhler P & Wolf-Gladrow D

10:00 **Keynote:** Carbon Storage Technology Potentials and Difficulties

Lackner K

10:30 Alkaline Particle Size and Delivery for Settling and Dissolution: Optimising Ocean-Based Enhanced Weathering Geoengineering

Lubansky A, Tannenberg M, Kruger T & Darton R

10:45 Carbonation of Artificial Silicate Minerals: Passive Removal of Atmospheric CO₂

Washbourne C-L, Renforth P & Manning D

Session 07h follows this session in this room. For details see page 209.

07h: Oceanic Anoxia and Ocean Dead Zones, Past, Present and Future

Session chaired by **Martin Kennedy,**
Thomas Wagner & Anthony Cohen

- 11:00 Enhanced Phosphorus Regeneration in Low Oxygen Marine Settings: Insights from Modern and Ancient Sediments and Implications for the Future Ocean
Jilbert T, Slomp CP, Kraal P, Steenbergh AK & Palastanga V
-
- 11:15 Sediment Response to Persistently Low Oxygen Levels in Bottom Waters: The Lower St. Lawrence Estuary
Mucci A, Lefort S & Sundby B
-
- 11:30 Insights into Short-Term Changes in Local and Global Seawater Redox Conditions during Cretaceous OAE 2
Goldberg T, Poulton SW, Wagner T & Rehkamper M
-
- 11:45 Mo-Isotopes as Tracers of Cretaceous Ocean Anoxia
Izon G, Cohen A, Coe A, Poulton S & Wagner T
-
- 12:00 PGE Perspective on Early Cretaceous Oceanic Anoxic Event: Pacific vs. Tethyan Domains
Tejada ML, Suzuki K, Ishikawa A, Nozaki T, Senda R, Ravizza G & Kimura J-I
-
- 12:15 The Extent of Oceanic Anoxic Events Revealed by Correlated Mo- and U Isotope Records
Weyer S, Montoya Pino C, Gordon G, van de Schootbrugge B, Oschmann W, Pross J & Anbar A
-

08a: Natural, Synthetic, and Incidental Nanoparticles, their Surface Characteristics, and their Interactions with Earth and Life

Session chaired by Mike Hochella, Laurent Charlet, Frank von der Kammer & Jamie Lead

- 09:30** Multimethod Characterisation of Nanoparticles in the Environment
Stolpe B, Lead J, Lapworth D, Handley-Sidhu S, Fabrega J, Galloway T, Poole J, Whitby C & Colbeck I
-
- 09:45** Nanoparticles in Aqueous Environments: Electrochemical, Nanogravimetric, STM and AFM Studies
Ciglenečki I, Bura-Nakić E, Margus M, Milanović I, Batina N, Avalos-Perez A & Krznarić D
-
- 10:00** Radiolabelling of Engineered Nanomaterials as a Tool for Sensitive Particle Tracking
Hildebrand H & Franke K
-
- 10:15** The Ash that Closed Europe's Airspace: Part I, Grains Size Distribution of the Eyjafjallajökull Ash and Soluble Salt Coatings
Gislason S, Eiríksdóttir E, Alfredsson H, Oskarsson N, Sigfússon B, Larssen G, Hassenkam T, Nedel S, Bouvet N, Hem C, Balogh Z, Dideriksen K & Stipp S
-
- 10:30** The Ash that Closed Europe's Airspace: Part II, the Physical Aspects of the Eyjafjallajökull Ash (Geochemistry Fellow Presentation)
Stipp S, Hassenkam T, Nedel S, Bovet N, Hem C, Balogh Z, Dideriksen K, Eiríksdóttir E, Alfredsson H, Oskarsson N, Sigfusson B, Larssen G & Gislason S
-
- 10:45** Local Structure of Poorly Ordered Nanosized Iron Oxides. Implications for Contaminants Scavenging
Maillot F, Morin G, Corinne C, Wang Y, Bonnin D, Chaneac C & Calas G
-
- 11:00** Composition, Structure and Shape of *in situ* Precipitated Fe-Oxide Nanoparticles from a Soil Effluent
Fritzsche A, Wiczorek AK, Rennert T, Händel M & Totsche KU
-
- 11:15** Adsorption of Organophosphorous Compounds on Well-Characterized Iron Mineral Nanoparticles
Mäkie P, Persson P & Österlund L
-
- 11:30** Nanoparticulate Fe(III)-precipitates Forming by Fe(II) Oxidation in Water
Voegelin A, Schwarz S, Hug S & Kaegi R
-

- 11:45 Discovering Environmentally-Critical Nanomineralogy: Highly Reactive Mn-Oxyhydroxide Nanofiber Nucleation and Growth Catalyzed by Nanohematite
Veeramani H, Dippon U, Murayama M, Henderson R, Kappler A & Hochella MF
-
- 12:00 Structural Aspects and Surface Reactivity of Aluminous Ferrihydrite Precipitates
Cismasu AC, Michel FM, Stebbins J, Levard C & Brown G
-
- 12:15 Surface Properties and Complexation on Titanium Dioxide Nanoparticles
Jonsson C, Perez Holmberg J, Gallego-Urrea J, Abbas Z, Ahlberg E, Bergenholtz J & Hassellöv M
-

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08h: Geochemical Processes at Mineral-Water Interfaces – Insight from Macroscopic, Spectroscopic, and Computational Methods: Interfacial Redox Processes

Session chaired by Jeffrey Catalano, Udo Becker & Jean-François Boily

- 09:30 Electrochemically-Driven Lithium Isotopic Fractionation
Black J, Perre E, Umeda G, Dunn B, McDonough W & Kavner A
-
- 09:45 Iron Isotope Fractionation in Soil Solutions of a Gleysol
Schuth S & Mansfeldt T
-
- 10:00 Combined WAXS/XAFS Measurements for Studying the Reaction of S(-II) with Lepidocrocite
Behrends T, Hellige K, Silveira M & Peiffer S
-
- 10:15 Pyrrhotite Oxidative Dissolution: A Microstructural Perspective by FIB-TEM and Surface Topometry
Harries D, Pollok K & Langenhorst F
-
- 10:30 Alteration of Arsenopyrite in Sulphuric Acid
Cai Y & Hu X
-
- 10:45 Selenium Reduction by Pyrite: pH Effect and Mossbauer Study
Gehin A, Kang M, Greneche J-M & Charlet L
-
- 11:00 **Invited:** Photochemical Transformations of Carboxylates on TiO₂ and Iron(III)(hydr)oxide Surfaces
Hug S & Borer P
-
- 11:15 Adsorption and Oxidative Transformation of Aromatic Acids by Fe(III)-Montmorillonite
Polubesova T, Eldad S & Chefetz B
-
- 11:30 Kinetics of Coupled Fe(II)-Catalysed Ferrihydrite Transformation and U(VI) Reduction
Boland D, Collins R, Glover C, Payne T & Waite D
-
- 11:45 **Invited:** Time-Resolved Metal(loid) Reactivity at Biogeochemical Interfaces
Sparks D, Ginder-Vogel M & Landrot G
-
- 12:00 Reduction of Biogenic Uranyl Phosphate Nanoparticles by Three Metal-Reducing Bacteria
Rui X, Boyanov M, Kwon MJ, O'Loughlin E, Dunham-Cheatham S, Fein J, Bunker B & Kemner K
-
- 12:15 Using Bacteria to Produce Tailored Magnetic Nanoparticles
Byrne J, Coker V, Telling N, van der Laan G, Vaughan D, Patrick R & Lloyd J
-

10h: Geochemical Frontiers of the Rock/ Water/Hydrocarbon System

Session chaired by Bruce Yardley & Christian Ostertag-Henning

- 09:30 The Stability and Structure of Mg^{2+} Bicarbonate and Carbonate Ion Pairs – An Experimental and Theoretical Study
Stefansson A, Lemke K, Benzeth P & Schott J
-
- 09:45 Metastable Phase Equilibria for the Aqueous System Containing Lithium, Rubidium and Chloride at 298.15 K
Yu XD, Zeng Y, Zhang JQ & Yang JY
-
- 10:00 Solubility of Carbon Dioxide in Aqueous Fluids at Subcritical Pressure: Testing the Models
Rosenqvist J, Kilpatrick A & Yardley B
-
- 10:15 Recent Advances in Kinetics of Water-Rock Interaction and Applications to Geological Carbon Sequestration
Zhu C, Lu P & Liu F
-
- 10:30 Kinetic Experiments of Some Silicate Mineral Dissolutions in Water from a Subcritical to a Supercritical State
Zhang R, Hu S & Zhang X
-
- 10:45 **Invited:** Reactivity of Mafic and Ultramafic Rocks with CO_2 -charged Fluids and the Autocatalytic Reduction of CO_2 to Form CH_4
Rosenbauer R, Oze C, Jones C, Thomas B, Goldsmith J & Bischoff J
-
- 11:00 Thermodynamic Consequences of the Injection of CO_2 - H_2S Gas Mixtures in Sulfur-Rich Hydrocarbon Reservoirs
Uteyev R, Richard L, Randi A & Pironon J
-
- 11:15 On the Use of Nucleation Barriers in Numerical Simulation of Water-Rock Interactions
Bertier P, Weber C & Stanjek H
-
- 11:30 **Keynote:** Analogues between Water in Granite Melts and Petroleum Formation
Lewan M
-
- 12:00 Effects of Water on the Thermal Stability of Hydrocarbons and the Composition and Isotope Characteristics of the Gas Products
He K, Zhang S & Mi J
-
- 12:15 Alteration of Oil by Gas: Experiments in Fused Silica Capillary Capsules
Bourdet J, Eadington P, Burruss R & Chou I-M
-

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11c: Metal Solubility in Geofluids and Ore-Forming Silicate Melts

Session chaired by Jacob Hanley, Zoltan Zajacz,
A.E. Williams-Jones & James Webster

- 09:30 Gold Scavenging by Liquid Bismuth Melts
Cockerton AB & Tomkins AG
-
- 09:45 The Transport of Gold in Petroleum: An Experimental Study
Fuchs S, Migdisov A & Williams-Jones A
-
- 10:00 The Effect of Cl on the Solubility of Au and Pd in Andesitic Melts
Botcharnikov R, Linnen R, Guillong M, Holtz F & Kamenetsky V
-
- 10:15 The Solubility of Au and Cu in Andesite Melts
Zajacz Z, Candela PA, Piccoli PM, Wälle M & Sanchez-Valle C
-
- 10:30 New Insights into Gold Transport in HCl-Bearing Vapour at Elevated Temperatures
Hurtig NC, Migdisov A & Williams-Jones A
-
- 10:45 **Invited:** The Solubility of Gold in Water-Hydrogen Sulphide Vapours
Zein D, Migdisov A & Williams-Jones A
-
- 11:00 The Effect of Sulfur on PGE Solubility in Silicate Melts
Laurenz V, Fonseca ROC, Ballhaus C, Jochum KP & Sylvester PJ
-
- 11:15 Hydrothermal Processes beneath the Merensky Reef and UG2 Chromitite, Bushveld Complex, RSA
Adlakha E, Hanley J & Heinrich C
-
- 11:30 Experimental Constraints on Magmatic Wolframite
Che X, Linnen R & Wang RC
-
- 11:45 Chemical Limits of Trace Elements in Pyrite
Deditius A, Kesler S, Reich M, Utsunomiya S & Ewing R
-
- 12:00 Tin Substitution in Chalcopyrite and Sphalerite from Hydrothermal Sulfides
Evrard C, Moussa N, Fouquet Y & Rinnert E
-
- 12:15 Mineral Textures and Fluid Inclusion Characteristics of Ore Samples from the Guanajuato District, Mexico
Moncada D & Bodnar R
-

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13d: Aerosols, Energy Sources and Climate

Session chaired by Surabi Menon & Jon Egill Kristjansson

- 09:30 **Invited:** Multi-Decadal Change of Atmospheric Aerosols and their Effect on Surface Radiation
Chin M, Diehl T, Streets D, Wild M, Qian Y, Yu H, Tan Q, Bian H & Wang W
-
- 09:45 Effects of Absorbing Aerosols on Accelerated Melting of Snowpack in the Tibetan-Himalayas Region
Lau W
-
- 10:00 **Invited:** Direct Aerosol Effect from Multimodel Simulations in AeroCom
Myhre G
-
- 10:15 **Invited:** Observational and Modeling Study of the Relationship between Aerosols and Super-Cooled Cloud Fraction
Storelvmo T, Lohmann U & Choi Y-S
-
- 10:30 Smoke Aerosol Emission Source Analysis from Satellite and Airborne Measurements
Ichoku C, Gatebe C & Kahn R
-

Session 13f follows this session in this room. For details see page 216.

13f: Marine Aerosol Formation and Transformation

Session chaired by Colin O'Dowd & Thorsten Hoffmann

- 10:45 **Keynote:** Production Flux of Sea-Spray Aerosol
de Leeuw G, Andreas EL, Anguelova MD, Fairall CW, Lewis ER, O'Dowd C, Schulz M & Schwartz SE
-
- 11:15 **Invited:** Laboratory Studies into Sea-Spray Chemical Speciation in Plankton-Enriched Sea-Water
Ceburnis D, Ovadnevaite J, Zacharias M, Bialek J, Connan S, Rinaldi M, Monahan C, Facchini MC, Berresheim H, Stengel D & O'Dowd C
-
- 11:30 Evaluating the Impact of Marine Organic Aerosols on Climate
Meskhidze N, Xu J & Gantt B
-
- 11:45 **Invited:** Quantification of Primary Marine Organic Aerosol Properties Using Aerosol Mass Spectrometry
Ovadnevaite J, Ceburnis D, Berresheim H, Dall'Osto M, Bialek J, Monahan C, Worsnop D & O'Dowd C
-
- 12:00 **Invited:** Comparing Ambient and Generated Marine Particle Composition, Size, and Production
Russell L, Frossard A, Modini R, Deane G, Stokes D, Keene W, Quinn T & Bates T
-
- 12:15 Marine Aerosol Oxalic Acid from In-Cloud Oxidation of Glyoxal
Rinaldi M, Decesary S, Fuzzi S, Ceburnis D, O'Dowd C, Sciare J, Burrows J, Ervens B & Facchini MC
-

(Session 13f continues on Wednesday 17th PM on page 249)

14c: Proxies for Chemical Weathering – Interpretation of Ocean Records

Session chaired by **Friedhelm von Blanckenburg & Ed Tipper**

- 09:30 Nd Isotopes vs Magnetic Susceptibility as a Double Proxy for Paleoclimate and Paleoweathering: The Kerguelen Case
Allègre CJ, Meynadier L & Kent DV
-
- 09:45 Iron Isotope Composition of the Middle Eocene Ooidal-Oncoidal Ironstones and the Associated Lateritic Paleosols from the Bahariya Depression, Western Desert, Egypt
Salama W, Weryer S, Gaupp R & El Aref M
-
- 10:00 Oxidative Weathering Fractionates Chromium Isotopes
Crowe S, Døssing L, MacLean L, Frei R, Fowle D, Mucci A & Canfield D
-
- 10:15 High-Resolution, Ultra-Trace and Major Element Chemical Stratigraphy of a New Paleoproterozoic Weathering Profile
Babechuk MG & Kamber BS
-
- 10:30 Weathering of Black Shales and Re-Os Isotope Systematics
Georgiev S, Stein HJ, Hannah J, Bingen B, Hatlø V, Rein E, Piasecki S, Weiss H & Xu G
-
- 10:45 *In situ* O & Si Isotopic Microanalysis of Diagenetic Cements: Basin Brines vs. Weathering, Low vs. High T
Pollington A, Kozdon R, Kitajima K, Strickland A & Valley J
-

Session 14d follows this session in this room. For details see page 218.

14d: Links between Surface Processes and the Evolution of Earth's Biogeochemical Cycles

Session chaired by Martin Kennedy & Sasha Turchyn

11:00 Enhanced Chemical Weathering during Early Triassic in Response to the Collapse of Terrestrial Ecosystem after the End-Permian Mass Extinction

Ikeda M, Sakuma H, Tada R & Takahasi S

11:15 Mycorrhizal Weathering through Space and Time: Implications for the Long-Term Carbon Cycle

Taylor L, Banwart S, Leake J & Beerling D

11:30 **Invited:** Geochemical and Ecological Models of Plant-Driven Chemical Weathering: Insights into the Sinks for Atmospheric CO₂

Keller CK, O'Brien R, Balogh-Brunstad Z & Bormann B

11:45 Rates and Mechanisms of Oxygen Consumption by Fresh Volcanic Material in the Marine Environment

Hembury D, Palmer M & Fones G

12:00 **Keynote:** Land Colonisation and Earth System Change: A Recurring Pattern

Lenton T

15d: Geochemical and Microbiological Research in Both Shallow and Deep-Sea Hydrothermal Environments

Session chaired by Roy Price & Paul Craddock

- 09:30 **Invited:** The Emergence of Metabolism: Prebiotic Simulations of Shallow Sea Hydrothermal Vents
Guzman M
-
- 09:45 Geo-Bio Interactions in Hydrothermal Fluids and their Potential Role for Hydrothermal Metal Fluxes
Koschinsky A, Sander S, Klevenz V & Perner M
-
- 10:00 **Keynote:** Microbial Community Structures in Shallow-Sea, Deep-Sea, and Terrestrial Hydrothermal Systems
Amend J, Meyer-Dombard D & Schrenk M
-
- 10:30 Microbial Communities in Shallow-Sea Hydrothermal Environment of the Kueishantao Island, Taiwan
Lin L-H, Tsai W-Y, Lu G-H, Wang P-L, Cheng T-W & Price RE
-
- 10:45 Thermophilic Anaerobic Oxidation of Methane Performed by Novel Microbial Consortia
Wegener G, Knittel K, Holler T, Krukenberg V, Widdel F & Boetius A
-
- 11:00 Subcritical Phase Separation, Extreme Arsenic Enrichment, and the Search for Arsenotrophs in the Marine Shallow-Water Hydrothermal Vents off Milos Island, Greece
Price R, Nitzsche K, Meyerdierks A & Amend J
-
- 11:15 Structure and Function of Microbial Communities Associated with Low-Temperature Hydrothermal Venting and Formation of Barite Chimneys at Loki's Castle Vent Field
Steen IH, Thorseth IH, Roalkvam I, Dahle H, Stokke R & Pedersen R-B
-
- 11:30 **Invited:** Abiogenic Formation of Carbon Species at Hydrothermal Conditions Using a Novel Flow Apparatus
Pester N & Seyfried W
-

Session 15e follows this session in this room. For details see page 220.

