



GEOCHIMICA ET COSMOCHIMICA ACTA

Journal of The Geochemical Society and The Meteoritical Society

AUTHOR INFORMATION PACK

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ISSN: 0016-7037

DESCRIPTION

Geochimica et Cosmochimica Acta publishes research papers in a wide range of subjects in **terrestrial geochemistry, meteoritics, and planetary geochemistry**. The scope of the journal includes:

- 1). Physical chemistry of gases, aqueous solutions, glasses, and crystalline solids
- 2). Igneous and metamorphic petrology
- 3). Chemical processes in the atmosphere, hydrosphere, biosphere, and lithosphere of the Earth
- 4). Organic geochemistry
- 5). Isotope geochemistry
- 6). Meteoritics and meteorite impacts
- 7). Lunar science; and
- 8). Planetary geochemistry.

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Inorganic chemical processes relevant to low temperature Geochemistry and Atmospheric Chemistry; Mineral/gas and mineral/water interfaces; Vibration spectroscopy, X-ray photoelectron spectroscopy, electrochemistry, thermodynamic and molecular modeling."

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Nicolas Dauphas, University of Chicago, Chicago, USA
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 Mantle Geochemistry, Igneous Processes, Intraplate Magmatism, Lithospheric Mantle, Layered Intrusions, Cosmochemistry, Planetary Accretion and Differentiation, Siderophile Elements, Volatile Elements, Radiogenic and Stable Isotopes
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 Mineral-microbe interactions, Bioremediation, Life in extreme environments, Biogeochemical cycling of elements, Geomicrobiology, Aqueous geochemistry
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James Farquhar, University of Maryland, College Park, USA
Sarah J. Feakins, University of Southern California, Los Angeles, USA
Jérôme Gaillardet, Institut de Physique du Globe de Paris, Paris, France
 Isotope geochemistry, Critical Zone, Weathering and Erosion, River Geochemistry, Paleo pH Proxies, Global Cycles
Chris Hall, University of Michigan, Ann Arbor, USA
Chris Herd, University of Alberta, Edmonton, Canada
 Shergottites, Mars, meteorites, oxygen fugacity, trace element and radiogenic isotope geochemistry, igneous and experimental petrology, curation and handling of planetary materials, organic geochemistry, carbonaceous chondrites
Gregory Herzog, Rutgers University, Piscataway, New Jersey, USA
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Shichun Huang, University of Nevada at Las Vegas, Las Vegas, USA
Munir Humayun, Florida State University, Tallahassee, USA
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Alexander Krot, University of Hawaii at Mānoa, Honolulu, HI, USA
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 Sedimentary Geochemistry, Biogeochemical Cycles, Astrobiology
Thomas M. Marchitto, Jr., University of Colorado Boulder, Boulder, USA
Horst Marschall, Goethe University, Frankfurt, Germany
Frank McDermott, University College Dublin, Dublin, Ireland
Anders Meibom, École Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland
Jack Middelburg, Utrecht University, Utrecht, Netherlands
John Moreau, Melbourne University, Parkville, Australia
 geomicrobiology, biogeochemistry, aqueous geochemistry, environmental geochemistry, environmental microbiology, biomineralization, biosignatures, mineralogy, astrobiology, planetary geology
Frédéric Moynier, Institut de Physique du Globe de Paris, France
Alfonso Mucci, McGill University, Montreal, Canada
Alexander Nemchin, Curtin University, Perth, Australia
Martin Novak, Czech Geological Survey, Prague, Czech Republic
Dimitri Papanastassiou, NASA Jet Propulsion Laboratory, Pasadena, USA
Caroline Peacock, University of Leeds, Leeds, UK
 low temperature aqueous geochemistry, mineral-water interface geochemistry, application of synchrotron techniques to understand environmental systems particularly x-ray fluorescence and x-ray absorption spectroscopy, thermodynamic surface complexation modelling, heavy metal stable isotope fractionation.
Ann Pearson, Harvard University, Cambridge, USA
Gleb Pokrovski, Université Paul Sabatier (Toulouse III), Toulouse, France

Experimental geochemistry both at low and high temperatures, geochemistry of magmatic-hydrothermal metal deposits, thermodynamic modeling of geological fluids and water-mineral interactions, speciation and partitioning of chemical elements and their isotopes in mineral-fluid-vapor-melt systems, and in-situ spectroscopic approaches (in particular X-ray absorption and fluorescence, and Raman spectroscopy).

