

Poster Sessions

All contributions (posters and keynote lectures) in the form of an abstract including all authors are available on Zenodo via the GES12 community.

www.zenodo.org/communities/ges12/



Legend



Monday, 10:50 am – 11:40 am

| Poster No. | Title | Presenter |
|------------|---|---------------------|
| 1 | Assessing a temperature reconstruction from lipid biomarkers in an alpine wetland from Sierra Nevada, southern Iberia | Marta Rodrigo-Gámiz |
| 2 | Roles of biogeochemical cycles in Arctic stratospheric ozone depletion | Barbara Sulzberger |
| 3 | First record of a carbon cycle perturbation during the late Barremian: Multiproxy evidence for environmental change (Caravaca, Spain) | Cristina Sequero |
| 4 | Evaluating organic matter sources and diagenetic state in lacustrine sediments | Carsten Schubert |
| 5 | Is a one-point calibration sufficient for accurate $\delta^{18}\text{O}$ and $\delta^{17}\text{O}$ determination of dissolved O_2 in water samples from Lake Lugano? | Sarah Pati |
| 6 | Effect of structural aluminum and aqueous Fe(II) on jarosite stability | Andrew Grigg |
| 7 | Iron mineral transformations in Earth's surface environments: A novel approach for in-situ studies | Joëlle Kubeneck |

| Poster No. | Title | Presenter |
|------------|--|------------------------|
| 8 | Revealing Evaporite Fluid and Deformation Histories Using SIMS Sylvite K-Ca Dating | Johanna Marin Carbonne |
| 9 | Constraining sources and cycling of zinc and its isotopes in a global ocean model | Claudia Eisenring |
| 10 | Understanding stable-Sr isotope fractionation associated with gypsum precipitation | Yana Kirichenko |
| 11 | Iron sulfide mineral formation by ubiquitous Geobacter species | Muammar Mansor |
| 12 | Comparing the geochemical behavior of scandium and rare earth elements in boreal rivers in northern and central Sweden | Franziska Klimpel |

Monday, 3:10 pm – 4:10 pm






| Poster No. | Title | Presenter |
|------------|--|-------------------------|
| 13 | Constraining secondary clay formation during (non-)glacial weathering with Ge/Si ratios and silicon isotopes at Efri Haukadalsa and Hvítá in Iceland | Yi Hou |
| 14 | Lake Effect Precipitation: implications for climate and hydrology | Rama V. Krishnamurty |
| 15 | Ground-truthing the diatom-bound nitrogen isotope paleo-proxy: A progress report | Anja S. Studer |
| 16 | Enhanced petrogenic organic carbon oxidation at glacial terminations? | Thomas Blattmann |
| 17 | Seasonal, weathering and biotic controls of Si cycling in coastal groundwater and estuary in Southern India; insights from a multi-isotope approach | Sarath Pullyottum Kavil |
| 18 | Peat as a potential total alkalinity source to the Baltic Sea through submarine groundwater | Nai-Chen Chen |
| 19 | Phosphorus mobilization and interactions with iron in response to redox dynamics in a drained wetland area | Xingyu Liu |
| 20 | Tin isotopic variations as tracers for anthropogenic pollution in sediments of Lake Zurich, Switzerland | Aurelia Meister |

| Poster No. | Title | Presenter |
|------------|--|-------------------|
| 21 | Dominance of the benthic flux of rare earth element (REE) on continental shelves: implications for oceanic budgets | Kai Deng |
| 22 | Investigation of the Suess Effect in the Southern Indian Ocean over the last two decades (1998 – 2021) | Coraline Leseurre |
| 23 | The Study of Modern Microbial Dolomite-Forming Environments to Interpret Ancient Dolomite Formation: Testing Proxies in Brejo do Espinho, Rio de Janeiro, Brazil | Judith McKenzie |
| 24 | Increased mobilization of toxic elements from permafrost areas in the Eastern Alps | Hoda Moradi |