15e: Balancing the Radiocarbon Budget

Session chaired by Jess Adkins

11:45 The Effect of Deep Ocean Stratification on $p\text{CO}_2$ and $\Delta^{14}\text{C}$
Adkins J

12:00 **Invited:** A Deglacial ^{14}C Budget
Hain MP, Sigman DM & Haug GH

(Session 15e continues on Wednesday 17th PM on page 251)

16a: Geochemical Processes in Mining
Environments: Introduction

Session chaired by Kate Campbell, Colleen
Hansel & Kai-Uwe Ulrich

12:00 **Keynote:** Acid Mine Drainage and Responsible Mining
Nordstrom DK

(Session 16a continues on Wednesday 17th PM on page 253)

16e: Engineered Nanomaterials in the Environment: Strategies to Understand their Behaviour and Impact in Environmental and Biological Media

Session chaired by **Maria Romero-Gonzalez, Frank von der Kammer, Greg Lowry & Peter Vikesland**

09:30 Invited: Optimization and Application of Engineered Nanocrystalline Iron Oxides (nMAG) for Uranium Analysis in Environmental Samples

Fortner J, Mayo J, Lewicka Z, Benoit D & Colvin V

09:45 Imogolites as a Tool for Evaluating the Hazard of HARN

Levard C, Liu W, Masion A, Thill A, Rose J, Chaurand P, Auffan M, Doelsch E, Proux O & Bottero JY

10:00 Single Particle ICP-MS for Detection of Engineered Nanoparticles in Environmental Samples

Tuoriniemi J, Cornelis G, Gustafsson S & Hassellöv M

Session 16h follows this session in this room. For details see page 223.

16h: Environmental Implications of Waste Recycling: Challenges in Preserving Soil and Water Resources

Session chaired by Emmanuel Doelsch & Armand Masion

- 10:15 **Invited:** Investigation of Copper and Zinc Speciation in Pig Slurry by a Multitechnique Approach
Legros S, Doelsch E, Chaurand P, Rose J, Masion A, Borschneck D, Proux O, Hazemann J-L, Briois V, Ferrasse J-H, Saint-Macary H & Bottero J-Y
-
- 10:30 Copper Speciation in Organic Wastes by X-Ray Absorption Spectroscopy
Tella M, Chataing S, Collin B, Diot MA, Bravin MN & Doelsch E
-
- 10:45 **Keynote:** Zeolitization of Aluminosilicate Waste Materials in Soil as a Tool for Soil Remediation
Terzano R
-
- 11:15 Redox Conditions in Infiltration Basins of a Large Scale Soil Aquifer Treatment (SAT) of Effluent
Goren O, Gavrieli I, Burg A, Negev I, Guttman J, Kraitzer T, Cikurel H, Kloppmann W, Guerrot C & Pettenati M
-
- 11:30 Mobility of Nitrogen and Heavy Metals in Biosolid Amended Soil
Moraetis D, Voutsadaki S, Kotronakis M, Kontolaimakis G, Stamati F, Nikolaidis N & Kalogerakis N
-
- 11:45 **Invited:** The Impact Associated to Wastewaters Treatment Plant Discharges into a Fluvial System (Central Portugal)
Silva A, Carvalho N, Almeida P, Oliveira N, Antunes M, Ferreira A & Albuquerque T
-

Session 16a follows this session in this room. For details see page 221.

17c: Methane Cycling in Marine and Terrestrial Environments

Session chaired by **Samantha Joye, Alina Stadnitskaia, Helge Niemann & Tomas Feseker**

- 09:30** **Keynote:** Methane Geochemistry's "Stealth" Process: Microbial Oxidation
Reeburgh W
-
- 10:00** Differences in Coupling between AOM and SRR in Marine Sediments
Knab N & Jorgensen B
-
- 10:15** Characterization of Anaerobic Methane Oxidation in Lake Kinneret (Israel)
Bar-Or I, Sivan O, Adler M, Kushmaro A, Pearson A & Eckert W
-
- 10:30** Endolithic Anaerobic Methane Oxidation at Cold Seeps
Marlow J, Steele J & Orphan V
-
- 10:45** Coenzyme F430, Understanding Methanotrophy in Methane Rich Environments
Fulton J, Bird L & Freeman K
-
- 11:00** Dynamic Subsurface Biosphere Fuelled by Organic Matter from the Past
Meister P, Contreras Quintana S, Liu B, Khalili A, Ferdelman TG, Kuypers M & Jørgensen BB
-
- 11:15** Hydrate Destabilization and Methane Release Events during Last Glacial Episode in Bay of Bengal
Joshi RK & Mazumdar A
-
- 11:30** Seasonal Variations in Microbial Carbon Cycling in Freshwater Wetland Sediments Identified through Rate Assays, Lipid Biomarkers, and Porewater Geochemistry
Segarra K, Yoshinaga M, Schubotz F, Heuer V, Hinrichs K-U, Samarkin V & Joye SB
-
- 11:45** Aerobic Methanotrophs Drive the Formation of a Seasonal Anoxic Benthic Nepheloid Layer in a Monomictic Lake
Blees J, Niemann H, Wenk C, Zopfi J, Schubert CJ, Veronesi M & Lehmann M
-
- 12:00** Synoptic Approaches to Scale CH₄ Flux in Boreal Landscapes
Dörsch P, Lange H, Thomas B, Siljanen H, Jensen S & Bakken L
-
- 12:15** Abiotic Synthesis of Methane from Biomolecules Under Ambient Conditions
Althoff F & Keppler F
-

18e: Novel Molecular Methods to Understand Past and Present Biogeochemical Processes

Session chaired by Dirk Sachse & Valerie Schwab-Lavric

- 09:30 **Keynote:** Tracing Molecular Proxy Signals from Biological Source to Sedimentary Sink
Eglinton T, Galy V, Feng X, Voss B, Peucker-Ehrenbrink B, Ponton C, Giosan L, Schefuss E, Montlucon D, Douglas P, Pagani M, Wu Y & Drenzek N
-
- 10:00 Reconstructing Ancient Landscapes: Molecular Insights to Spatial Patterns in Ecosystems and Water
Magill CR, Ashley GM & Freeman KH
-
- 10:15 The Rusty Sink: Impact of Iron on the Sedimentary Organic Biomarker Record
Gelinas Y, Lalonde K, Tremblay L, Moritz A & Barber A
-
- 10:30 Molecular Tools for Understanding Biomarker Compounds
Bradley A, Pearson A & Marx C
-
- 10:45 Deciphering the Significance of Hopanoids in the Marine Geologic Record
Saenz J, Wakeham S, Eglinton T & Summons R
-
- 11:00 D/H Composition of Leaf Waxes from C3 Plants along a Transect from the UK to Central Siberia, Russia
Pedentchouk N & Fisher K
-
- 11:15 Soil Leaf-Wax n-Alkane δD along Altitudinal and Latitudinal Transects: Implications for Paleoelevation and Paleohydrology Reconstructions
Luo P, Peng P & Gleixner G
-
- 11:30 Compound-Specific Isotopic Evidence of Paleoenvironmental Change Lake El'gygytgyn, NE Russia
Wilkie K, Petsch S, Burns S & Brigham-Grette J
-
- 11:45 **Invited:** δD of Alkenones as Proxy for Paleo Sea Surface Salinity
van der Meer M, Kasper S, Benthien A, Bijma J, Zahn R, Sinninghe Damsté JS & Schouten S
-
- 12:00 Hydrogen Isotopic Signatures of Algal Biomarkers as a Proxy of Hydroclimatic Variability in Lake Isabel, Mexico
Romero Viana L, Haug GH, Kienel U & Sachse D
-
- 12:15 Quantitative Deuterium NMR as a Site-Specific D/H Probe to Study Organic Matter
Wang Y, Cody G, Alexander C & Fogel M
-

(Session 18e continues on Wednesday 17th PM on page 255)

20g: Applying Synchrotron Science to Geosciences

Session chaired by Max Wilke & Hanns-Peter Liermann

- 09:30 **Keynote:** High Pressure Geochemistry in Laser-Heated Diamond Anvil Cells with Synchrotron Light
Dubrovinsky L
-
- 10:00 *In situ* Insights to Partitioning of Highly Siderophile Elements between Silicate and Iron Rich Liquids at Extreme Conditions
Petitgirard S, Borchert M, Andrault D, Appel K & Liermann H-P
-
- 10:15 *In situ* SXRF Determination of Trace Element Abundances in Aqueous Fluid at 1 – 3 GPa and 300 – 500°C: Applications to Subduction Zone Element Cycling
Simon A, Tanis E, Tschauner O, Frank M, Chow P, Xiao Y, Shen G & Hanchar J
-
- 10:30 Direct Measurement of Ce^{3+}/Ce^{4+} and Eu^{2+}/Eu^{3+} in Hadean Zircons by XANES
Tailby N, Trail D, Cates N, Mojzsis S, Bell E, Harrison TM & Watson EB
-
- 10:45 Initial Results from a New Time Resolved Microfocus XEOL Facility at the Diamond Light Source
Mosselmans E, Taylor R, Finch A & Quinn P
-
- 11:00 Two- and Three-Dimensional Imaging of Platinum-Group Minerals at Submicrometer Scale with Synchrotron X-Ray
Kogiso T, Suzuki K, Suzuki T & Uesugi K
-
- 11:15 Synchrotron Rapid Scanning X-Ray Fluorescence of Soft-Tissue Fossils
Edwards N, Barden H, Manning P, Sellers W, van Dongen B, Bergmann U & Wogelius R
-
- 11:30 **Invited:** High-Pressure Microbiology in the Synchrotron Light
Daniel I, Picard A, Testemale D & Hazemann J-L
-

Session 20h follows this session in this room. For details see page 227.

20h: Abundance and Distribution of Critical High-Tech Metals in Ore Minerals

Session chaired by F. Michael Meyer & Jens Gutzmer

- 11:45 **Keynote:** Base Metal Ore Deposits and Marine Mineral Resources: Rare Metal Sources for Sustainable Energies?
Schwarz-Schampera U
-
- 12:00 Trace Element Geochemistry of Micas by Laser Ablation ICP-MS in the Moose II Lithium-Tantalum Pegmatite Deposit, NWT
Anderson M, Lentz D, McFarlane C & Falck H
-
- 12:15 Concentration of Chalcophile and Siderophile Elements in MORB Sulphide Droplets: New Sulphide Melt-Silicate Melt Partition Coefficients
Patten C, Barnes S-J & Mathez EA
-

21f: Fluid Flow in the Earth's Crust

Session chaired by Alasdair Skelton, Andrew Putnis & Jay Ague

- 09:30 $\delta^{18}\text{O}$ Zoning in Eclogite Garnet
Russell A, Kitajima K, Strickland A, Medaris Jr. LG, Spicuzza M & Valley J
-
- 09:45 Halogen Concentrations and $\delta^{37}\text{Cl}$ in Apatite as a Fluid Probe to Decipher Fluid-Rock Interaction
Layne G, John T, Whitehouse M, Austrheim H & Kusebauch C
-
- 10:00 **Invited:** Deformation of Garnet in Eclogite: Dominant Mechanisms and the Active Role of Fluids
Smit M, Scherer E, John T & Janssen A
-
- 10:15 **Keynote:** What can Equilibrium Thermodynamics Tell us About Metasomatic Alteration?
Evans K
-
- 10:45 B-Bearing Fluids: Caught in the Act
Dutrow B, Henry D, Gable C, Travis B & Foster T
-
- 11:00 Fluid-Flow Controls of Low $\delta^{57}\text{Fe}$ Hydrothermal Iron Mineralization
Matthews A, Erel Y, Stern D, Ryb U & Avni Y
-
- 11:15 REE and Stable Isotope Constraints on Formation of Metamorphic Quartz Veins: A Case Study from the Rhenish Massif (Germany)
Wagner T, Boyce A & Erzinger J
-
- 11:30 Evidence of K-Fe Metasomatism in the SW Scottish Highlands
Kleine B, Skelton A & Pitcairn I
-
- 11:45 Isotopically-Zoned Zircons: Records of Fluid/Melt Flow in the Lower Crust, Kapuskasing Uplift
Bowman J, Moser D, Valley J, Wooden J, Kita N & Mazdab F
-
- 12:00 The Nature of Fluid Flow through Vertical Formations in the Aureole of the EJB Pluton, White Mountains, California
Nabelek P & Morgan S
-
- 12:15 Depth- and Pressure Dependent Permeability in the Upper Continental Crust – Data from the Urach 3 Geothermal Well
Stober I
-

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	Chamber Hall	Club A	Club B/C	Club D	Club E	Club H	Conference Hall	Forum Hall	Meeting Hall I
	10h / 10e	02g	06b	03d	04c	05f	21f / 09g / 09h	17d	16a
14:00	Zhang	Albarède	Portnyagin	Zedgenizov	Class	Willett	Zhao	Luther	Parsons
14:15	Lüders	Eisner	Krashennikov	Gaillou	Janin	Bracciali	Pisapia		O'Day
14:30		Mumma	Hohl	Nestola	Schroth	Wang	Markl	Wuttig	Pastén
14:45	Germerott	Raymond	Cassidy	Navon	MacLennan	Bruand	Dilek	Ingri	Gault
15:00	Pedersen	Ballhaus	Feineman	Howell	Lassiter	Blackburn	Furnes	Heller	Klimko
15:15	Wheeler	Yokochi	Stewart	Potgieter	Almeev	MacDonald	Goodenough	Kieber	Waworuntu
15:30	Stankiewicz	Zahnle	Danyushevsky	Sommer	Sager	Daly	Ishizuka	Shaked	Antelo
15:45		Marty	Huang	Ingrin	Murphy	Vedanti	Bozovic	Carrasco	Burke
16:00	Sun	Mezger	König	Berry	Beier	Bartoli	Yang	Pesch	Ketterer
16:15		Tolstikhin	Barth		Koppers	Kawakami	Tuffen	Grasse	Simon
16:30	Larter	Zhang	Sorbadere		Labanieh	Yardley	Perugini	Carlson	Herbert
16:45		Becker	Jacques				Deegan	Angert	Yurkevich

	Meeting Hall IV	Meeting Hall V	North Hall	Panorama Hall	Small Hall	Small Theatre	South Hall	Terrace 1	Terrace 2
14:00	Priadi	Prieto	Nenes	Bryan	Chikaraishi	John	Badanina	12g / 12i	07f
14:15	Neubauer	Jun	Fuentes - Lopez	Marchitto	Ho	Pollok	Loges	Gebbie	Kamyshny Mason
14:30	Wilkinson	Oelkers	Bates	Ruckelshausen	Sanchi	Driesner	Aranovich	Amundson	Canfield
14:45			Stetzer	Stott	Vogl		Seo		
15:00	Dobias	Sand	Durant	Burke	von Blanckenburg	Grevel	Tremaine		Busigny
15:15	Gondikas	Skuce	Hsu	Robinson		Gross	Hanley		
15:30	Brown	Gilbert	Tsay	McCollom	Wiederhold	Harlov	Lefort	Soulet	Cox
15:45		Rodriguez -Blanco	Grassian	Andreani	Guelke -Stelling	Gysi	Panizzo	Panizzo	Poulton
16:00	Coker	Pina		Hentscher	Balter	Frandsen	Murphy	Mazumdar	Macalady
16:15	Gorski	Stockmann	Ro	Lee	Coutaud	Terehova	Richard	Bertrand	Jones
16:30	Hansel	Van Driessche	Woodhouse	Lang	Sanabria	Brownlee	Kerr	Rubio	Sturm
16:45	Michel	Collins	Nenes	Pasini	Selby	McEnroe	Kawahata	De Lange	Zerkle

02g: What was the Source of Earth's Volatiles?

Session chaired by Sean Raymond & Bernard Marty

- 14:00 The Great Volatile Delivery to Earth
Albarède F, Ballhaus C, Lee C-T, Yin Q-Z & Blichert-Toft J
-
- 14:15 **Invited:** Observational Constraints on the Water and Volatile Content of Planet-Forming Regions of Circumstellar Disks
Eisner J
-
- 14:30 **Invited:** The Role of Comets as Possible Contributors of Water and Prebiotic Organics to Terrestrial Planets
Mumma M & Charnley S
-
- 14:45 How Jupiter's Two-Phase Gas-Driven Migration Shaped the Inner Solar System
Raymond S, Walsh K, Morbidelli A, O'Brien D & Mandell A
-
- 15:00 Late Volatile Addition to Earth
Ballhaus C, Laurenz V, Fonseca ROC, Muenker C, Albarède F, Rohrbach A, Schmidt MW, Jochum KP, Stoll B, Weis U & Helmy H
-
- 15:15 **Invited:** Early Degassing of the Earth
Yokochi R
-
- 15:30 **Keynote:** Xenon the Magnificent
Zahnle K
-
- 15:45 Chondritic-Like Xenon in the Archean Atmosphere
Pujol M & Marty B
-
- 16:00 Origin of Earth's Volatile Elements: Constraints from Rb Isotopes
Mezger K, Nebel O & vanWestrenen W
-
- 16:15 Mantle Degassing Rates and Gas Loss from Atmosphere: A View from Xenology
Tolstikhin I, Marty B & Hofmann A
-
- 16:30 Degassing History of Earth
Zhang Y
-
- 16:45 Reconciling Abundances of Highly Siderophile Elements and Major Volatiles in the Silicate and Near-Surface Earth
Becker H & Fischer-Gödde M
-

(Session 02g continues on Wednesday 17th Posters on page 260)

03d: Cratonic Mantle Processes: Insights from Diamonds and Xenoliths

Session chaired by Maya Kopylova & Paolo Nimis

- 14:00 Evidence for Evolution of Growth Media in Superdeep Diamonds from Sao-Luis (Brasil)
Zedgenizov D, Ragozin A, Shatsky V, Kagi H, Odake S, Griffin W, Araujo D & Yuryeva O
-
- 14:15 On the Peculiarities of Australian and Venezuelan Pink Diamonds: Influence of the Geologic Settings
Gaillou E, Butler J & Post J
-
- 14:30 Crystallographic Relationships between Diamond and its Olivine Inclusions
Nestola F, Nimis P & Harris JW
-
- 14:45 "Table" vs "Bench": Trace Elements in Fibrous Diamonds
Navon O, Griffin WL & Weiss Y
-
- 15:00 Mixed-Habit Diamonds: Evidence of a Specific Mantle Fluid Chemistry?
Howell D, Griffin W, O'Reilly SY, O'Neill C, Pearson N, Piazzolo S, Stern R, Stachel T & Nasdala L
-
- 15:15 The Formation of Micro-Diamonds in Cracks Caused by a C-O-H Rich Fluid Under Medium to Low Pressure Conditions
Potgieter J, Sommer H, Regenauer-Lieb K, Jung H & Gasharova B
-
- 15:30 "WEERTMAN" Cracks: A Possible Mechanism for Near Sonic Speed Diamond Extraction from the Earth's Mantle
Sommer H, Regenauer-Lieb K, Gaede O, Jung H & Gasharova B
-
- 15:45 Water Content of Lithospheres Deduced from Xenoliths: The Example of Kerguelen Islands and South African Craton
Ingrin J, Liu J, Xia QK, Deloule E & Grégoire M
-
- 16:00 Quantitative Mapping of the Oxidation State of Iron in Mantle Garnet
Berry A, Yaxley G, Hanger B, Woodland A, de Jonge M, Howard D & Paterson D
-

04c: Plumes, Mid-Ocean Ridges, and Plates: Examining their Dynamics and Interactions with Observations and Models

Session chaired by Kaj Hoernle, Anthony Koppers, William Sager & Christoph Beier

- 14:00 **Keynote:** Plate- Versus Plume-Driven Processes – South Atlantic DUPAL Revisited
Class C & le Roex A
-
- 14:30 New Isotopic Constraints on Amsterdam-St. Paul Hotspot Activity: Evidence for a Deep-Seated Mantle Plume and Implications for the DUPAL Anomaly Origin
Janin M, Hemond C, Maia M, Agrancier A, Johnson K & Ponzevera E
-
- 14:45 Evidence of Mantle Heterogeneity Underneath Slow-Spreading Ridges? Case Study at 45°N Mid-Atlantic Ridge
Schroth N & Murton BJ
-
- 15:00 The Generation of Geochemical Asymmetry in MORB Around Iceland by Radially Symmetric Plume Flow Under an Asymmetric Ridge System
Shorttle O & Maclennan J
-
- 15:15 Geochemical Investigation of Gabbroic Xenoliths from Hualalai Volcano, Hawaii
Lassiter J & Gao R
-
- 15:30 Highly Depleted Melt Inclusions in Olivine from Shatsky Rise
Almeev R, Portnyagin M, Wengorsch T, Sano T, Natland J & Garbe-Schönberg D
-
- 15:45 The Shatsky Rise Supervolcano
Sager W, Sano T & Korenaga J
-
- 16:00 Sr, Nd, Hf and Pb Isotope Characterisation of Basalts from IODP Site U1346, Shirshov Massif the Youngest Edifice of the Shatsky Rise, Northwest Pacific
Murphy D, Geldmacher J & Romanova I
-
- 16:15 Lithospheric Control on Geochemical Composition of the Louisville Seamount Chain
Beier C, Regelous M, Mahoney J, Vanderkluyzen L & Haase K
-
- 16:30 Preliminary Results from Integrated Ocean Drilling Program Expedition 330 to the Louisville Seamount Trail
Koppers A, Yamazaki T & Geldmacher J
-
- 16:45 Origin of the Seamounts Near Futuna Island, SW Pacific
Labanieh S, Chazot G, Etoubleau J, Fouquet Y, Dosso L & Hemond C
-

05f: Calibrating the Thermo-Mechanical Evolution of Continental Crust: Magmatism, Metamorphism, Deformation, and Erosion

Session chaired by Ethan Baxter, Rebecca Flowers, Stacia Gordon & Gregory Dumond

- 14:00 **Keynote:** From Thermochronometric Ages to Exhumation Rates
Willett S, Brandon M, Fox M & Herman F
-
- 14:30 Testing Crustal Deformation and Erosion-Tectonic Feedback Models in the Easternmost Himalaya Using Palaeo-Brahmaputra Deposits
Bracciali L, Parrish RR, Najman Y & Horstwood MSA
-
- 14:45 Tectonothermal Evolution of the Triassic Flysch in the Songpan-Garzê Orogen, Eastern Tibetan Plateau
Wang H, Rahn M, Zhou J & Tao X
-
- 15:00 Fate of an Eocene HT Metamorphic Complex in a Forearc Location
Bruand E, Gasser D & Stuewe K
-
- 15:15 A Long-Term Record of Continental Lithosphere Exhumation via U-Pb Thermochronology of the Lower Crust
Blackburn T, Bowring S, Perron T, Mahan K & Dudas F
-
- 15:30 Combined SIMS U-Pb Ages and Ti-in-Zircon Geothermometry Fingerprints Long Deep Crustal Residence in the Archaean
MacDonald J, Wheeler J, Harley S, Goodenough K, Crowley Q & Mariani E
-
- 15:45 Xenoliths Reveal Lower Crustal Deformation and Metamorphism with No Obvious Surface Expression
Daly JS, Van den Berg R, Whitehouse M & O'Rourke H
-
- 16:00 Power Law Behavior in Continental Crustal Heat Production and Its Implications to the Thermal Regime of the Continents
Vedanti N, Srivastava RP, Pandey OP & Dimri V
-
- 16:15 Melting in the Deep Crust: Message from Melt Inclusions in Peritectic Garnet from Migmatites
Bartoli O, Cesare B, Poli S, Bodnar RJ, Frezzotti ML, Acosta-Vigil A & Meli S
-
- 16:30 Zircon Behavior in the Upper Amphibolite Facies Polymetamorphic Terrane, Ryoke Belt, Japan
Kawakami T, Yamaguchi I, Yokoyama TD, Maki K, Hirata T & Shibata T
-
- 16:45 Rates and Mechanisms of Hydration in Crystalline Crust
Yardley B, Nabein H-P & Heinrich W
-

06b: Arc Magmas from Slab to Eruption

Session chaired by **Olivier Bachmann, Lorella Francalanci, Philipp Ruprecht & Paul Wallace**

- 14:00** **Keynote:** Arc Magmas from Slab to Eruption: The Case of Kliuchevskoy Volcano
Portnyagin M, Mironov N, Ponomareva V, Bindeman I, Hauff F, Sobolev A, Kayzar T, Garbe-Schönberg D & Hoernle K
-
- 14:15** Parental Melts of Avachinsky Volcano (Kamchatka) Recorded in Melt Inclusions
Krasheninnikov S & Portnyagin M
-
- 14:30** Geochemical Evolution of Lavas of the Rabaul Caldera – Fractionation of Fe Isotopes and HFSE Ratios during Fractional Crystallisation
Hohl S, König S, Münker C, Schuth S & Kuduon J
-
- 14:45** Tracking the Magmatic Evolution of an Island Arc Volcano: Insights from a High-Precision Pb Isotope Record of Montserrat, Lesser Antilles
Cassidy M, Taylor R, Palmer M & Trofimovs J
-
- 15:00** Upper Crustal Overprinting of Lower Crustal Processes at Maipo Volcano (34° 10'S), Southern Volcanic Zone
Feineman M, Drew D, Murray T & Sruoga P
-
- 15:15** Evolution of Andesite Magma Systems; Egmont Volcano, New Zealand
Stewart RB, Zernack A, Turner M, Price R, Smith I & Cronin S
-
- 15:30** Subduction Factory Unroofed: Modern Submarine Magmatism in the North Fiji Basin, Southwest Pacific
Danyushevsky L & Falloon T
-
- 15:45** U-Series Disequilibria of Arc Lavas Revisited: Time-Scales of Magmatism in Convergent Margins
Huang F
-
- 16:00** Deep Versus Shallow Slab Melt Signatures Recorded by Nb/Ta in Modern Island Arc Lavas
König S & Schuth S
-
- 16:15** The Cause of High Nb/Ta in K-Rich Lavas from the Sunda Arc System
Barth AR, Kirchenbaur M, König S, Schuth S, Luguet A, Idrus A & Münker C
-
- 16:30** Origin of Nepheline-Normative Primitive Magmas in Island Arcs
Sorbadere F, Schiano P & Métrich N
-

16:45 Along-Arc Geochemical Variations in the Southern Volcanic Zone, Chile

*Jacques G, Hoernle K, Wehrmann H, Garbe-Schönberg D,
van den Bogaard P, Hauff F, Mahlke J, Schumann K
& Lara LE*

07f: Modern Analogues for Precambrian Marine Ecosystems

Session chaired by Sean Crowe & Noah Planavsky

- 14:00 Multiple Sulfur Isotope Fractionation during Sulfur Cycling in a Warm, Monomictic Lake with Sub-Millimolar Sulfate Concentration
Kamyshny A, Eckert W, Gun J, Lev O, Zerkle A, Mansaray Z & Farquhar J
-
- 14:15 Microbial Sulfur Isotope Fractionation in Littoral Sediments: Interpreting $\delta^{34}\text{S}$ Variability in Archean Rocks
Mason P, Stam M, Laverman A, Pallud C & Van Cappellen P
-
- 14:30 **Medal:** The Many Flavors of Oxygen-Minimum Zones Past and Present
Canfield D
-
- 15:15 Fe Isotope Cycling in Ferruginous and Anoxic Lake Pavin (France) from Water Column to Sediment
Busigny V, Planavsky N, Jézéquel D, Louvat P, Michard G, Viollier E & Lyons T
-
- 15:30 **Invited:** Metatranscriptomics of the Green Sulfur Bacteria in a Meromictic Swiss Lake (Lago di Cadagno)
Cox R, Habicht K, Miller M, Storelli N, Tonolla M & Frigaard N-U
-
- 15:45 **Keynote:** Iron Mineralization in Anoxic, Non-Sulphidic Systems
Poulton S
-
- 16:00 **Invited:** Proterozoic Analog Ecosystem and Organic Biomarkers in a Florida Sinkhole
Macalady J, Albrecht H, Welander P, Fulton J, Schaperdoth I, White T, Freeman K, Newman D & Summons R
-
- 16:15 **Invited:** A Precambrian Manganous Sea?
Jones C, Crowe SA & Canfield DE
-
- 16:30 High Methane Oxidation Rates in Ferruginous Lake Matano
Sturm A, Crowe S, Jones C, Leslie K, Canfield D, Nomosatryo S, Mucci A & Fowle D
-
- 16:45 S Isotope Investigation of a Redox-Stratified System Dominated by Chemotrophic Sulfide Oxidation
Zerkle A, Macalady J, Jones D & Farquhar J
-

(Session 07f continues on Wednesday 17th Posters on page 265)

08a: Natural, Synthetic, and Incidental Nanoparticles, their Surface Characteristics, and their Interactions with Earth and Life

Session chaired by Mike Hochella, Laurent Charlet, Frank von der Kammer & Jamie Lead

- 14:00 Zinc Sulfide in Suspended Matter from an Oxidic River (Seine, France)
Priadi C, Morin G, Ayrault S, Maillot F, Juillot F, Testemale D, Proux O, Llorens I & Brown G
-
- 14:15 Size Dependent Element Interaction and Speciation in Environmental Nanoparticles
Neubauer E, von der Kammer F, Kraemer SM & Hofmann T
-
- 14:30 **Keynote:** Diffusion of Nanoparticles in Waters and Biofilms-Implications for Bioavailability
Peulen T-O, Domingos RF, Simon DF & Wilkinson KJ
-
- 15:00 Toxicity of Silver Nanoparticles to Environmental Microbial Consortia
Dobias J, Costanza A, Suvorova E, Trotta M & Bernier-Latmani R
-
- 15:15 Influence of Thiol-Containing Ligands for the Aggregation and Dissolution of Metallic Silver Nanomaterials
Gondikas A, Reinsch B, Lowry G & Hsu-Kim H
-

Session 08b follows this session in this room. For details see page 240.

08b: Chemical and Microbial Electron Transfer Processes at Mineral Surfaces

Session chaired by Kevin Rosso & Andreas Kappler

- 15:30 **Keynote:** Redox Reactions on Mineral Surfaces: Spectroscopic and Imaging Studies at the Molecular Level
Brown G, Morin G, Ona-Nguema G, Juillot F, Fandeur D, Benzerara K, Calas G, Wang Y, Ha J, Kaya S, Kendelewicz T, Spormann A & Nilsson A
-
- 16:00 Bioengineering Nano-Magnetite for Contaminant Clean-Up
Coker V, Crean D, Cutting R, Telling N, Byrne J, Pattrick R, van der Laan G, Vaughan D & Lloyd J
-
- 16:15 An Electrochemical Approach to Determine the Redox Properties of Iron-Bearing Clay Minerals
Gorski C, Sander M, Aeschbacher M, Klüpfel L & Hofstetter T
-
- 16:30 The Role of Aluminum in Ferrihydrite Preservation
Hansel C
-
- 16:45 Natural Ferrihydrite: Impact of Structure and Composition on Redox Cycling
Michel FM, Cismasu AC, Lezama-Pacheco JS, Massey M, Fendorf S, Brown GE & Bargar JR
-

(Session 08b continues on Wednesday 17th Posters on page 266)

08i: Mineral Nucleation: From the Atomic to the Planetary Scale

Session chaired by **Juan Diego Rodriguez-Blanco, Teresa Roncal-Herrero & Karina Krarup Sand**

- 14:00 Interfacial Tension, Metastability, and Solubility of Solid Solutions
Prieto M, Katsikopoulos D & Fernandez-Gonzalez A
-
- 14:15 **Keynote:** Nucleation and Growth Mechanisms and Kinetics of Environmentally Important Oxides and Carbonates
Jun Y-S, Lee B, Hu Y, Ray J, Waychunas G & Fernandez-Martinez A
-
- 14:45 Is Mineral Precipitation the Reverse of Dissolution?
Oelkers E, Saldi G & Schott J
-
- 15:00 CaCO₃ Polymorph Growth and Stabilization in Water-Ethanol Mixtures
Sand K, Rodriguez-Blanco JD, Makovicky E, Benning L & Stipp S
-
- 15:15 Nanoparticle Bioremediation: Application of Solid Phase Capture
Skuce R, Tobler D, Lee M & Phoenix V
-
- 15:30 **Invited:** Mapping the Amorphous-To-Crystalline Transitions in CaCO₃ Biominerals with 20-nm Resolution
Gilbert P
-
- 15:45 The Role of Mg in the Formation of Monohydrocalcite
Rodriguez-Blanco JD, Bots P, Roncal-Herrero T, Shaw S & Benning LG
-
- 16:00 Atomic Force Microscopy Observations of Nanostructures and Crystal Growth in Bivalves
Pina CM, Checa AG, Sainz-Díaz CI & Cartwright JHE
-
- 16:15 How do Mineral Substrates Affect Calcite Nucleation and Growth?
Stockmann GJ, Oelkers EH, Wolff-Boenisch D & Bovet N
-
- 16:30 **Invited:** Growth Rate of Giant Gypsum Crystals
Van Driessche AES, García Ruiz JM, Tsukamoto K, Patiño LD & Satoh H
-
- 16:45 Ferric Iron Geometry and Coordination during Hydrolysis and Ferrihydrite Precipitation
Collins R, Rose A, Glover C, Boland D, Payne T & Waite D
-

(Session 08i continues on Wednesday 17th Posters on page 267)

09g: Elements of Ophiolites

Session chaired by Yildirim Dilek & Harald Furnes

- 14:45 **Keynote:** Geochemical and Tectonic Fingerprinting of Ophiolites
Dilek Y & Furnes H
-
- 15:00 Different Types of Precambrian Ophiolites
Furnes H, Dilek Y & DeWit M
-
- 15:15 Multiphase Magmatic History of the Oman-UAE Ophiolite
Goodenough K, Styles M, Thomas B, Schofield D, Crowley Q & Millar I
-
- 15:30 **Invited:** Processes and Timescale of Subduction Initiation and Subsequent Evolution of Izu-Bonin Mariana Island Arc
Ishizuka O, Tani K, Reagan MK, Kanayama K, Umino S, Harigane Y, Sakamoto I, Miyajima Y, Yuasa M & Dunkley DJ
-
- 15:45 Demir Kapija Ophiolite: A Snapshot of Subduction Initiation within a Back-Arc
Bozovic M, Prelevic D, Romer RL & Barth M
-
- 16:00 *In situ* Diamonds and Moissanite in Podiform Chromitites of the Luobusa and Ray-Iz Ophiolites, Tibet and Russia
Yang J-S & Robinson PT
-

(Session 09g continues on Wednesday 17th Posters on page 269)

Session 09h follows this session in this room. For details see page 243.

09h: Volcanic Glass Heterogeneity: Primary and Secondary Causes, and Uses

Session chaired by Kim Berlo, Victoria Smith & Olivier Reubi

- 16:15 **Invited:** Primary and Secondary Water Content Heterogeneity in Volcanic Glasses
Tuffen H, Castro J, Owen J & Denton J
-
- 16:30 **Keynote:** Magma Mixing as a Petrological Clock to Measure the Timescale of Volcanic Eruptions: Experiments and Numerical Models
Perugini D
-
- 16:45 Boron Isotope Systematics during Magma-Carbonate Interaction
Deegan FM, Jolis EM, Troll VR, Freda C & Whitehouse MJ
-

(Session 09h continues on Wednesday 17th Posters on page 270)

10e: Towards the Geochemical Tricorder –
Advances in Geochemical Microtechnology,
Sampling and Sensing Systems:

Session chaired by Steve Larter

15:30 **Keynote:** Collection and Measurements of Reservoir Fluids
Properties – ‘Today and Tomorrow’

*Stankiewicz A, O’Keefe M, Mostowfi F, Ratulowski J,
Atkinson M & Sharma S*

16:00 **Keynote:** Predicting Reservoir Fluid Properties Using
Absolute Concentrations of Canned Cutting Gas
Components

Sun Y

16:30 **Keynote:** Towards the Geochemical Tricorder: Trends and
Needs in Subsurface Geochemical Sensor Systems for Energy
Recovery and Carbon Management

Larter S & Snowdon L

10h: Geochemical Frontiers of the Rock/ Water/Hydrocarbon System

Session chaired by Bruce Yardley & Christian Ostertag-Henning

14:00 A Simulation Study of Hydrocarbon Gas Generation from Fischer–Tropsch Synthesis with Varying Carbon Source and Hydrogen in a Gold Tube System

Zhang S & Mi J

14:15 **Keynote:** The Significance of Rotliegend Brines in Mineralizing Processes and Hydrocarbon Systems in the Southern Permian Basin

Lüders V, Plessen B, Vonhof H & Schneider J

14:45 Geochemical Signatures of Thermochemical Sulfate Reduction – Ketones and Sulphur Species

Germerott S, Ostertag-Henning C & Behrens H

15:00 A Study on the Effect of Pore Geometry on Mineral Changes

Pedersen J, Jettestuen E, Vinningland JL, Madland M, Cathles L & Hiorth A

15:15 Fluid Pressure Versus Rock Pressure: Their Influence on Metamorphic Reactions

Wheeler J, Llana-Funez S & Faulkner D

(Session 10h continues on Wednesday 17th Posters on page 270)

Session 10e follows this session in this room. For details see page 244.