Monday, 5 pm – 6 pm

| Poster No. | Title | Presenter |
|------------|--|---------------------------------|
| 25 | Atmosphere-Cryosphere coupling processes – a closer look into High Mountain Hydrology | Bibhasvata Dasgupta |
| 26 | High and low latitude controls on Mid-Brunhes Coccolithophore Bloom and implications on ocean carbon cycle | Hongrui Zhang |
| 27 | Sources and sinks of Alpine glacier-derived carbon | Michelle Worek |
| 28 | Locating organic carbon deposition and degradation hotspots on continental margins | Sarah Vilar Paradis |
| 29 | Connecting the spheres: modeling global trace element biogeochemical cycling | Athena Nghiem and Andrea Stenke |
| 30 | Phosphate retention by Fe(III)- and Ca-precipitates formed in aerated groundwater | Ville Nenonen |
| 31 | Atmospheric and surface impacts of solar energetic particles and galactic cosmic rays during geomagnetic field reversals | Marina Friedel |

Legend

| | | | |
|---|---|---|---|
|  Theme 1 |  Theme 2 |  Theme 3 |  Theme 4 |
|  Theme 5 |  Theme 6 |  Theme 7 |  Theme 8 |

| Poster No. | Title | Presenter |
|------------|--|-----------------------|
| 32 | Nutrient, metal and carbon stocks in Port of Rotterdam sediments | Guangnan Wu |
| 33 | Spatio-temporal variability of nitrogen and major ions in a nitrogen-enriched, calcareous fen and contiguous waters | Philip Agreda-zywczuk |
| 34 | Nickel and zinc cycling in the Southern Ocean: insights from isotopes | Nolwenn Lemaitre |
| 35 | Multiproxy evidence for environmental change across the PETM (Alamedilla, S Spain) | Jose Manuel Castro |
| 36 | Widespread formation of intracellular calcium carbonates by the bloom-forming cyanobacterium <i>Microcystis</i> | Juliette Gaëtan |
| 37 | The effects of lithology on the Mg cycle at late stages of critical zone evolution, traced by Mg and Sr isotopes at the Luquillo CZO | Maria Chapela Lara |

Tuesday, 10:10 am – 11:40 am

| Poster No. | Title | Presenter |
|------------|--|-----------------------|
| 38 | Weathering of Paraná-Etendeka basalts as the trigger of climate and environmental change during the Valanginian 'Weissert' Event | Lawrence Percival |
| 39 | High-resolution DOC measurements indicate seasonal differences in the contribution of sub-catchments to DOC export | Katharina Blaurock |
| 40 | Susceptibility of old paddy soils to increasing temperatures related to climate change | José Miguel Ninin |
| 41 | Effect of Fe-rich water treatment residuals on sediment geochemistry and internal P loading of a peaty freshwater system | Melanie Münch |
| 42 | Phosphate release during sulfidation of lepidocrocite: developing a kinetic model for the coupled processes | Ming kai Ma |
| 43 | Intense biogeochemical iron cycling in micropyrrite from Neoproterozoic stromatolites | Marie-Noëlle Decraene |

| Poster No. | Title | Presenter |
|------------|--|--------------------|
| 44 | Spatial distribution of heavy metals in the sediments of pellicular ponds: case of the Thomas pond in Brenne – France | Amina Haouchine |
| 45 | Duckweeds as quasi-hyperaccumulators of rare earths and the bio-unavailability of Gd-based contrast agents | Anna-Lena Zocher |
| 46 | A reconstruction of ocean $\delta^{26}\text{Mg}$ in the Triassic from dolostones and a new model of Earth surface recovery following the End Permian | Duncan Dale |
| 47 | Identifying source and sinks of marine micronutrients: the confounding role of biological variability | Gregory de Souza |
| 48 | What are the physico-chemical conditions necessary for the formation of microbialites? | Jeanne Caumartin |
| 49 | Is anaerobic oxidation of methane explaining the Fe mineralogy of Greifen lake sediments? | Laura Cottet-moine |
| 50 | Meteoric ^{10}Be as a tracer for water infiltration into deep weathering zones along a climate gradient | Laura Krone |