11c: Metal Solubility in Geofluids and Ore-Forming Silicate Melts

Session chaired by Jacob Hanley, Zoltan Zajacz,
A.E. Williams-Jones & James Webster

- 14:00 Distribution of Rare Elements in Mineral-Forming Environments of Rare-Metal Granites
Badanina E, Borisova A, Thomas R & Syritso L
-
- 14:15 Fluoride Complexation of Yttrium Under Hydrothermal Conditions
Loges A, Migdisov A, Wagner T, Williams-Jones A & Markl G
-
- 14:30 Acid-Base Fractionation in the Model Cl-Bearing Granite
Aranovich L & Novikova M
-
- 14:45 **Invited:** Molybdenite Deposition in Bingham Canyon Deposit: Role of Sulfur, Redox and pH Chemistry in Magmatic-Hydrothermal Fluids
Seo JH, Guillong M & Heinrich CA
-
- 15:00 Ion Association in Hydrothermal Systems: Strontium Chloride, Hydroxide and Acetate to 350 °C and 20 MPa
Arcis H, Zimmerman G & Tremaine P
-
- 15:15 Origin of Early Hydrothermal Fluids Associated with the Sudbury Structure Deduced from Individual Fluid Inclusion Sr Isotope Analysis
Hanley J, Oberli F & Pettke T
-
- 15:30 Composition of the Earliest Hydrothermal Fluids Circulating along the South Range of the Sudbury Igneous Complex, Canada
Lefort D, Hanley J & Seo JH
-
- 15:45 Albitite Related to Iron Oxide Mineralization: Melt Inclusion Evidence for a Magmatic Origin
Tomé CM, Tornos F & Wälle M
-
- 16:00 U-Series Disequilibrium in Groundwater as a Vector for U Mineralisation
Murphy M, Dosseto A, Turner S & Schaefer B
-
- 16:15 Conditions for Uranium Transport in Unconformity-Related U Deposits
Richard A, Rozsypal C, Banks DA, Mercadier J, Cuney M, Boiron M-C & Cathelineau M
-
- 16:30 Advancing Studies of the Origin and Role of Hydrocarbons in Ore-Forming Systems
Kerr M & Hanley J
-
- 16:45 Boron Isotope Geochemistry of Subseafloor Hydrothermal Ore Deposits, Agrokippa B, in Troodos Ophiolite, Cyprus
Kawahata H, Yamaoka K, Matsukura S & Ishikawa T
-

12g: Modeling of Geochemical Proxies

Session chaired by Xavier Giraud, Olivier Marchal & Michael Evans

14:00 **Keynote:** How Geochemical Proxies Provide Quantifiable Evidence of Climate Shifts over the Last 25,000 Years

Gebbie G

14:30 The Stable Isotope Composition of Chlorine in Hyperarid Soils

Amundson R, Barnes J, Ewing S, Heimsath A & Chong G

(Session 12g continues on Wednesday 17th Posters on page 275)

Session 12i follows this session in this room. For details see page 248.

12i: Marginal Basin Sediments: Archives for High-Resolution Paleoclimate Records Including Land-Ocean Interactions

Session chaired by Gert De Lange, F.M. Martinez-Ruiz, Stefano Bernasconi & G Versteegh

- 15:30 Binge/Purge Oscillations of the Thawing Fennoscandian Ice Sheet Revealed by ϵ_{Nd} and Biomarkers
Soulet G, Ménot G, Bayon G, Rostek F, Ponzevera E, Lericolais G & Bard E
-
- 15:45 A $\delta^{30}\text{Si}$ Reconstruction of Holocene Productivity of the Southern Ocean, East Antarctica
Panizzo V, Cardinal D, Crosta X & Mattielli N
-
- 16:00 Variation in Carbon Stable Isotope Ratios of Organic Matter in Bay of Bengal during the Last Glacial Episode
Mazumdar A, Joshi RK, Peketi A & Naik BG
-
- 16:15 Interactions between Precipitation and Sea Surface Temperature in Northern Chilean Patagonia during the Late Holocene
Bertrand S, Hughen K, Sepúlveda J & Pantoja S
-
- 16:30 Relationship between Palaeoclimate and Diagenesis Intensity in Sediments from Transitional Environments: The Galician Rías (NW Spain)
Andrade A, Rubio B, Rey D, Álvarez-Iglesias P, Bernabeu A & Vilas F
-
- 16:45 Mediterranean Sapropel Formation; Preservation and Palaeoceanography
De Lange GJ, Slomp C, Crudeli D, Corselli C, Principato S, Erba E & Thomson J
-

(Session 12i continues on Wednesday 17th Posters on page 276)

13f: Marine Aerosol Formation and Transformation**Session chaired by Colin O'Dowd & Thorsten Hoffmann****14:00 Keynote:** Marine Productivity: Impacts on Aerosols and Clouds*Nenes A***14:15** On the Hygroscopic Behaviour of Marine Particles Enriched with Biogenic Nanogels*Fuentes-Lopez E, Coe H, Green D & McFiggans G***14:30** Measurements of Ocean Derived Aerosol off the Coast of California*Bates T, Quinn P, Frossard A, Russell L, Hakala J, Kieber D & Keene W*

Session 13g follows this session in this room. For details see page 250.

13g: Atmospheric Dust

Session chaired by **Reto Gieré & Bernard Grobéty**

- 14:45 **Invited:** Ice Formation on Atmospheric Mineral Dust Particles
Stetzer O, Welti A, Ladino L & Lüönd F
-
- 15:00 **Invited:** Advances in the Understanding of Atmospheric Impacts of Volcanic Ash Emissions Since Eyjafjallajökull 2010
Durant AJ & Prata AJ
-
- 15:15 Global Distributions of Mineral Dust Properties from SeaWiFS and MODIS: From Sources to Sinks
Hsu NC, Bettenhausen C & Sayer A
-
- 15:30 Biogeochemical Impact of Long-Range Transported Dust over Northern South China Sea
Tsay S-C, Wang S-H & Hsu NC
-
- 15:45 **Keynote:** Chemical Modification of Airborne Mineral Dust
Grassian V
-
- 16:15 Direct Observation of Chemical Modification of Asian Dust Particles during Long-Range Transport
Song Y-C, Jung H-J, Kim H & Ro C-U
-
- 16:30 Minor Effect of Physical Size Sorting on Iron Solubility of Transported Mineral Dust
Woodhouse M, Shi Z, Carslaw K, Krom M, Mann G & Benning L
-
- 16:45 Atmospheric Acidification of Mineral Aerosols: A Source of Bioavailable Phosphorus for the Oceans
Nenes A, Krom M, Mihalopoulos N, Van Cappellen P, Shi Z, Bougiatioti A, Zampas P & Herut B
-

(Session 13g continues on Wednesday 17th Posters on page 277)

15e: Balancing the Radiocarbon Budget

Session chaired by Jess Adkins

- 14:00 The Relationship between $\Delta^{14}\text{C}$ and $\delta^{13}\text{C}$ of DIC in the LGM Ocean
Bryan S, Lehman S & Marchitto T
-
- 14:15 Low Latitude Surface Ocean Contribution to the Deglacial Atmospheric Radiocarbon Decline
Marchitto T, Lehman S, Lindsay C, Bryan S, Ortiz J & van Geen A
-
- 14:30 Intermediate Water $\Delta^{14}\text{C}$ off Brazil between 3-40 ka BP
Ruckelshausen M, Kowsmann R, Godoy JM, Santos GM & Mangini A
-
- 14:45 The Mid-Depth $\Delta^{14}\text{C}$ Anomaly during Termination 1, Do Hydrothermal Vents Play a Role?
Stott L & Timmermann A
-
- 15:00 Mixing of Radiocarbon from High Latitude Oceans through the Atmosphere and Ocean during the Last Deglaciation: Results from Iceland and the Drake Passage
Burke A, Robinson L & White N
-
- 15:15 **Invited:** Marine Controls on Atmospheric Radiocarbon: The Glacial and Deglaciation
Robinson LE, Burke A & Adkins JF
-

Session 15h follows this session in this room. For details see page 252.

15h: Submarine Hydrothermal Processes and Alteration of the Oceanic Lithosphere

Session chaired by **Frieder Klein, Marguerite Godard, Gretchen L. Früh-Green & Niels Jöns**

- 15:30 **Keynote:** Serpentinization and Hydrogen Generation
McCollom T, Klein F, Bach W, Jons N & Templeton A
-
- 15:45 Iron Speciation in Serpentine during Oceanic-Type Serpentinization
Andreani M, Munoz M, Marcaillou C & Delacour A
-
- 16:00 On Organic Synthesis Reactions Driven by Serpentinization
Hentscher M, Bach W & Klein F
-
- 16:15 The Stability of Amino Acids Under Redox-Constrained Hydrothermal Conditions
Lee N, Foustoukos D, Sverjensky D, Cleaves HJ, Klochko K & Hazen R
-
- 16:30 Microbial Utilization of the Products of Serpentinization at the Lost City Hydrothermal Field
Lang S, Früh-Green G, Bernasconi S, Butterfield D, Lilley M, Proskurowski G & Mehay S
-
- 16:45 Cryptoendolithic Colonization in the Hydrating Mantle along Mid Ocean Ridges
Pasini V, Ménez B & Brunelli D
-

(Session 15h continues on Wednesday 17th Posters on page 279)

16a: Geochemical Processes in Mining Environments: Drainage, Tailings, and Treatment

Session chaired by Kate Campbell & Kai-Uwe Ulrich

- 14:00 **Invited:** Establishing Baseline Geochemical Conditions at Historic Gold Mines for Risk Assessment and Remediation
Parsons M, Goodwin T & Little M
-
- 14:15 Mercury Distribution and Speciation in a Seasonal Wetland Impacted by Mine Waste
O'Day P, Serrano S, Stilson T & Vlassopoulos D
-
- 14:30 Arsenic Mobilization in a High Andean Watershed Impacted by Legacy Mining
Leiva E, Ríos P, Escauriaza C, Bonilla C, Pizarro G & Pastén P
-
- 14:45 Characterization of Nanoparticulate Arsenic in Waters Draining Abandoned Gold Mine Tailings
Gault A, Parsons M & Jamieson H
-
- 15:00 Secondary Minerals in Mine Wastes at Sb Deposits in Slovakia
Klimko T, Majzlan J, Lalinská B, Chovan M, Goettlicher J & Steininger R
-
- 15:15 Geochemical Reactivity of Submarine Tailings from the Batu Hijau Mine
Sahami A, Waworuntu J & Fawcett S
-
- 15:30 Iron Oxides in Copper Mining Environments: Transformation and Reactivity
Antelo J, Fiol S, López R, Gondar D & Arce F
-
- 15:45 Speciation of Contaminant Metals in Red Mud from Ajka, Hungary
Burke I, Mayes W, Peacock C, Brown A, Jarvis A & Gruiz K
-
- 16:00 ²³⁰Th-²³⁴U-²³⁸U Disequilibria along the River Catchments from the Iberian Belt (Spain) Affected by Acid Mine Drainage (AMD)
Ketterer M, Hierro A, Barbero L, Olias M, Bolivar JP, Casas-Ruiz M & Baskaran M
-
- 16:15 Development of an Active Mine Water Treatment Technology by Use of Schwertmannite
Janneck E, Burghardt D, Simon E, Damian C, Martin M, Schöne G & Meyer J
-
- 16:30 Pilot-Scale Barrier System for Removal of Nitrate in Mine Drainage
Herbert R & Winbjörk H
-
- 16:45 Metals and As in Mine Tailings Drainage Systems: Mobility and Removal
Yurkevich N & Saeva O
-

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17d: Biogeochemistry of Limiting Nutrients

Session chaired by Stephan Kraemer & Peter Croot

- 14:00 **Keynote:** Soluble Mn(III), Mn(II) and Total Mn in Sediment Porewaters: Soluble Mn(III) is Ubiquitous
Madison A, Mucci A, Sundby B, Tebo B & Luther G
-
- 14:30 Uncovering the Key Processes Involved in Manganese Biogeochemical Cycling in the Ocean
Wuttig K, Heller M & Croot P
-
- 14:45 Sequestering of Phosphorus during Freshening of a Silled Marine Basin; Role of Manganese
Ingri J, Sutterasak T, Widerlund A & Elming S-Å
-
- 15:00 Processes Affecting Iron Solubility in the Tropical North Atlantic
Heller MI & Croot PL
-
- 15:15 Photochemical Production of Dissolved Organic and Inorganic Nutrients from Resuspended Sediments
Kieber R, Southwell M, Laquire C, Thompson L, Skrabal S, Avery B & Mead R
-
- 15:30 Keep and Touch – Dust and Mineral Iron Utilization by the Marine Diazotroph *Trichodesmium*
Shaked Y, Rubin M & Berman-Frank I
-
- 15:45 Evaluating Sources and Transport of Zinc and Cadmium and their Complexing Ligands in the Atlantic and Pacific Oceans
Carrasco G, Duffaut-Espinosa L, Morton P & Donat J
-
- 16:00 Competitive Ligand Exchange between Cu-Humate Complexes and Methanobactin
Pesch M-L, Christl I, Kraemer SM & Kretzschmar R
-
- 16:15 Silicon Isotopes as a Tracer for Silicate Utilization in the Peruvian Upwelling
Grasse P, Ehlert C, Stramma L, Ryabenko E, Franz J & Frank M
-
- 16:30 In Silico, Physiological, and Proteomic Cost-Benefit Analysis of Resource-Limited Microbial Growth
Carlson R, Folsom J & Taffs R
-
- 16:45 Available-Phosphate Oxygen Isotopes Point to Extracellular Equilibration
Angert A, Mazeh S & Weiner T
-

(Session 17d continues on Wednesday 17th Posters on page 286)

18e: Novel Molecular Methods to Understand Past and Present Biogeochemical Processes

Session chaired by Dirk Sachse & Valerie Schwab-Lavric

- 14:00 **Invited:** Compound-Specific Stable Isotope Analysis of Amino Acids as a Novel Tool for Ecological Food Web Study
Chikaraishi Y, Ogawa N, Takano Y, Tsuchiya M & Ohkouchi N
-
- 14:15 Is TEX₈₆ Paleothermometry Applicable in the Polar Regions?
Ho SL, Fietz S, Rueda G, Martinez-Garcia A, Mollenhauer G, Rosell-Mele A, Lamy F, Ruggieri N & Tiedemann R
-
- 14:30 Distribution of Branched Tetraether Lipids in a Black Sea Sediment Core: Insights into Continental Temperature Evolution in Central Europe over the Past 40000 Years
Sanchi L, Menot G & Bard E
-

Session 18g follows this session in this room. For details see page 256.

18g: Non-Traditional Isotopes in Non-Traditional Matrices

Session chaired by Jean Carignan, Sander
van den Boorn & Christophe Cloquet

- 14:45 Isotope Reference Materials for Present and Future Isotope Research
Vogl J & Pritzkow W
-
- 15:00 **Keynote:** Unconventional Matrices Prevent Novel Isotopes Turning Traditional
von Blanckenburg E, Bouchez J, Guelke-Stelling M, Oelze M, Ostertag-Henning C, Schuessler JA & Steinhöfel G
-
- 15:30 Sequential Extractions as a Tool to Investigate Stable Metal Isotope Fractionation between Soil Pools
Wiederhold J, Bourdon B & Kretzschmar R
-
- 15:45 Isotope Fractionation during Fe Translocation in Plants Grown with an Artificial Chelate
Guelke-Stelling M & von Blanckenburg F
-
- 16:00 An Animal Model (Sheep) for Fe, Cu and Zn Isotopes Cycling in the Body
Balter V & Zazzo A
-
- 16:15 Copper and Zinc Isotope Fractionation during their Interaction with Phototrophic Biofilm
Coutaud A, Pokrovsky OS, Rols J-L & Viers J
-
- 16:30 Determination of U-Th and Pb Isotope Ratios in Crude Oil, Kerogen and Asphaltenes: Potential Application for Dating Age of Expulsion of Crude Oil from the Rock Source
Sanabria G, Péchéryran C, Bérail S, Prinzhofer A & Donard OFX
-
- 16:45 Identifying the When and Where of Oil Generation Using Platinum, Palladium, Osmium and Rhenium Geochemistry
Selby D, Finlay A & Osborne M
-

(Session 18g continues on Wednesday 17th Posters on page 290)

20b: Magnetic Properties of Chemical Interfaces and Nano-Crystals in Natural Systems

Session chaired by **Suzanne McEnroe & Ann Hirt**

- 16:00 **Invited:** The Influence of Local Cation-distribution on the Magnetic Properties in Ilmenite-rich α - Fe_2O_3 - FeTiO_3 Systems
Frandsen C & Mørup S
-
- 16:15 Transition of a Pyrrhotites to Antiferromagnetic State Induced by Cation Vacancies
Terehova A, Onufrienok V & Sazonov A
-
- 16:30 Magnetic Properties of Ilmenite-Hematite Containing Magnetite Nano-Crystals
Brownlee S, Feinberg J, Kasama T, Harrison R, Scott G & Renne P
-
- 16:45 Interfaces and Exchange Coupling
McEnroe S, Robinson P, Fabian K, Harrison R, Miyajima N & Langenhorst F
-

(Session 20b continues on Wednesday 17th Posters on page 293)

20d: Advances in Experimental and Computational Approaches to Mineral-Fluid Interactions

Session chaired by David Dolejs & Juraj Majzlan

14:00 **Invited:** On the Duration and Rates of Fluid Release from a Dehydrating Slab

John T, Podladchikov Y, Gussone N, Bebout G, Halama R, Magna T & Klemd R

14:15 Reaction Paths and Volume Changes of Solid Solutions in Coupled Dissolution-Precipitation Reactions: The Role of Endmember Solubility

Pollok K, Putnis CV & Putnis A

14:30 **Keynote:** Computational Approaches to Hydrothermal Fluid-Rock Interaction on Nanometer to Kilometer Scales

Driesner T

15:00 Experimentally Determined Standard Properties for $\text{MgSO}_4 \cdot 4\text{H}_2\text{O}$ (Starkeyite) and $\text{MgSO}_4 \cdot 3\text{H}_2\text{O}$; A Revised Internally Consistent Thermodynamic Dataset for Magnesium Sulfate Hydrates

Grevel K-D, Majzlan J, Benisek A, Dachs E, Steiger M, Fortes AD & Marler B

15:15 Birefringence Mapping: A New *in situ* Mass-Loss Technique for Determining Mineral Solubility

Gross J, Burchard M & Maresch WV

15:30 Experimental High-Grade Alteration of Zircon Using Alkali- and Ca-Bearing Solutions

Harlov D & Dunkley D

15:45 CO_2 Sequestration and Hydrothermal Basalt Alteration at 40-250°C

Gysi A & Stefánsson A

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Session 20b follows this session in this room. For details see page 257.

21f: Fluid Flow in the Earth's Crust

Session chaired by Alasdair Skelton, Andrew Putnis & Jay Ague

- 14:00 The Effect of Post-Depositional Fluids on Ediacaran Sedimentary Carbonate in South China
Zhao Y & Zheng Y
-
- 14:15 U/Pb Dating of Geodic Calcites: A Tool for Paleohydrological Reconstructions
Pisapia C, Deschamps P, Hamelin B, Battani A, Buschaert S & David J
-
- 14:30 Mineralizations Monitor Depth and Composition Variations of Paleohydrothermal Fluid Systems
Markl G & Staude S
-

Session 09g follows this session in this room. For details see page 242.

02g: What was the Source of Earth's Volatiles?

Floor 1

- 1001 A Hydrogen Rich Early Earth?
Toulhoat H, Beaumont V, Zgonnick V, Larin N & Larin VN
-
- 1002 Nitrogen Speciation in Mantle Fluids
Li Y, Keppler H & Audetat A
-
- 1003 Time Variation of He and Ar Isotopic Compositions in the Earth's Atmosphere
Arakawa Y & Matsuda J-I
-
- 1004 Constraints on Earth Outgassing History from Ar Isotope Composition of Devonian Atmosphere
Stuart F & Mark D
-
- 1005 Implications of Fault Spilling Gases in Searching Active Ruptures
Wang H, Zheng G, Wang J, Hu C & Liu X
-
- 1006 Role of Hydrogen and Oxygen Fugacity in Incorporation of Nitrogen in Reduced Magmas of the Early Earth's Mantle
Kadik A & Litvin Y
-

02h: Taphonomy and Geochemistry:
Experiment and Observation in Understanding
the Fossil Record of Early Life

Floor 1

- 1008 Early Fossilization Process of Cyanobacteria in Modern Microbialites
Couradeau E, Benzerara K, Gerard E, Esteve I, Moreira D & Lopez-Garcia P
-

(Session 02h continues on Thursday 18th PM on page 329)

03b: Estimating the Deep Mantle Water
Budget from Geochemistry, Geophysics,
and Geodynamical Modelling

Floor 1

- 1009 Distribution and Time Variation of Helium Isotope Ratios Around the Source Region of The Iwate-Miyagi Nairiku Earthquake in 2008
Horiguchi K, Nakayama T & Matsuda J-I
-
- 1010 Structural Phase Transition of Ammonia Hydrate Under High Pressure
Ma C, Zhou Q, Li F, Hao J, Wang J, Huang F & Cui Q
-
- 1011 FTIR Study of OH-OD Exchange in Fe-Free Ringwoodite-Wadsleyite Samples
Vigouroux E, Ingrin J, Bolfan-Casanova N & Frost DJ
-

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04d: Influence of Volatiles on Mantle and Magma Processes

Floor 1

- 1012 Extreme Pressure Dependence of Sulphur Solubility in Silicate Melts (Experimental Data)
Kostyuk A & Gorbachev N
-
- 1013 A Study on Volcanic Minerals and Hosted Melt Inclusions in Newly-Erupted Tengchong Volcanic Rocks, Yunnan Province
Li N, Fan Q & Zhang L
-
- 1014 Chlorine and CO₂ Rich Fluids in 2.5 Ga Amphibolite-Granulite Facies Basement Below the Killari Earthquake Region, India and Seismogenesis
Pandey O, Parthasarathy G, Tripathi P, Rajagopalan V & Sreedhar B
-
- 1015 Basaltic Magmatism and Mantle Metasomatism in the Rio Grande Rift
Rowe M, Lassiter J & Schmandt B
-

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04h: Pb Isotopic Insights into Earth's Evolution: A Tribute to George R. Tilton (1923 – 2010)

Floor 1

- 1016 U-Pb Dating of Very Low-Grade Metamorphic Titanite
Oliveros V, Simonetti A & Morata D
-
- 1017 Pb-Hf-Nd Isotopic Decoupling in Peridotite Xenoliths from Mega (Ethiopia): Insights into the Multistage Evolution of the East African Lithosphere
Bianchini G, Bryce JG, Blichert-Toft J, Beccaluva L & Natali C
-
- 1018 Rollback-Enhanced Decompression Melting of a Volatile-Rich Mantle: The Ancient Lavas of Mt. Etna
Bryce J, Graham D, Blichert-Toft J, Hanan B, Miller S, Barkman J, Spera F & Tilton G
-
- 1019 Chemical Heterogeneities along the South Atlantic Mid-Ocean-Ridge (5-11°S): Shallow or Deep Recycling of Ocean Crust?
Hauff F, Hoernle K, Kokfelt TF, Haase K, Garbe-Schönberg D & Werner R
-
- 1020 Pb Isotopes and the Origin of the 'ghost Plagioclase' Signature in Melt Inclusions from the Galapagos Archipelago
Peterson M, Saal A, Nakamura E, Burgess K & Kitagawa H
-

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05c: Continent Formation through Time

Floor 1

- 1021 Origin and Evolution of Post-Collisional Volcanism: An Example from Gabal Nugara, North Eastern Desert, Egypt
Khalaf EEDA H
-
- 1022 Mineralogy and Petrogenesis of the Precambrian Basement Rock, Around Ede, Southwestern Nigeria
Bolarinwa AT, Jimoh MT & Odusi OO
-
- 1023 Preliminary Results of Magnetic Fabric of the Gole – Zard Pluton, Aligoodars, Iran
Sadeghian M, Badallo S & Shiebi M
-
- 1024 Paleoproterozoic Crustal Growth in West Africa: Archean or Modern Tectonics?
Baratoux L, Ganne J, Jessell MW, Naba S & Metelka V
-
- 1025 Early Archean Crust of the Ukrainian Shield – Evidence from Detrital Zircons
Bibikova E, Shumlyanskyy L, Hawkesworth CJ, Claesson S, Storey C, Dhuime B & Fedotova A
-
- 1026 Age and Geochemical Characteristics of the Malayer Plutonic Complex, West of Iran
Deevsalar R & Ahadnejad V
-
- 1027 Evolution of Crust in the Dharwar Craton: The Nd Isotopic Evidence
Dey S
-
- 1028 LA-ICP-MS Chronological Study of Tongka Gneissic Granite in Northern Gangdise, Qinghai-Tibet Plateau
He S-P, Wang C & Gu P-Y
-
- 1029 Secular Trends in Granite Zircon $\epsilon\text{Hf}-\delta^{18}\text{O}$, Australian Tasmanides
Jeon H, Williams I, Chappell B & Bennett V
-
- 1030 Detrital Zircon Provenance of Late Ordovician-Silurian Sandstones in the Lower Yangtze Foreland Basin of South China
Jia D, Li H, Wu L & Li Y
-
- 1031 Geochronology and Geochemistry of Hongqilapu Granite in Eastern Pamirs, China
Kang L, Xiao P-X, Gao X-F, Xi R-G, Dong Z-C & Guo L
-
- 1032 Implications of U-Pb-Hf Detrital Zircon Data on the Precambrian Crustal Evolution of NW India
Kaur P, Zeh A, Chaudhri N, Gerdes A & Okrusch M
-
- 1033 Geodynamic Implications of New U-Pb Zircon Ages for the Kamanjab Inlier (NW-Namibia)
Kleinhanns IC, Wilsky F, Nolte N, Becker T, Hansen BT, Klemm R & Fliegel D
-

- 1034 Zircon Hf Isotopic Study of the Mesozoic Granitoids from Korea and Japan and Tectonic Implications
Lee SR, Cho D-L & Wu F-Y
-
- 1035 Precambrian P-T-Time History of the Yenisey Ridge as a Consequence of Contrasting Tectonic Settings in the Western Margin of the Siberian Craton
Likhanov I & Reverdatto V
-
- 1036 Recognition of the Archean High-Grade Terrain in the South Qinglin Orogen and its Connection with the South China Block Tectonics
Ling W-L, Lu S-S, Chen Z-W, Liu X & Duan R-C
-
- 1037 Complex Tectonic-Thermal History of the Red River Shear Zone: Evidence on Zircon SHRIMP and LA-ICP-MS Dating of the Yaoshan Group, SE Yunnan, China
Liu Y-P, Li Z-X, Liao Z, Ye L, Pi D & Li C-Y
-
- 1038 Isotope Study of Neoproterozoic to Lower Palaeozoic Successions of the Southern Kalahari Craton
Naidoo T, Zimmermann U, Miyazaki T & Vervoort J
-
- 1039 Isotopic Composition of the Early Precambrian Crust of the South-Western Siberian Craton: Implications for Crustal Growth and Mantle-Crustal Interaction through Time
Turkina O
-
- 1040 Geochronological Fingerprint Revealed the Evolution of the Crust Underlying Cerro Pampa Adakite, Argentine Patagonia
Orihashi Y, Anma R, Motoki A, Haller M, Ramos V & Hirata D
-
- 1041 Petrogenesis of Syn-Orogenic Leucogranites (Damara Orogen, Namibia)
Ostendorf J & Jung S
-
- 1042 Mesoarchean Tectono-Metamorphic Event from Bundelkhand Craton, Central India
Pati JK & Saha L
-
- 1043 The Lower Pre-Cambrian, the Urals
Pystin A & Pystina Y
-
- 1044 Distinguishing Periods of Crustal Growth and Recycling by U-Pb Dating, Sr, Pb and Hf Isotopes Among the Eastern Cordilleran Granitoids of South Peru
Reitsma M, Schaltegger U, Spikings R, Chiaradia M, Ulianov A & Gerdes A
-
- 1045 The 1.86-1.84 Ga Magmatism in the Western East European Craton: Implications for a Convergent Continental Margin
Skridlaite G, Whitehouse M, Bogdanova S & Taran L
-



- 1046 Cadomian Igneous Rocks from Europe's Variscan Belt, Lazovo Complex
Statelova J, von Quadt A, Machev P & Georgiev S
-
- 1047 Episodic Events of the Western North China Craton and North Qinling Orogenic Belt, in Central China: Revealing by Detrital Zircon U-Pb Ages
Sun Y, Diwu C, Zhang H, Qiang W & Guo A
-
- 1048 3.84 Ga Crustal Material in Dunhuang Block, Gansu Province, China
Wang H-L, Xu X-Y, Zhu T, Li T & Li Z-P
-
- 1049 Redefine Bulunkuo Group in Eastern Pamirs Syntaxis and its Signification – From the Evidence of LA-ICP-MS Isotope Dating of Detrital Zircon
Xiao P-X, Gao X-F, Kang L, Dong Z-C, Guo L & Xi R-G
-
- 1050 Formation of the Oldest Rocks in the Cathaysia Block, Southern China
Yu J, O'Reilly S, Wang L & Griffin W
-
- 1051 A Paleoproterozoic Tectonothermal Event Recorded in Precambrian Basement Rocks of the Kuluketage Block, Northeastern Tarim, China
Zhu W, Wu H, Shu L & Ma D
-

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06c: Geochemical Tracing of Recycled Subducted Materials

Floor 1

- 1052 Subduction-Related or Subduction-Modified Source? The Case of Central-Eastern Anatolia Volcanism
Agostini S, Savaşçın MY & Manetti P
-
- 1053 Whole-Rock Chemostratigraphy of Diverse Magma Series in the Tertiary Alkaline Volcanics of Trabzon-Giresun Area, NE Turkey
Yücel C, Arslan M, Temizel İ & Abdioğlu E
-
- 1054 Facies and Petrochemical Characteristics of the Tertiary Aged Tekkeköy (Samsun) Area Volcanics, NE Turkey
Dursun T & Arslan M
-
- 1055 The Chemistry of Some Minerals from the Shir-Kuh Granitoidic Batholith, South-West of Yazd, Central Iran
Sheibi M & Nedelec A
-
- 1056 Geochemistry and Tectonic Setting of Una-Una Volcano, Sulawesi, Indonesia
Broom-Fendley S, Thirlwall M, Cottam M & Hall R
-

- 1057 Fluid-Mobile Element Enrichment in Mantle Wedge of Subduction Zones
Jean M & Shervais J
-
- 1058 On the Fluid-Mobility of Molybdenum, Tungsten, and Antimony in Subduction Systems
Wehrmann H, Halama R, Garbe-Schönberg D, Hoernle K, Jacques G, Heydolph K, Mahlke J & Schumann K
-
- 1059 Li Isotopic Composition of Subduction-Related Leucogranites: Source Tracking and Tectonic Implications
Xiao Y, Xu L, Gao Y, Li S, Sun H & Gu H
-
- 1060 HIMU-Emi Type OIBs from the Neoproterozoic Penakacherla Greenstone Belt, Dharwar Craton, India: Implications on Recycling of Mesoarchean Crust
Manikyamba C & Kerrich R
-
- 1061 Geochemical Characters and LA-ICP-MS Zircon U-Pb Dating of the Lenglonglin Volcanic Rocks in North Qilian Tectonic Belt
Yu J-Y, Li X-M, Wang G-Q & Wu P
-
- 1062 Zircon Hf-O Isotope Evidence for Crust-Mantle Interaction during Continental Deep Subduction
Dai L-Q
-

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07f: Modern Analogues for Precambrian Marine Ecosystems

Floor 1

- 1063 Microbial Cycling of Sulfur in the Aphotic Zone of a Meromictic Lake
Bannon D, Ono S, Templer S & Bosak T
-
- 1064 Cr-Isotopes and REE Variations in a Laterite Profile: Implication for Redox Processes and Element Mobility during Weathering
Berger A & Frei R
-
- 1065 Sulfate Reduction and Microbial Abundance in Saline, Alkaline Lake Van (Turkey)
Glombitza C & Kallmeyer J
-
- 1066 The Nitrogen Isotopic Composition of a Proterozoic Microbial Community
Gueneli N & Brocks JJ
-
- 1067 Calibrating S Isotope Fractionation in Sulfate Reducing Bacteria
Johnston DT, Bradley AS, Cummins R, Leavitt WD & Girguis PR
-

- 1068 Measuring $\delta^{13}\text{C}$ in Siderite and Organic Matter of Lake Sediments
Lebeau O, Busigny V, Chaduteau C, Jezequel D & Ader M
-
- 1069 Fe-Poor and Sulfide-Rich: Mangrove Lake as a Precambrian Analogue?
Pellerin A, Wing B, Bui TH, Rough M, Mucci A & Canfield DE
-

08b: Chemical and Microbial Electron Transfer Processes at Mineral Surfaces

Floor 1

- 1070 Bioreduction of Biotite and Chlorite: Effects on Mineral Reactivity
Brookshaw D, Pattrick R, Lloyd J & Vaughan D
-
- 1071 Fe(II)-Induced Trace Element Release from Crystalline Iron Oxides
Friedrich A & Catalano J
-
- 1072 A Role of Plant Biomass-Derived Black Carbon in Electron Transfer Processes?
Wanzenek T, Keiluweit M, Daniel P, Baham J & Kleber M
-
- 1073 Combining Electrochemical and Spectroscopic Methods to Obtain Speciation of Quinones
Orsetti S, Spahr S, Laskov C & Haderlein S
-
- 1074 Liposome Study of MtrABC: A Porin Cytochrome Electron Transport System from *Shewanella oneidensis*
White G, Edwards M, Baiden N, Hall A, Butt J, Richardson D & Clarke T
-

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08c: Biogeochemical Processes within Floodplain and Deltaic Sediments

Floor 1

- 1075 Potential for Manganese Oxidation in Shallow Groundwater Induced by Water Table Fluctuation
Farnsworth C, Voegelin A & Hering J
-
- 1076 Release of Trace Metals in Soil Suspensions as Affected by Redox Potential and Temperature
Hindersmann I & Mansfeldt T
-
- 1077 Sulfur, Carbon and Nitrogen Isotopic Variation in the Drinking Water Source of Beijing
Ji H, Zhu X, Li H, Lu F & Xin X
-

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08i: Mineral Nucleation: From the Atomic to the Planetary Scale

Floor 1

- 1078 FT-ICR Mass Spectrometry of Carbonate Clusters: Magic Clusters and pH Effects
Lemke K, Sadjadi S & Seward T
-
- 1079 Why do Earthworms Synthesize ACC?
Diz P, Gil C, Mendez J, Iglesias-Briones MJ & Gago-Duport L
-
- 1080 Ripening Processes during Crystallization of Natrojarosite
Jimenez A, Hernandez A, Fernandez-Gonzalez A & Prieto M
-
- 1081 Nucleation and Growth of Acicular Goethite from Ferric Hydroxide Gel Under Moderate Temperature (30 and 70°C)
Montes-Hernandez G, Beck P, Renard F, Quirico E, Lanson B, Chiriac R & Findling N
-
- 1082 Macroscopic Anhydrite Interacted with Pb-Doped Solutions
Morales J, Astilleros JM, Jimenez A & Fernández-Díaz L
-
- 1083 Formation and Inhibition of Calcite, Aragonite and Vaterite
Niedermayr A, Dietzel M & Köhler S
-
- 1084 Experimental Study of Nucleation and Phase Stability of Calcium Sulfate
Ossorio Peralta M, Van Driessche A & García Ruiz JM
-
- 1085 The Importance of the Fluid-Mineral Interface in the Control of Crystal Growth
Putnis CV, Ruiz-Agudo E, Wang L, Klasa J & Putnis A
-
- 1086 The Transformation of ACC to Vaterite; An *in situ* SAXS/WAXS Study
Bots P, Rodriguez-Blanco JD, Roncal-Herrero T, Shaw S & Benning L
-
- 1087 The Role of Inorganic Additives in Evaporitic Carbonate Precipitation
Roncal-Herrero T, Bots P, Rodriguez-Blanco JD, Shaw S & Benning LG
-
- 1088 Exploring the First Steps of Iron(III) Oxyhydroxide Nucleation Using a Competitive Ligand Kinetic Approach
Rose A
-
- 1089 Solvent Effect on the Precipitation of Mg-Carbonate
Teng H & Wang J
-
- 1090 Non-Isothermal Dehydroxylation Kinetics of Common Sheet-Like Phases and their Informational Value
Trittschack R & Grobety B
-

08k: Water Structure and Hydrogen Bonding on Mineral and Nanoparticle Surfaces

Floor 1

- 1091 Formation of Nanoparticles with Stereochemical Effects
Using the Polyphenol-Pseudoboehmite Complexation

Franke M

- 1092 Wetting of Mineral Surfaces – Molecular Dynamics
Simulation

Tunega D, Solc R, Pašalić H, Gerzabek MH & Lishka H

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09f: Linking the Plutonic and Volcanic Records: Textural and Geochemical Fingerprinting of Magma Chamber Processes

Floor 2

- 2001 A Magma Plumbing System Probed by the Grænavatn
Porphyritic Group, East Iceland

Andersen C, Riishuus M & Tegner C

- 2002 Petrogenesis of Monotonous Dacitic Taapaca Volcanic
Complex, N. Chile

Banaszak M & Wörner G

- 2003 U-Th-Ba Elemental Fractionation during Partial Melting
of Crustal Xenoliths and its Implications for U-Series
Disequilibria in Continental Arc Rocks

Brens R & Hickey-Vargas R

- 2004 Probing the Toba Super-Eruption: Oxygen Isotope
Geochemistry of Zoned Quartz Phenocrysts

*Budd D, Troll V, Muñoz-Jolis E, Deegan F, Smith V,
Whitehouse M, Freda C, Harris C & Hilton D*

- 2005 Oxygen Fugacity-Dependence of Zircon-Melt Trace Element
Partitioning

Burnham A & Berry A

- 2006 Distinguishing between Open and Closed System Magma
Differentiation at Arc Volcanoes by Combining U-Series and
Elemental Systematics

Cooper L, Reubi O, Dungan M, Bourdon B & Langmuir C

- 2007 The Peculiarities of Khasurta Massif Rocks Formation on the
Melt Inclusions Study (Angara-Vitim Batholith, Western
Transbaikalia)