Tuesday, 3:10 pm – 4:10 pm

| Poster No. | Title | Presenter |
|------------|--|-------------------------|
| 51 | Dust emissions response to Holocene climate change, Sonoran Desert, Arizona, USA | Nadya Teutsch |
| 52 | In-situ iron oxyhydroxide transformations induced by redox fluctuations in a rice paddy soil | Katrin Schulz |
| 53 | Catch me if you can – impact of pH on antimony removal during iron(III) precipitation | Laura Wegner |
| 54 | Controls of redox-dependent P cycling in the Benguela Upwelling System | Kristin Anna Ungerhofer |
| 55 | The role of coexisting goethite during ferrihydrite transformation | Luiza Notini |

Legend

| | | | |
|---|---|---|---|
|  Theme 1 |  Theme 2 |  Theme 3 |  Theme 4 |
|  Theme 5 |  Theme 6 |  Theme 7 |  Theme 8 |

| Poster No. | Title | Presenter |
|------------|--|-------------------|
| 56 | Extreme carbon and nitrogen isotopic signatures preserved in 2.7 Ga sedimentary rocks: widespread redox changes or local environmental conditions? New insight from the Carajás basin, Brazil. | Alice Pellerin |
| 57 | Source of heavy metals in agricultural soils – anthropogenic or lithogenic? | Michal Hosek |
| 58 | Unravelling the mysteries of arsenic in the Zenne River (Belgium): sources, distribution, geochemistry, and bioavailability | Vendula Smolikova |
| 59 | Biogeochemical Cycle of Silicon along the South West Indian Ocean GEOTRACES Section (SWINGS) | Damien Cardinal |
| 60 | Marine Silicate Weathering: Evidence from Si isotope | Tzu-Hao Huang |
| 61 | Unravelling early diagenesis: New insight from microscale minor sulfur isotopes | Virgil Pasquier |
| 62 | Brucite biomineralization at the Lost City hydrothermal field, 30°N MAR | Karmina Aquino |
| 63 | Measuring solute and gas fluxes through the Management Induced Reactive Zone (MIRZ) in agriculture and restored prairie soils | Ashlee Dere |

Thursday, 10:10 am – 11:40 am

| Poster No. | Title | Presenter |
|------------|---|-----------------|
| 64 | Environmental reconstructions using low- $\delta^{18}\text{O}$ magmatic-hydrothermal systems from Archean to nowadays | David Zakharov |
| 65 | A novel ostracod record from Lake Simcoe (Canada) tracks inputs of glacial meltwater, relative temperature changes, and sources of inorganic carbon throughout the last ~14 000 years | Rebecca Doyle |
| 66 | Lithological control on carbon fluxes in streams and rivers of the Engadin valley | Olivier Reymond |
| 67 | Diciphering the role of phytoplankton in aquatic mercury biotransformations | Vera Slaveykova |

| Poster No. | Title | Presenter |
|------------|---|-------------------------|
| 68 | 'Trans(formation) of Fe-C aggregates in permafrost systems under redox fluctuations | Ankita Chauhan |
| 69 | Fe(II)-catalyzed ligand-controlled dissolution of Fe(III)(hydr)oxides in light and dark conditions | Stephan Hug |
| 70 | Middle Darriwilian carbon isotope excursion (MDICE) in the Ordos Basin of China and geochemical records for the Great Ordovician Biodiversification Event | Yining Li |
| 71 | Biogeochemical Transformation of Phosphorus in Floodplain Aquifers | Wen Shao |
| 72 | Clay dissolution during early diagenesis? – Insights from neodymium isotopes | Jörg Rickli |
| 73 | Micropyrrite in microbialites record S microbial cycling | Johanna Marin Carbonne |
| 74 | Coccolithophore physiology and molecular mechanism response to Seawater Mg/Ca Ratio | Xiaoxu Ma |
| 75 | Evidence for microbial mineral weathering in semi-arid environments | Christopher Schwerdhelm |