Damdinova L & Tsyrenov B

- 2008 Correlations between Hf, O and Trace Element Concentrations in Zircon from Rhyolitic Rocks (NE German Basin)
Deja E, Pietranik A, Kierczak J, Milke R & Breitkreuz C
-
- 2009 Widespread Synchronous Volcanism on the Snake River Plain
Ellis B, Wolff J, Mark D & Bindeman I
-
- 2010 Petrology of the Middle Eocene Sub-Volcanic Association of Western Pontides
Genc SC, Gulmez F, Keskin M, Tuysuz O & Isseven T
-
- 2011 Magma Evolution and the Formation of a 'Daly Gap' in the Volcanic and Plutonic Rocks of Akaroa Volcano, New Zealand
Hartung E, Deering C, Kennedy B, Trent A, Gane J & Turnbull R
-
- 2012 Trace Element Analysis in Quartz by Using Laser Ablation ICP-MS: A Tool for Deciphering Magma Evolution
Svojtka M, Ackerman L & Breiter K
-
- 2013 The Role of Volcano-Plutonic Complex for Simulation of Origin of Rare-Metal Granites from Transbaikalia, Russia
Syrtsso L, Abushkevich V, Badanina E & Volkova E
-
- 2014 Single Crystal Sr-Isotope Data of Ferrar Lavas and Sills Determined by LA-MC-ICPMS
Tympel JE, Abratis M, Gerdes A & Viereck-Goette L
-
- 2015 Rates of Crystal Nucleation and Growth from Inversion of Natural Crystal Size Distributions
Špillar V & Dolejš D
-
- 2016 Petrogenetic Implications of Two Contrasting Granite Types in The Çataldag Plutonic Complex, NW Turkey
Kamaci O & Altunkaynak S
-
- 2017 Grain-Supported Flow at Magma Transfer Zones
Vegas N, Rodriguez J, Tubia JM, Esteban JJ & Cuevas J
-
- 2018 Geochemistry and $^{40}\text{Ar}/^{39}\text{Ar}$ Geochronology of Adakite-Like Porphyries in NW Turkey: Implications For Slab Breakoff Induced Adakitic Magmatism
Yildiz M & Altunkaynak S
-

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09g: Elements of Ophiolites

Floor 2

- 2019 Primary Phases in Peridotites of the Ślęza Ophiolite (SW Poland)
Wojtulek P, Puziewicz J & Ntaflou T
-

- 2020 Petrogenesis of Mantle Peridotites from the Kizildag Ophiolite (SE Turkey): Implications from Mineral Composition
Sen AD, Uysal I, Godard M, Bağcı U & Kaliwoda M
-
- 2021 The Petrological, Geochemical and Tectonic Settings of Metabasites from Mashhad, NE of Iran
Mazaheri SA, Bieresdorfer R & Armstrong F
-
- 2022 Introduction of Three Granitoid Types with Different Origins from Ophiolitic Mélange of Nain (Central Iran)
Shirdashtzadeh N, Samadi R & Torabi G
-

09h: Volcanic Glass Heterogeneity: Primary and Secondary Causes, and Uses

Floor 2

- 2023 Can We Use Variations in Volatile Concentrations in Volcanic Glass to Study Degassing?
Berlo K, Pyle D, Barclay J, Mather T & Tuffen H
-
- 2024 New Juvenile Glass Chemistry from Colli Albani, Italy and its Use for Understanding Petrogenesis
Cross J, Smith V, Giordano G, Tomlinson E, Roberge J & Menzies M
-
- 2025 Conduit-Scale to Localized Degassing in Ascending Magmas: Insights from Cl Measurements in Vesuvius 79AD Pumice
Gurioli L, Shea T, Hellebrand E & Hammer J
-
- 2026 Different Coloured Vitreous Phases in Obsidian
Kirste J, Wagner G, Schulze N & Kloess G
-
- 2027 Oxygen Isotope Analysis of Experimental Glasses by SIMS: A Calibration Attempt
Pedroza K, Jolis E, Troll V, Freda C, Harris C, Deegan FM, Whitehouse M, Bindeman I, Annersten H & Ellis B
-

10h: Geochemical Frontiers of the Rock/Water/Hydrocarbon System

Floor 2

- 2028 The FeS/H₂S System – A Model for a Primitive DMSO Reductase
Alpermann T, Qi Z, Poppitz W & Weigand W
-
- 2029 Inorganic and Organic Occurrences from Diagenesis of the Güvenç Formation Shales in the Adana basin, Turkey
Buyukutku A & Albayrak M
-

- 2030 Application of the Correspondence Analysis to Determine Anomalous Elements and Samples
Darabi Gholestan F, Ghavami-Riabi R & Asadi-Haroni H
-
- 2031 Two Easy Methods in Evaluation of an Exploration Data Set
Ghavami-Riabi R, Khalo-Kakai R & Asadi-Haroni H
-
- 2032 Albite Precipitation in Mudstones – Comparison of Natural and Synthetic Systems
Hellevang H, Thyberg B & Jahren J
-
- 2033 New Insights on the Origin of Unresolved Complex Mixtures
Hu SZ, Li SF, Wang JH, Zhang DM & Ma J
-
- 2034 Oil-Source Correlation for Severely Biodegraded Oils in Biyang Depression, China
Li SF, Hu SZ, He S & Zhang DM
-
- 2035 Impact of Parent Rocks and Diagenetic Evolution on Sandstone Reservoir Quality with Low to Very Low Permeability
Luo JL
-
- 2036 Using Discrimination Analysis for Anomaly Separation and Distinguish the Mineralized Factors
Majlesi MJ, Memarzadeh M, Ghavami-Riabi R & Asadi-Haroni H
-
- 2037 Transformation of Nitrogen during Sediment Burial History
Ostertag-Henning C & Illing C
-
- 2038 Desorption of Quinoline from Clay: An Investigation of the LoSal™ Mechanism
Pedersen C, Hem C & Stipp S
-
- 2039 The Solubilities and Phase Diagram of the Aqueous System Containing with Vanadate at 298 K
Peng Y & Zeng Y
-
- 2040 Quantitative Identification of Reservoir Fluid Properties and Boundary Shifts by Laser-Induced Fluorescence
Su J, Zhang S & Zhu G
-
- 2041 Sulphate Reduction Induced by Hydrogen Under Hydrothermal Conditions
Truche L, Berger G & Cartigny P
-
- 2042 Potential-Ph Diagram for the V-Cl-H₂O System at High Chlorine Concentration
Wang RL, Zeng Y & Zhang SH
-
- 2043 Phase Equilibrium for the Aqueous System Containing Ammonium, Magnesium and Chloride at 323.15 K
Zeng Y, Yu XD, Yang JY & Hong J
-

- 2044 Large Area Multi-Stage Quasi-Layer Petroleum Accumulation in Carbonate Reservoirs in Tazhong Area, Tarim Basin
Zhu G, Zhang S, Wang Y & Su J

10i: Geochemistry in Geothermal Energy: Field Observations, Experiments and Modeling

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- 2045 Geothermal Energy Development In Turkey
Akpınar A, Akaryalı E & Kömürçü Mİ
- 2046 Model Calculations of Scale Forming Minerals of High Enthalpy Geothermal Waters in Turkey
Cetiner Z & Xiong Y
- 2047 Density and Apparent Molar Volume of Binary Electrolyte Aqueous Solutions at Elevated Temperatures
Zein D, Driesner T & Sanchez-Valle C
- 2048 Hydrochemical Properties of Thermal Waters in the Eastern Black Sea Section
Gultekin F, Firat Ersoy A & Hatipoglu E
- 2049 Geothermal Gradient and Heat Flow Distributions of Northeastern Taiwan and Its Implication
Liu C-M, Song S-R, Jeng F-S, Yeh E-C, Wang T-T & Lu Y-C
- 2050 The Crystal Morphology of Aragonite and its Implications in Pumping Pipe of Hot Spring, Taiwa
Lu Y-C, Song S-R, Liu C-M & Huang L
- 2051 Simulating Experiments on Gas Generation of Coal Under Different Fluid Pressure
Mi J, Zhang S & He K
- 2052 Monitoring Fluid Properties in a Geothermal Plant
Regenspurg S, Harald M, Giese R & Mathias P
- 2053 Hotspot: The Snake River Geothermal Drilling Project
Shervais J
- 2054 Silicic Acid Removal as Calcium or Magnesium Silicate from Geothermal Water
Yonezu K, Kawabata Y, Watanabe K & Yokoyama T
- 2055 Application of Lithogeochemistry for Regional Scale Mapping of Geothermal Prospectivity in Sabalan Volcano, North West of Iran
Ziaei M, Ziaii M, Kamkar A & Asghari AA

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10j: Giant Oil Spills and Environmental Impact: Past Lessons and Future Predictions

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- 2056 Investigation the Use of Ozonation Column for Phenol Removal
Jalayeri H, Marandi R & Doulati F
-
- 2057 Contaminated Soil Diagnosis by Electrical Resistivity Tomography in Underground Storage Tanks of Different Petrol Stations in SE Spain
Rosales RM, Martinez P & Faz A
-
- 2058 Influence of Oil Price Fluctuation to Chinese Economy
Niu JY, Zhao LR & Zhou JS
-

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12d: Novel Molecular and Isotopic Tracers of Terrigenous Supply to Marine Sediments

Floor 2

- 2059 A Global Distribution Map for Nd Isotopes in European Watersheds
Bayon G, Toucanne S, Freslon N & Ponzevera E
-
- 2060 Terrigenous Input and Microcharcoal Changes in the Gulf of Papua during the Last 60 Kyr
Bonnet N, de Garidel-Thoron T, Ménot G, Beaufort L, Buchet N & Bard E
-
- 2061 Dynamics of the Pliocene East Antarctic Ice Sheet Revealed by Radiogenic Isotopes in Marine Sediments
Cook C, van de Flierdt T, Williams T, Hemming S & Pierce E
-
- 2062 Removal of Seawater ^{234}U Incorporated in Holocene Basaltic Sediments from the Reykjanes Ridge
Mohamed KJ, Robinson LF & McManus JF
-
- 2063 The Os Isotopic Record of Organic Rich Sediments from the Benguela Upwelling System, Namibia
Reisberg L, Blamart D & Zimmermann C
-
- 2064 Wetland Extension on the Russian Plain over the Past 40 Kyr: A Biomarker Approach from the Black Sea
Rostek F & Bard E
-
- 2065 N-Alkan-2-ones of Lacustrine Sediments and Its Climate Significance in Linxia Basin, NE Tibetan Plateau, NW China
Wang Y & Fang X
-

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12e: Biomineralization of Marine Organisms: Toward a Better Understanding of Proxy Records

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- 2066 Rapid Age Determination of Oysters Using Shell Mg/Ca Ratios
Spence B, Gillikin DP, Goodwin DH, Byrne D, Roopnarine P & Anderson L
-
- 2067 Carbon Isotope Fractionation Associated with CaCO₃ Precipitation Induced by Ureolysis
Millo C, Dupraz S, Ader M, Guyot F, Thaler C & Ménez B
-
- 2068 Determination of $\delta^{11}\text{B}$ Ratios in Marine Biogenic Carbonates via LA-MC-ICP-MS
Fietzke J, Ragazzola F, Heinemann A, Taubner I, Böhm F, Erez J, Hansteen TH & Eisenhauer A
-
- 2069 Strontium Isotope Fractionation in Scleractinian Corals
Fruchter N, Böhm F, Eisenhauer A, Dietzel M, Krabbenhöft A, Niedermayr A, Reynaud S, Lazar B & Stein M
-
- 2070 Effects of Thermal and Salinity Stresses on Growth of Aposymbiotic and Symbiotic Primary Polyyps (*Acropora digitifera*)
Inoue M, Shinmen K, Nakamura T, Iguchi A, Suzuki A, Kawahata H & Sakai K
-
- 2071 Coral Records of Ocean Acidification and Physiological Processes in the Southern Great Barrier Reef
Kang JO, McCulloch M, Eggins S, Gagan M & Mortimer G
-
- 2072 Calcium and Magnesium Isotopes in Biogenic Calcite
Kisakürek B, Eisenhauer A, Müller M, Taubner I, Fietzke J, Böhm F, Buhl D & Erez J
-
- 2073 *In situ* $\delta^{18}\text{O}$ and Mg/Ca Analyses of Diagenetic and Foraminiferal Calcite: Implications for Paleoceanographic Proxy Records
Kozdon R, Kelly C, Kitajima K, Strickland A & Valley J
-
- 2074 Boron Isotopes as pH Proxy: Combination of Boron Speciation and Isotope Composition Data
Rollion-Bard C, Blamart D, Trebosc J, Tricot G, Mussi A & Cuif J-P
-
- 2075 Diurnal Cycle of Strontium/Calcium Ratio in a Giant Clam Shell: A Super-Fine Pyrheliometer
Sano Y, Kobayashi S, Shirai K, Takahata N, Watanabe T, Sowa K & Iwai K
-
- 2076 Elemental and Isotopic Composition of Cultured Scleractinian Corals
Taubner I, Böhm F, Fietzke J, Eisenhauer A, Garbe-Schönberg D & Erez J
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- 2077 The Role and Effect of Boron during the Crystallization of CaCO_3
Vallina B, Rodriguez-Blanco JD, Blanco JA & Benning LG
-
- 2078 Temperature Dependence of Mg Isotope Fractionation in Deep-Sea Coral: Paleoceanographic Implication as a New Proxy for Water Temperature
Yoshimura T, Tanimizu M, Inoue M, Suzuki A, Iwasaki N & Kawahata H
-

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12f: Frontiers in Cosmogenic Dating of Glacial Landscapes: Last Analytical Developments, New Production Rates Calibration, Sampling Strategies and Paleoclimatic Significance of New Glacial Chronologies

Floor 2

- 2079 Patterns of Cosmogenic Age Distributions for Late Quaternary Moraines in Tibet
van der Woerd J, Kali E, Chevalier M-L, Liu-Zeng J, Mériaux A-S, Tapponnier P, Hilley G, Li H, Finkel R & Ryerson F
-
- 2080 Cosmogenic ^{21}Ne Production Systematics in Quartz Inferred from a 25 m Sandstone Core
Balco G, Shuster D, Blard P-H, Zimmermann L & Stone J
-
- 2081 Irregular Retreat of Tropical Glaciers during the Holocene
Jomelli V, Khodri M, Favier V, Brunstein D, Ledru MP, Wagnon P, Blard PH, Sicart JE, Braucher R, Grancher D, Bourles D, Barconnot P & Vuille M
-

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12g: Modeling of Geochemical Proxies

Floor 2

- 2082 IsoMAP: A Web-GIS Workspace for Modeling Isotope Ratios in the Environment
Bowen G, West J, Zhao L, Miller C, Zhang T, Liu Z, Lee H & Kalangi A
-
- 2083 Molecular Fossils and Organic Proxies Evidencing the Facial Evolution of the Lower Miocene Sokolov Basin, Eger Graben
Franču J, Mácová D, Sýkorová I, Havelcová M, Kribek B, Martínek K & Rojik P
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- 2084 Paleoenvironmental Evolution of the Lower Miocene Organic Clays (the Sokolov Basin, Eger Graben, Czech Republic): Anorganic Proxies
Knesl I, Kribek B, Martínek K, Rojik P & Franču J
-

12i: Marginal Basin Sediments: Archives for High-Resolution Paleoclimate Records Including Land-Ocean Interactions

Floor 2

- 2085 Recent Cessation of Nile Discharge Affecting the Geochemistry of SE Mediterranean Inner Shelf Sediments
Almogi-Labin A, Sandler A & Herut B
-
- 2086 Sediment-Water Nutrient and Oxygen Fluxes in Two Antarctic Continental Shelf Areas Differently Affected by Climate Change
Sañé E, Isla E & Grémare A
-
- 2087 Geochemical Composition of Recent Sediments and Subrecent Variability of the Last 500 Years for the SW Adriatic Sea and the Gulf of Taranto (Southern Italy)
Goudeau M-L & De Lange GJ
-
- 2088 High-Frequency Climate Cycles in the Westernmost Mediterranean during the Last 20,000 yrs
Rodrigo-Gámiz M, Martínez-Ruiz F, Rodríguez-Tovar FL, Jiménez-Espejo FJ & Pardo-Igúzquiza E
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- 2089 Comparison of XRF Core Scan Data to Conventional Geochemical Analyses: Usage in High Resolution Paleoenvironmental Research
Hennekam FM & De Lange GJ
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13b: Aerosols, Clouds and Precipitation

Floor 2

- 2090 Anions Dramatically Enhance Proton Transfer Across the Air-Water Interface
Hoffmann M, Mishra H, Enami S, Neilson R, Goddard W & Colussi A
-
- 2091 Does Aerosol Alter Entrainment Mixing in Warm Cumulus?
Small J, Jonsson H & Chuang P
-
- 2092 Combustion Aerosol over Marine Stratus: Long Range Transport, Subsidence and Aerosol-Cloud Interactions over the South East Pacific
Clarke A, Freitag S, Brekhovskikh V, Snider J, Campos T, Kazil J & Feingold G
-
- 2093 A Possible Evidence of Urbanization Effect on the Light Precipitation in the Mid-Korean Peninsula
Eun S-H, Kim B-G, Chae S-H & Park J-C
-
- 2094 Dependence of Adiabaticity of Stratiform Clouds Upon Stability, and its Relationship to Aerosol-Cloud Interactions
Kim Y-J, Kim B-G, Miller M & Song C-K
-

- 2095 Atmospheric Aerosol as the Source of Nitrate Deposits in Turpan-Hami Basin, China: Evidence from Oxygen and Nitrogen Isotopic Compositions
Li Y, Qin Y, Liu F & Hou K
-
- 2096 Ship Emissions and their Influence on Large Scale Cloud Fields
Peters K, Quaas J, Stier P & Grassl H
-
- 2097 Estimating Aerosol Forcings Using the MACC Aerosol Reanalysis
Quaas J & Bellouin N
-
- 2098 The Combined Use of CALIOP, MODIS and OMI Aerosol and Cloud Products for Calculating Direct Aerosol Radiative Effects
Redemann J, Vaughan M, Shinozuka Y, Russell P, Livingston J & Remer L
-
- 2099 Impact of Aerosols on the Equilibrium Response of the Climate System
Sousa Santos G & Bey I
-

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13g: Atmospheric Dust

Floor 2

- 2100 Red Sea Detritus Provenance during MIS 6/5 and MIS 2/1 Transitions
Palchan D, Stein M, Erel Y, Almogi-Labin A & Goldstein SL
-
- 2101 Short Residence Time and Fast Transport of Fine-Grain Detritus – From ⁷Be in Settled Dust in the Judean Desert
Belmaker R, Lazar B, Stein M & Beer J
-
- 2102 Variable Radiogenic Isotopic Compositions in Saharan Dust Across the Atlantic
Aarons S, Aciego S & Gleason J
-
- 2103 Survey of Aeolian Airborne Dust over Iran from the Point of View Geochemistry and Mineralogy (Case Study: Western Iran and North of Persian Gulf and Sea of Mokran)
Ahmady Birgani H, Feiznia S & Charehsaz N
-
- 2104 Nutrient Content of Mineral Aeolian Dust and its Impacts on Temperate Forest Nutrient Cycles
Lequy É, Conil S, Leclerc E & Turpault M-P
-
- 2105 Mineralogy of Atmospheric Particles Deposited on Cypress Leaves Close to a Nuclear Plant
Kaltenmeier R, Gieré R & Pourcelot L
-
- 2106 Potentially Toxic Metal Bearing Mineral Phases in Total Suspended Particles from Budapest, Hungary
Sipos P, Márton E, Németh T, Kovács Kis V, May Z & Szalai Z
-