Thursday, 3:10 pm – 4:10 pm

| Poster No. | Title | Presenter |
|------------|---|------------------|
| 76 | The potential of wine residue to induce bionitrification in a groundwater flow constructed wetland | Alex Tiewin Abu |
| 77 | Stable Strontium and Calcium isotopic variability in groundwater from coastal aquifers from the Sundarbans delta, India | Sourav Ganguly |
| 78 | Thallium adsorption onto soil clay minerals | Andreas Voegelin |
| 79 | (Hybrid) N ₂ O production kinetics of ammonia oxidation in the Eastern Pacific | Claudia Frey |
| 80 | Electron-exchange capacity of particulate organic matter and its impact on methane and carbon dioxide formation in northern peatlands | Rob Schmitz |

Legend

| | | | |
|---|---|---|---|
|  Theme 1 |  Theme 2 |  Theme 3 |  Theme 4 |
|  Theme 5 |  Theme 6 |  Theme 7 |  Theme 8 |

| Poster No. | Title | Presenter |
|------------|--|------------------------|
| 81 | Metagenomic insights into microbial communities from an 8,000-year sedimentary sequence at Lake Cadagno | Paula Rodriguez |
| 82 | Oxygen isotope fractionation during enzymatic O ₂ consumption reactions | Carolina De Carvalho |
| 83 | Release and biovolatilisation of antimony from contaminated soils | Adrien Mestrot |
| 84 | Dynamics of Thallium sediment-water exchange across a continental shelf biogeochemical gradient | Kasper Primdahl Olesen |
| 85 | Mapping mineralogical heterogeneities at the nm-scale by scanning electron microscopy in modern stromatolites: assessing the origin of laminations | Juliette Debrie |
| 86 | Microbial biomineralization and detoxification of toxic compounds by a metal-resistant bacterium, <i>Cupriavidus campinensis</i> S14E4C | Gorkhmaz Abbaszade |
| 87 | Reactivity of manganese oxides in organo-mineral-microbe systems and implications for soil carbon dynamics | Isabella Olga Zelano |
| 88 | The influence of black shale weathering on riverine Mo isotopes | Quentin Charbonnier |

| Poster No. | Title | Presenter |
|------------|--|----------------------------|
| 89 | What do the combination of Mg/Ca, clumped ($\Delta 47$) and conventional ($d^{18}O$) stable isotope in planktonic foraminifera tell us about the mid-Pleistocene transition? | Marion Peral |
| 90 | Does Plant Growth accelerate Rock Weathering? | Friedhelm von Blanckenburg |
| 91 | Oxygenic denitrification/anammox – A new pathway in the lacustrine nitrogen cycle | Ittai Gavrieli |

| Poster No. | Title | Presenter |
|------------|--|--------------------------------|
| 92 | Export of DOC from riparian soils to streams – a coupled hydrological-redoxchemical process chain | Stefan Peiffer |
| 93 | Tagging Quinones in Complex Environmental Media (Aqueous Biochars) with Cysteine and Cysteine-Containing Peptides | Yu Yang |
| 94 | In situ Fe isotope compositions of Archean to Paleoproterozoic sedimentary pyrite: local versus global processes | Juliette Dupeyron |
| 95 | Decreasing arsenic and cadmium in rice: Interactions of soil sulfate amendment, liming, and soil texture under intermittent flooding | Xu Fang |
| 96 | Assessment of the toxic potency and mutagenicity of soils from waste dumping sites in Wallonia, Belgium | Besarta Matranxhi |
| 97 | Hg Methylation in Iron-rich Soils from Iceland with Contrasting Organic Matter Content | Maureen Le Bars |
| 98 | Modeling the early diagenesis of neodymium and its radiogenic isotope | Jianghui Du |
| 99 | Analytical advancements to improve the understanding of the marine biogeochemical selenium cycle | Esther Breuning |
| 100 | Algae-Bacteria interactions in the Marine Selenium Cycle – from Selenometabolites to Volatile Emissions | Pauline Béziat and Zoé Le Bras |
| 101 | Water flowpath and transit time controls on silicate weathering: field, experimental, and modeling constraints in Capesterre River catchment | Jotis Baronas |

Legend

Theme 1

Theme 2

Theme 3

Theme 4

Theme 5

Theme 6

Theme 7

Theme 8