- 2107 Chemical and Isotopic Properties of Airborne Particles in Industrial, Urban and Rural Areas of the Rhine Valley
Guéguen F, Stille P, Dietze V & Millet M
-
- 2108 Distribution Characteristics of Pt, Pd, and Related Traffic Elements in Dusts from Seoul, Korea
Chon HT, Sager M & Lee HY
-
- 2109 Dry Deposition: A Major Pathway of Atmospheric Dust Particle Deposition
Kumar R & Kumari KM
-
- 2110 Characterization of Airborne Dust Particles in the Coal Mining Area of Cam Pha, Northern Viet Nam
Hoàng-Hòa TB, Gieré R, Dietze V, Kaminski U & Stille P
-
- 2111 Dust from Copper Smelters in the Zambian Copperbelt
Vitkova M, Ettlér V, Veselovsky F, Kribek B & Sebek O
-
- 2112 Osmium Isotopic Tracing of Atmospheric Emissions from an Aluminum Smelter
Gogot J, Poirier A & Boulemant A
-
- 2113 Extinction-To-Backscatter Ratio of Asian Dust Observed with a Combined Raman Elastic-Backscatter Lidar in Seoul, Korea
Kim S-W, Kim M-H, Yoon S-C & Sugimoto N
-
- 2114 Validation of Saltation Flux Parameterization with Observation
Kang J-Y, Mikami M, Shao Y, Yoon S-C, Tanaka TY & Sekiyama TT
-
- 2115 Chemical and Mineralogical Profile of the Local Wind-Blown Surface Soil Contribution to Respirable Airborne PM in Rome (Italy)
Pietrodangelo A, Salzano R, Pareti S, Rantica E & Perrino C
-

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14e: Silicate Weathering and Organic Carbon Sequestration during Continental Erosion: Processes Controlling Dissolved and Particulate Fluxes Exported by Rivers to the Ocean

Floor 2

- 2116 Karst Versus Sandstone and Anthropogenic Influences on Small Rivers of the Franconian Alb
Barth J, Mader M, van Geldern R, Schreiter I, Zimmermann P, Türk T & Schulte P
-
- 2117 Carbon Isotope Composition of DIC in the Yalong Jiang of Changjiang Basin, China
Li S, Chetelat B, Liu C-Q, Yue F & Zhao Z
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- 2118 Spectroscopic Estimation of SiO₂ for Characterizing Clays in the Brahmaputra River Sediment

Saikia BJ

- 2119 Lithium Isotope Fractionation during Extreme Weathering of Basalt in Hainan Island, South China

Hou K

- 2120 Iron Oxides of Soils from Cenozoic Basalts Weathering in Eastern China: Relationship with Climate Change

Du K, Chen Y, Long X, Li H & Ji J

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14g: Experimental Constraints on Chemical Erosion Rates and Mechanisms Using New and/or non Traditional Isotope Tools

Floor 2

- 2121 Geochemical Characteristics of the Shaxi-Changpushan Porphyry Cu-Au Deposit: Significance to Ore Formation

Sun SC, He SG & Jiang F

- 2122 Erosion Rate of Yellow Soil on Pine Hill in the Three Gorges Reservoir Region Using ¹³⁷Cs Technique

Cheng J, Shuang Y, Jiang ZY & Li H

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15h: Submarine Hydrothermal Processes and Alteration of the Oceanic Lithosphere

Floor 3

- 3001 Rutile Included in the Podiform Chromitite from Ocean Floor at MAR 15°20'N FZ, Site 1271, ODP Leg 209

Abe N

- 3002 Growth-Zoned Chromian Spinel in Rodingite: Evidence for Cr Mobility in Hydrothermal Solution

Akizawa N, Arai S, Tamura A & Uesugi J

- 3003 Modeling of Ultramafic-Hosted Hydrothermal Systems Using CAST3M

Perez E, Charlou JL, Jean-Baptiste P & Mugler C

- 3004 Polyphase Serpentinization History of Mariana Forearc Mantle: Observations on Ultramafic Clasts from ODP Leg 195, Site 1200

Kahl W-A, Jöns N, Bach W & Klein F

- 3005 Low Temperature Alteration of Serpentinized Dunite; A Case Study from the Leka Ophiolite Complex

Økland I, Thorseth I, Huang S & Pedersen RB



- 3006 Microbial Life Associated with Low Temperature Alteration of Ultramafic Rocks in the Leka Ophiolite Complex
Daae FL, Thorseth I, Dahle H, Jørgensen SL & Pedersen RB
-
- 3007 A Profile of Multiple Sulfur Isotopes for the Oman Ophiolite
Oeser M, Strauss H, Peters M, Wolff E, Koepke J, Garbe-Schönberg D & Dietrich M
-
- 3008 Hydrothermal Circulation and Post-Obduction Hydration & Carbonation of Oceanic Lithosphere – $^{87}\text{Sr}/^{86}\text{Sr}$ and Oxygen Isotopic Study of Oman Ophiolite
Chen C, Andronicos C, Cathles L & White W
-
- 3009 High-Temperature Hydrothermal Activity in the Lower Oceanic Crust: Petrological and Geochemical Evidence for Fluid Pathways in the Oman Ophiolite
Wolff PE, Garbe-Schönberg D, Koepke J & Streuff K
-
- 3010 Fluid and Temperature Conditions in an Oceanic Detachment Fault Footwall: Insights from Late-Stage Mineral Veins (ODP Leg 304/305)
Jöns N, Bach W, Rosner M & Plessen B
-
- 3011 Dolomitization of Serpentinized Harzburgite from the Atlantis Massif
Klein F
-
- 3012 Spatial and Temporal Variability of Fluid and Gas Chemical Composition at the Lucky Strike Hydrothermal Vent Site (Mid-Atlantic Ridge)
Chavagnac V, Boulart C, Monnin C & Castillo A
-
- 3013 Compositions of Phyllosilicates from the TAG Hydrothermal System at 26°N on the Mid-Atlantic Ridge as Guide to Subseafloor Entrainment of Seawater: Results from ODP Leg 158
Shu L, Bach W, Klügel A & Jöns N
-
- 3014 Analysis of As and Sb in Samples from Turtle Pits Hydrothermal Field Using New Standard Material
Wohlgemuth-Ueberwasser CC, Schuth S, Berndt J & Viljoen F
-
- 3015 Sulfur and Strontium Isotope Study of Hydrothermal Mineralization from the SE Afar Rift
Moussa N, Rouxel O, Nonnotte P, Fouquet Y, Ponzevera E & Etoubleau J
-

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16a: Geochemical Processes in Mining Environments – Sponsored by MIBRAG

Floor 3

- 3016 Mining-Induced Groundwater Environmental Impact Assessment at Shuyang County, Jiangsu Province, China
Zhu X, Wu J, Wu J & Xia Y
-
- 3017 Research of Three-Dimensional Engineering Geology Strata Modeling in Urban Underground Space
Huang J-L
-
- 3018 Distribution of Potentially Toxic Elements Around Dolly Au-Cu Mine, Central Iran
Alavi Tabaei F, Modabberi S & Asadi-Haroni H
-
- 3019 Natural Fe-Oxidizing Lagoon as a Pretreatment in AMD Remediation
Macias F, Ayora C, Caraballo M, Nieto JM & Roetting T
-
- 3020 REE Behaviour in Acid Mine Drainage Conditions in the Ríos Tinto and Odiel (Iberian Pyrite Belt, SW Spain)
Barbero L, Olías M, Hierro A, Casas-Ruiz M & Bolívar JP
-
- 3021 Groundwater Flow Impacts on Sediment Biogeochemistry: A Multivariate Statistical Approach
Beer J, Neumann C, Fleckenstein JH, Peiffer S & Blodau C
-
- 3022 Element Behavior in Technogenic Systems and Methods of Mine Waste Treatment
Bogush A, Lazareva E, Voronin V, Galkova O & Ishuk N
-
- 3023 The Effect of Sb(V) on the Transformation of Ferrihydrite to Goethite, Hematite, and Ferrosityte
Bolanz R, Majzlan J & Ackermann S
-
- 3024 An Attempt to Set the Relation between Chemical Composition and Microbiological Activity in AMD Reservoirs in the Łęknica Region (the Muskau Arch, Western Poland)
Bożęcki P & Rzepa G
-
- 3025 Occurrences of Nickel in Different Host Phases of a Laterite Deposit: An Example from Berong, Philippines
Calibo M, Arcilla C, Ong R, Tejada ML & Rafols J
-
- 3026 Kinetic Modeling of Microbial Fe(II) Oxidation, Fe(III) Hydrolysis, and Mineral Precipitation in Acid Waters
Campbell K & Nordstrom DK
-
- 3027 Fe-Rich Stalactites from Libiola Mine: Mineralogical and Geochemical Features
Carbone C, Dinelli E, Marescotti P & Lucchetti G
-
- 3028 Radionuclides in Uranium Milling Tailings and Environment Remediation
Carvalho E, Oliveira J & Malta M
-



- 3029 Characteristic Elements and Lead Isotope of Kaempferia Galangal from Yangchun, Guangdong, China
Chang XY, Fu SM, Chen N, Liu H, Zhang HY, Wu QH, Zhao XF & Zhu BQ
-
- 3030 Natural Water Contamination Under Chromite Deposit Mining
Cherkasova E & Ryzhenko B
-
- 3031 Geochemical Position of Pb, Zn and Cd in Soils Near the Mine/Smelter: Effects of Land Use, Type of Contamination and Distance from Pollution Source
Chrastny V, Vanek A, Komarek M & Novak M
-
- 3032 Studies of Metalotolerant Vegetable Species and their Potential for Biogeochemical Prospecting and Environmental Restoration (Cavalo Old Mining Area, Central Portugal)
Pratas J, Favas P & Conde L
-
- 3033 Solid Speciation of As, Pb and Sb-Rich Anthropogenic Residues
Courtin-Nomade A, Rakotoarisoa O, Bril H, Kunz M & Tamura N
-
- 3034 Rock Alteration and Element Transfer during Formation of U Deposits Related to Na-Metasomatites in the Ukrainian Shield
Emetz A, Cuney M, Mercadier J, Mykhaylov V & Nazarchuk N
-
- 3035 Gaseous Mercury in Soils over Deeply Buried Sulfide Deposits
Barros F, Enzweiler J, Licht O, Castilhos Z & Araujo P
-
- 3036 Building Stone Potential of the Eastern Black Sea Region, NE Turkey
Ersoy H, Yalcinalp B & Arslan M
-
- 3037 Dissolution of Gold in Hydrochloric Acid
Garijo Marcos D & Shikazono N
-
- 3038 Accelerated Carbon Sequestration in Mine Tailings Using Elevated pCO₂
Harrison AL, Power IM & Dipple GM
-
- 3039 Metal Attenuation in Tailings
Hedlund T, Lövgren L & Karlsson T
-
- 3040 Arsenic, Copper, and Zinc Leaching through Preferential Flow in Mining-Impacted Soils
Helmhart M, O'Day P, Garcia-Guinea J, Serrano S & Garrido F
-
- 3041 Geochemical Impact of Seepage from a Canadian Oil Sands Tailings Pond: A Radial Diffusion Cell Study
Holden A, Mayer U & Ulrich A
-

- 3042 A Multi-Isotope Study for Identifying Groundwater Movement Near Disturbed Salt Domes: Case Study Stassfurt, Germany
Stadler S, Holländer H, Sültenfuss J, Jahnke C & Bohn A
-
- 3043 F,Cl-Rich Mineral Assemblages from Burned Spoil-Heaps in the Rosice-Oslavany Coalfield, Czech Republic
Houzar S, Hršelová P, Cempírek J & Sejkora J
-
- 3044 Semi Detail Orientation Survey in Semi Arid Conditions and Mineral Influenced Basin, Case Study in Southeastern Iran
Kazemi Mehrnia A & Rasa I
-
- 3045 Effects of Mining on Groundwater Quality in Gaft Chromite Mine, Iran
Dahrazma B, Kharghani M & Akhiani M
-
- 3046 Factors Affecting the Stability of Slags and Metal Release: The Case Study of Historical Cu Slags from Lower Silesia (SW Poland)
Kierczak J, Pietranik A & Potysz A
-
- 3047 Arsenic Mobility in a Waste Rock Pile at Dlouhá Ves, Czech Republic
Kocourková E, Sracek O, Houzar S, Cempírek J, Losos Z, Filip J & Hršelová P
-
- 3048 Use of Sequential Extraction to Evaluate the Mobility of Heavy Metals in the Huanuni Basin (Bolivia)
Kralj M, Marchesi M, Dinelli E, Soler A, La Fuente S & Coronado F
-
- 3049 Heavy Minerals in the Kafue River Sediments, Copperbelt Mining District, Zambia: Indicators of Industrial Contamination
Kribek B, Veselovsky F, Malec J, Knesl I, Sracek O, Mihaljevic M & Ettler V
-
- 3050 Uranium, Thorium and REE in Macrofungi from Pristine and Polluted Sites
Borovička J, Kubrová J, Rohovec J & Řanda Z
-
- 3051 Risk Assessment Analysis of Kadji-Sai Uranium Tailings Site, Kyrgyzstan
Kulenbekov Z & Merkel B
-
- 3052 Natural Attenuation of Metal Contaminants in a Large Mine-Impacted River: A Long-Term Case Study of Temporal and Spatial Trends
Moore JN & Langner HW
-
- 3053 Variability of the Element Content in Clays of the Poznan Series
Lech D, Bojakowska I, Brański P & Jaroń I
-

- 3054 The Characteristics of Tremolite Asbestos Occurred in Abandoned Asbestos Mines in South Korea
Hwang J, Oh J, Park G & Lee H
-
- 3055 Carbon Dioxide Sequestration within Jinchuan Copper-Nickel Mine Tailing, China
Li Z, Liu L & Ji J
-
- 3056 Distribution and Release of Strontium in Rivers Around Mine: An Indicator for the Oxidation of Sulfide Minerals in Carbonate Area
Li L, Zhang G, Liu H, Xiang M & Wei X
-
- 3057 Geochemical Characteristics of Heavy Metals in Soil Profile from an Old Metalliferous Mining Area in China
Yang L, Li Y & Li H
-
- 3058 Environmental Protection Design of Chinese Highway Tunnel
Lu J-F & Cui G-Y
-
- 3059 Migration of Toxic Elements in Biogeochemistry Chains in Residents and Farmlands Near a Pb-Zn Mine
Luo L, Chu B, Xu T, Wang X, Liu Y, Bo Y & Sun J
-
- 3060 Mine Hydrochemistry Evolution and Water-Inrush Discrimination Based on GIS: A Case in Panyi
Ma L, Wang X & Zhou X
-
- 3061 Thermodynamics of Crystalline iron(III) Arsenates Scorodite, Kaňkite, and Bukovskýite
Majzlan J, Drahotka P, Filippi M, Novak M, Loun J & Grevel K-D
-
- 3062 Chemical Fractionation of Pb and Zn and Determination of Pb Isotopes in Deposited Blast-Furnace Sludge
Mansfeldt T, Schiedung H & Schuth S
-
- 3063 Impact of a Small Downstream Reservoir on Metal Cycling in Acid Mine Drainage Impacted Waters
Rademacher L, Faul K & McDaniel G
-
- 3064 Environmental Impacts of Abandoned VMS Deposits: An Example Case from NE Turkey
Sağlam ES, Akçay M & Çolak DN
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- 3065 Changes in the Fe(II)/Fe(III) Ratio by Bacterial Activity According to Dynamics of an Acid Pit Lake
Santofimia E, López-Pamo E, González-Toril E & Aguilera A
-
- 3066 The Role of Impurity Atoms in Forming Cation Vacancies in the Pyrrhotite
Sazonov A & Onufrienok V
-
- 3067 The Speciation of Au, Ag, Hg, Th and U in Peat Polluted by Acid Mine Drainage
Scherbakova I, Lazareva E, Gustaytis M & Zhmodik S
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- 3069 Discussion on Radioactively Environmental Problems during Phosphorite Mining and Processing in Longmenshan Area
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- 3070 The Impact of Heavy Metals Concentration on Soil Biological Properties in Kintyre Pb Mining Area, Jamaica
Shukurov N, Robinson C, Wright P & Lalor G
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- 3071 Ore Processing and Metallurgy Technologies Applied to Soil Washing: Feasibility Studies in the Linares Area (Andalucía, Spain)
Sierra C, Jiménez-Gámez D, Menéndez-Aguado J, Afif E, Martínez J, Rey J & Rodríguez J
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- 3072 Processes of Heavy Metals Immobilization in Mires
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- 3073 Mobility of Elements from Cesium Formate Residue Emplaced on Pegmatite Tailings
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- 3074 "Hidden" Metals and Minerals: How to Detect Nanocompounds
Udubasa SS, Udubasa G, Constantinescu S & Popescu-Pogrion N
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- 3075 Arsenate Precipitation: An Alternative Fate of As in Soils Contaminated with Mine-Related Wastes
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- 3076 Metal Pollution Assessment In Sediment of the Talar River, N. Iran
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- 3077 Optimizing the Use of Magnetite from an Iron Mine for Reduction of Aqueous Cr(VI)
Villacís - García M & Villalobos M
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- 3078 Physico-Chemical and Mineralogical Transformations of Fluid Fine Tailings (FFT) Associated with the Alberta Oil Sands End Pit Lakes
Walshe G, Chen M, Chi Fru E & Weisener C
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- 3079 Assessment of Heavy Metal Pollutions from Lead-Zinc Mining Activities in the North River Basin, China
Wang J, Liu J, Chen Y-H, Xiao T-F, Wang C-L, Li X-P & Qi J-Y
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- 3080 Geochemical Characteristic Contrast of Heavy Metals between Sulphide Mines and Oxide Mines
Xu Z, Ni S, Teng Y & Zhang C
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- 3081 Environmental Effects of Zarand Coal Mines and Coal Washing Plant in Kerman Province, Southeast Iran
Yaghubpur A & Hakkakzadeh B
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- 3082 Migration and Speciation of Heavy Metals in Stream Sediments of a Mining-Influenced Basin, China
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- 3083 Origin and Fractionation of Heavy Metals of Sediments in the Drinking Water Source of Beijing
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- 3085 Quasi-Simultaneous Observation of Currents, Salinity and Nutrients in the Changjiang Plume on the Tidal Timescale
Gao L & Li D
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- 3086 Oxidation of Fe(II) in Natural Waters at High Nutrient Concentration
González AG, Santana-Casiano JM, Pérez N & González-Dávila M
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- 3087 Ecological Stoichiometry of Plant Nutrients: A Case Study of Degraded Grassland in Western Jilin Province, NE China
Li Y, Wang D, Sun C, Guo D, Yang Y & Shi X
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- 3088 Lithium Isotope Fractionation at the Soil-Plant Interface
Myska O, Magna T, Novak M, Siki J, Zoulkova V & Oulehle F
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- 3089 The Biogeochemistry of Phytosiderophores in the Rhizosphere in Relation to Fe Uptake
Schenkeveld W, Oburger E, Dell'Mour M, Stanetty C, Walter M, Hann S, Puschenreiter M & Krämer S
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- 3090 $\delta^{13}\text{C}$ Evidence of Conodont Evolution as a Response to Bioproduction Perturbations
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17k: Significance of Iodine in Biogeochemistry
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- 3091 Vertical Distribution of Iodine in Pore Water Collected from Japan Sea Sediments: Origin of Iodine-Rich Fluid Associated with Methane Hydrate
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-
- 3092 Analysis of Iodine, Bromine and Chlorine in Marine Sediments and Carbonate Nodules by ICP-MS
Sekiya T, Muramatsu Y, Anzai H, Matsumoto R, Tomaru H & Aizawa S
-
- 3093 Halogen Profiles of Pore Waters from Gas Hydrate Potential Area Offshore of SW Taiwan
Yang TE, Chen H-C, Chen H-W, Hong W-L, Chuang P-C, Chen N-C, Lin S, Chung S-H & Wang Y
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- 3094 Evaluation of Relationships Used to Model Sea Surface Iodide Concentrations
Chance R, Baker A, Carpenter L & Jickells T
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- 3095 Time-Resolved Emission of Iodine from Seaweed Measured with a New On-Line Mass Spectrometric Technique
Kundel M, Thorenz U, Bosle J, Huang R-J & Hoffmann T
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- 3096 Modelling Methyl Halide Emissions from Plants: From Cytosol to the Atmosphere
Parshotam L, Christopoulou D & Redeker K
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- 3097 Volatile Short Lived Iodocarbons from Biotic and Abiotic Sources Affecting Atmospheric Chemistry
Thorenz U, Kundel M, Bosle J & Hoffmann T
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- 3098 Influence of Microbiology and Photochemistry on Iodine Cycling
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- 3099 Modern Natural and Technogenic Iodine Biogeochemical Provinces: Spatial Structure and Health Effects
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- 3100 Catalytic Spectrophotometric Determination of Iodine in Vegetable Matter Digested by Pyrohydrolysis
Liu L, Wu D & Li P
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- 3101 Geochemical Implications of Iodine Distribution in Indian Soils
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- 3102 Transformation of Iodide to Organic Iodine in Soil-Water System
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- 3103 Large-Area Input, Inventories, and Transport of ^{129}I and ^{127}I in Germany
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- 3104 Level of ^{129}I and ^{127}I in Terrestrial Environment of Slovenia: A Two-Year Study of Background Areas
Osterc A & Stibilj V
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- 3105 ^{129}I as an Oceanographic Tracer in the Japan Sea
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- 3106 Medically-Derived ^{131}I as a Tracer in Aquatic Environments
Rose PS, Smith JP, Cochran JK, Aller RC, Swanson RL & Coffin RB
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- 3108 Effect of Lake Sediment Application on Soil Structure Assessed by Means of X-Ray Computed Microtomography
Illerhaus B, Joschko M, Barkusky D, Reinhold J, Gleixner G & Gerlach F
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- 3109 Analysis of Microbial Molecular Ecology Techniques in Constructed Rapid Infiltration System
Jiang X, Ma M-C, Li J & Lu A
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17n: Trace Metal Records in Marine Systems: Processes and Proxies

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- 3110 Seasonal and Tidal Variations of Dissolved Thallium in Coastal Waters
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- 3111 Geochemistry of Nickel Isotopes in Ferromanganese Crusts
Gall L, Williams H, Siebert C & Halliday A
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- 3112 Cu Speciation in Coastal Waters Using a Vibrating Gold Microwire Electrode
Gibbon-Walsh K, Salaun P & van den Berg S
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- 3113 Diagenetic Mobility of Mn and Fe Crusts in Organic-Poor Sediments of Lake Superior
Li J, Crowe S, Brown E, Dittrich M, Miklesh D & Katsev S
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- 3114 Metal-Rich Brown Layers in Arctic Ocean Sediments: Climate Versus Diagenesis
März C, Stratmann A, Eckert S, Schnetger B, Poulton SW & Brumsack H-J
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- 3115 How and Where Redox-Sensitive Trace Metals can Answer the Question Productivity or Ventilation
McKay J, Ivanochko T & Pedersen T
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- 3116 High Resolution Sulfur Isotope Analyses Across Sulphate-Methane Transition Zone
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- 3117 Osmium Isotopes in Manganese Nodules from the Labrador Sea
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- 3118 Origin and Evolution of Ferromanganese Crusts from South Atlantic
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- 3119 Behavior of Biological and Terrigenous Elements during the Late Cenozoic in the Bering Sea: Paleooceanographic Constraints of the IODP Exp. 323 Sediments by High Resolution Non-Destructive TATSCAN Scanning
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- 3120 Geochemical Studies in Piraeus Port Sediments, Greece
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- 3121 Dissolved Reactive Manganese at Pelagic Redoxclines
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- 3122 Mineral Composition of Sediments of the Southern Baltic Sea and their Heavy Metals Content
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- 3123 Ni Speciation and Isotope Fractionation in Marine Ferromanganese Deposits
Sorensen J, Toner B, Gueguen B & Rouxel O
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- 3124 The Comparison of Mo Isotope and Paleo-Oxygenation Parameters in Black Shales from Upper Yangtze Marine Sediments
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Chang S-C, Zhang H, Hemming S, Mesko G & Fang Y
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- 4002 Synthetic 'Age Solutions', Reference Materials for U-Th Geochronology
Condon D, Henderson G, Richards D & Woodhead J
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- 4003 Re-Os Geochronology of Lacustrine Organic-Rich Sedimentary Rocks: Systematics and Implications
Cumming V, Selby D & Lillis P
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- 4004 Intercalibration of Ar-Ar Standards and Samples at LDEO
Hemming S, Tsukui K, Mesko G, Ali G, Cai Y, Adler A, Campbell S, Crapster-Pregont E, Doherty C, Gombiner J, Russell J, Templeton J, Tremblay M & Vankeuren M
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- 4005 A New Highly Effective Silicagel Emitter for Lead Isotopic Measurements
Huyskens M, Iizuka T & Amelin Y
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- 4006 SHRIMP Studies of the Uranium Oxide-Based U/Pb SIMS Calibration
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- 4007 VisualAge: A Novel Approach to U-Pb LA-ICP-MS Geochronology
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- 4008 Combined U-Pb Zircon Dating and Apatite Trace Element Compositions Applied to Paleozoic Tephrochronology
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- 4009 Trace Metal and Mo Isotope Systematics in Petroleum Fluids
Archer C, Elliott T, Van den Boorn S, Avanzinalli R & Van Bergen P
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- 4010 Precise Determination of the Ca Isotopic Compositions by Thermo Ionization Mass Spectrometry
Chen H-W, Chen J-C, Shen JJ-S, Lee D-C & Lee T
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- 4011 Mercury Isotope Fractionation in Layered Roasted Ore Waste
Smith R, Wiederhold J, Jew A, Brown G, Bourdon B & Kretzschmar R

- 4012 Mercury Isotope Fractionation during Bio-Accumulation in Lichens
Estrade N, Carignan J & Cloquet C
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- 4013 Zn Mobility during Oceanic Crust Alteration Inferred by its Isotopic Composition
Cloquet C, Carignan J & France-Lanord C
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- 4014 Is Your Clean Lab Full of Zinc?
Wasylenki L, Wilkes E & Anbar A
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- 4015 On the way to Medical Diagnosis Based on the Isotopic Analysis of Metabolically Relevant Transition Metals
Van Heghe L, Engström E, Rodushkin I, Verstraete A, Van Vlierberghe H, Cloquet C & Vanhaecke F
-
- 4016 A Novel Ion Exchange Separation for Cu Prior to Stable Isotope Analysis by MC-ICPMS
Larner F, Rehkämper M, Coles B, Kreissig K, Weiss D, Sampson B, Unsworth C & Strekopytov S
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- 4017 Cu Isotope Geochemistry in the Unusual Las Cruces Supergene Copper Deposit
Miguélez NG, Mathur R, Tornos F, Velasco F & Videira JC
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- 4018 New Offset $\delta^{11}\text{B}$ Isotope Reference Materials for Geochemical and Environmental Boron Isotope Studies
Rosner M & Vogl J
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18h: Recent Advances in the Application of Calorimetry and Thermal Analysis in the Biogeosciences

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- 4019 Application of DSC and NMR to Study the Soil Organic Matter in the Atacama Desert
Barros N, Feijoo S, Rodríguez JA, Proupin J, Villanueva M & Salgado J
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- 4020 The Effect of Sodium Fluoride on Soil Microbial Activity during Organic Matter Decomposition – A Calorimetric Approach
Dziejowski JE
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- 4021 Application of Thermal Analysis and NMR to Study Soil Organic Matter Biodiversity and Biodegradability in Afforested Lands
Merino A, Pérez-Cruzado C, Salgado J & Barros N
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- 4022 Determining the Influence of the Mineral Matrix on Thermal Analysis of Soil Organic Matter in Bulk Samples
Fernández JM, Rasmussen C & Plante AF
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- 4023 Use of TGA/DSC-IR to Assess the Effect of Cr on Struvite Stability
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- 4024 Energy Content of Soil Organic Matter as Studied by Bomb Calorimetry
Rovira P & Henriques R
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- 4025 Analysis of Thermal Phases in Canaanite Ceramic 'Metallic Ware' Using FT-IR Spectroscopy
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- 4026 The Reaction Products during the Preparation of Granites for the Trace Elements Analysis by ICP-MS
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- 4027 Molecular Modelling of Carbon Dioxide Adsorption in Zeolites
Crabtree J, Parker S & Purton J
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- 4028 Mineral Variation Induced by CO₂ Injection in Saline Aquifer
Du S, Su X-S & Gu X
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- 4029 Modelling of Nanoparticles: Aggregation of Oxides and Hydroxides
Molinari M, Sayle D & Parker S
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- 4030 Modelling the Free Energy of Adsorption of Persistent Organic Pollutants at Clay Mineral-Water Interfaces
Shapley T & Parker S
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- 4031 Experimental Study of Solution-Mineral Interaction in the Qisanba Uranium Deposit, NW-China
Sun Z, Zhou Y & Liu J
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- 4032 Computational Modelling of Water and Amino Acid Adsorption at Corundum Structured Oxide Surfaces
Woronycz L, Shapley T, Arrouvel C, Costa D & Parker S
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- 4033 Reactive Transport Modeling of Carbon Sequestration in Volcanogenic Sandstone Formations
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20a: Unraveling P-T-t Paths: Pseudosections Versus Classical Phase Petrology

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- 4034 Interaction between Metamorphism and Deformation in Eclogite Facies Shear Zones, Lofoten, Norway
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- 4035 Mineral Metastability and Effective Bulk Composition: The Effect of Grain Sizes and Modal Mineral Amounts
Verdecchia SO, Reche J, Baldo EG, Segovia-Diaz E & Martínez FJ
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- 4036 Mineral Assemblages and Metamorphic History of Granulites in the Rychleby Mts., Bohemian Massif
Schlöglová K, Faryad SW, Dolejš D & Kláprová H
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- 4037 Calculated Stability of Osumilite, Sapphirine and Biotite in K_2O -FeO-MgO- Al_2O_3 - SiO_2 - H_2O - TiO_2 -O (KFMASHTO)
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- 4038 ^{40}Ar - ^{39}Ar Geochronology and PT Estimations on Garnet-Hornblende-Muscovite-Plagioclase Schists from the Kheis Belt, South Africa
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- 4039 Multistage Growth of Garnet in UHP Metagranite in the Dabie Orogen
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- 4040 Anisotropy of Magnetic Susceptibility of Triassic Red Beds, Central Portugal
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- 4041 Magnetic Anisotropy of Artificial Deposits
Mashukov A, Mashukova A & Siminchuk S
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20d: Advances in Experimental and Computational Approaches to Mineral-Fluid Interactions

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- 4042 Mechanism of Water-Rock Interaction of Alkaline Leaching Uranium in Shihongtan Deposit
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- 4043 Hydrogen Production from Low Temperature Olivine Alteration
Huang S, Hellevang H & Thorseth IH
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- 4044 Sequestration of Trace Elements during Nucleation and Growth of Serpentine Minerals Under Hydrothermal Conditions
Lafay R, Montes-Hernandez G & Janots E
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- 4045 Experimental Study of Mineral Equilibria in the System $\text{Li}_2\text{O}-\text{K}_2\text{O}-\text{Al}_2\text{O}_3-\text{SiO}_2-\text{HF}-\text{H}_2\text{O}$ (With Topaz) at 400°C and 100 MPa
Setkova T, Shapovalov Y & Balitsky V
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- 4046 Study on Diagenetic Environments of Calcite Veins Hosted in Marine Carbonate Rock in Middle Yangtze Region of Southern China
Wang F, He S & Yang X
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- 4047 The Dissolving and Driving Process in Qarhan Salt Lake, China
Wang W, Li W & Hao A
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- 4048 Zircon Solubility in Na-Si-Al-O-H Fluids by *in situ* SR-XRF Analysis
Wilke M, Schmidt C, Dubrail J, Appel K & Borchert M
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20i: Advanced Study of the Physical Properties of the Mantle Materials, and Applications to the Earth's Structure, Composition and Dynamics

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- 4049 The Elasticity Change of Na-Contained Silica According to the Post-Stishovite Phase Transition in the Earth's Lower Mantle
Asahara Y, Hirose K, Ohishi Y, Hirao N, Ozawa H & Murakami M
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- 4050 High-Pressure Single-Crystal Elasticity of MgSiO_3 and $(\text{Mg,Fe})\text{SiO}_3$ Perovskites at Pressures of the Earth's Lower Mantle
Kurnosov A, Trots D, Boffa Ballaran T, Harries D & Frost D
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- 4051 Focused Ion Beam Cutting of Large Samples for Brillouin Spectroscopy
Marquardt K & Marquardt H
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- 4052 *Ab Initio* Study on Lattice Thermal Conductivity of Minerals
Dekura H, Tsuchiya T & Tsuchiya J
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- 4053 High Pressure Diffraction Tomography Technique for Mineral Physics Research
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- 4054 Pressure-Induced Phase Transitions and H-D Isotope Effects in Portlandite

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- 4055 Geological, Mineralogical and Geochemical Characteristics of Saheb Skarn (West of Iran)

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- 4056 Studying on Tectono-Geochemistry and Rock Ore Specimens Appraisal of Bangwei Copper Mine

Pan P, Han R-S & Chang H

- 4057 Geochemical Constrains on Lower Ordovician Magmatism at the Central Iberian Zone (Central Portugal)

Antunes M, Neiva A & Silva MMV

- 4058 Metamorphic and Geodynamic Evolution of the High-Grade Units of Mundão – Sátão (Northern Portugal)

Castro P, Bento dos Santos T, Meireles C, Sequeira A & Ferreira N

- 4059 Calibration and Applications of the Dolomite Clumped Isotope Thermometer to High Temperatures

Bonifacie M, Ferry J, Horita J, Vasconcelos C, Passey B & Eiler J

- 4060 Geochemistry of S-Type Granitic Rocks from the Valongo Area (Northern Portugal)

Carvalho P, Neiva A, Vinha M & Corfu F

- 4061 Highly Felsic Peraluminous Granitoids in the Borborema Province, Northeastern Brazil

Ferreira V, Sial A, Parada M & Toselli A

- 4062 Analysis of Geochemical “Twins” Al/Ga and Si/Ge in Rock-Forming Silicate Minerals in Granitoides Using LA-ICP-MS

Gardenová N, Kanický V, Breiter K & Vaculovič T

- 4063 Ophiolites of the Kuznetsky Alatau Ridge (SW Siberia) as a Possible Ancient Crust Fragment of the Paleasian Ocean

Gertner I & Krasnova T

- 4064 Mantle Heterogeneities beneath Laguna Timone Volcano, Pali Aike Volcanic Field, Southern Chile

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- 4065 Mineralogical and Geochemical Studies of the Metasomatic Rocks within Gachin, Kalat, Pohl and Hormuz Island Salt Plugs, Iran

Kananian A, Taghipour S, Nemati R & Mackizadeh MA

- 4066 Geological Evolution of Paleotethys: Constraints from Ar-Ar, U-Pb Ages of Gabbro in Jinshajiang Suture Zone
Li J, Chen W, Yong Y, Sun J & Ji H
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- 4067 Rare Earth Element (REE) Quantification in Geochemical Samples: Can We Trust Commercially Available ICP-MS Calibration Solutions?
Marillo Sialer E & Meisel T
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- 4068 The Role of Hydroxyl Group (OH) in Forming Minerals
Onufrienok V, Sazonov A, Terehova A & Nikiforov A
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- 4069 Ti-in-Quartz Thermometry of Siliciclastic Metasedimentary Rocks of the Otago Schist, New Zealand
Palin JM, King CL, Wilson A & Martin CE
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- 4070 Spectroscopic Investigations on Natural Stichtite and Synthetic Hydrotalcites
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- 4071 Zoned Calc-Silicated Boudins in Quartz-Pelitic Metatexitic Rocks, NW Portugal
Ribeiro MDA, Areias MDC, Dória A & Ferreira P
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- 4072 Late-Cretaceous Alkaline Continental Magmatism Associated with Deccan Continental Flood Basalt Sequences of Saurashtra in Western India
Subba Rao DV, Babu EVSSK, Vidyasagar G & Madhukumar B
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- 4073 Basaltic Volcanism in NE-Russia; Evidence for Metasomatized Depleted Mantle Underneath Bering Sea Basalt Province
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- 4074 Proterozoic Magmatism
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- 4076 Research on Pretreatment of Highly Concentrated Dye-Printing Wastewater Using Surplus Sludge Together with Powder Ash
Chen J
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- 4077 Coupled Geochemical and Foraminiferal Response to Environmental Changes during the Deposition of Upper Cretaceous Oil Shale in the Negev, Israel
Illner P, Ashckenazi-Polivoda S, Berner Z, Abramovich S, Almogi-Labin A & Feinstein S

- 4078 Determining the Geographical Origin of Ginseng Using Strontium Isotopes, Multielements, and Metabolite Analysis
Lee A-R, Gautam M, Shin W-J, Choi M-S, Bong Y-S & Lee K-S
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- 4079 MUMIA VERA – Vera Mumia?
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- 4080 Provenance Discrimination of Plants from Three Bedrock Types Using Strontium Isotopes and Chemical Analysis
Song B-R, Gautam M, Shin W-J, Choi M & Lee K-S
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- 4081 Biomineralization and Growth Mechanism of Morphologically Controlled Strontium Carbonate
Sreedhar B, Satya Vani C, Keerthi Devi D & Parthasarathy G
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- 4082 UV-Vis Absorbance, Fluorescence and Concentration of Dissolved Organic Carbon (DOC) of Sea-Surface Microlayer Samples Collected at Okinawa, Japan
Toyama Y, Miyagi Y & Arakaki T
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- 4083 Readily Available Acidity in Schwertmannite
Vithana C, Sullivan L, Bush R & Burton E
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