Eric Quirico, Université Joseph Fourier (Grenoble I), Grenoble Cedex 9, France

Cosmochemistry, Meteorites, Interplanetary Dusts, Comets, Asteroids, Organic Matter, Ices, Raman Spectroscopy, Infrared Spectroscopy

Mark Rehkemper, Imperial College London, London, UK

Edward Ripley, Indiana University, Bloomington, USA

Claire Rollion-Bard, Institut de Physique du Globe de Paris, Paris, France

Sara Russell, Natural History Museum, London, UK

Edwin Schauble, University of California at Los Angeles (UCLA), Los Angeles, USA

Silke Severmann, Rutgers University, New Brunswick, USA

Timothy Shaw, University of South Carolina, Columbia, USA

David Shuster, University of California at Berkeley, Berkeley, USA

Daniel Sinclair, Victoria University of Wellington, Wellington, New Zealand

Paleoceanographic reconstruction using tropical corals and deep sea corals, Paleoclimate reconstruction using speleothems, Pacific oceanography and climate over the last 100,000 years, Biomineralization, especially of corals, Carbonate geochemistry: trace element and isotope systematics, geochemical modelling, Mass spectrometry method development: ICP-MS, especially laser-ablation

Orit Sivan, Ben-Gurion University of the Negev, Be'er Sheva, Israel

Methane, AOM, stable isotope, redox, porewater, groundwater, interface, early diagenesis

Carl Steefel, Lawrence Berkeley National Laboratory, Berkeley, USA

Brian Stewart, University of Pittsburgh, Pittsburgh, USA

Claudine Stirling, University of Otago, Dunedin, New Zealand

Andreas Stracke, Westfälische Wilhelms-Universität Münster, Munster, Germany

Weidong Sun, Chinese Academy of Sciences (CAS), Guangzhou, China

Fang-Zhen Teng, University of Washington, Seattle, USA

Isotope geochemistry of metals (e.g., Li, Mg, Fe, Cu, Zn etc.); composition and evolution of the continental crust and mantle; global elemental cycling; origin of the early solar system; MC-ICPMS

Mike Toplis, Observatoire Midi-Pyrenees, Toulouse, France

Christophe Tournassat, BRGM, Orléans, France

Tina Van de Flierdt, Imperial College London, UK

Wim van Westrenen, Vrije Universiteit Amsterdam, Amsterdam, Netherlands

Mario Villalobos, Universidad Nacional Autónoma de México (UNAM), Coyoacan, Mexico

Environmental geochemistry; surface chemistry of environmental colloids and nanoparticles; surface complexation modeling; mineral-water interface geochemistry; environmental molecular geochemistry; soil chemistry; water chemistry

Thomas Wagner, Heriot-Watt University, Edinburgh, UK

Global biogeochemical cycles; Greenhouse oceans; Late Quaternary climate; Tropical rainforests; Atmosphere-Land-ocean coupling; Paleoclimatology/Paleoceanography; Black shale; Unconventional petroleum resources; Terrestrial organic carbon; Organic geochemistry;

Richard Walker, University of Maryland, College Park, USA

Dominik Weiss, Imperial College London, London, UK

Josef Werne, University of Pittsburgh, Pittsburgh, USA

Stefan Weyer, Gottfried Wilhelm Leibniz Universität Hannover, Hannover, Germany

Jan Wiederhold, University of Vienna, Vienna, Austria

Qingzhu Yin, University of California, Davis, Davis, USA

Cosmochemistry, Meteoritics, Early Solar System, Planet Formation, Core Formation, Isotope Geochemistry, Nucleosynthesis, Isotope Anomalies, Mass Independent Isotope Fractionation, Extinct Radioactivity.

Chen Zhu, Indiana University, Bloomington, USA

GUIDE FOR AUTHORS

Geochimica et Cosmochimica Acta (GCA) publishes research papers in a wide range of subjects in **terrestrial geochemistry**, **meteoritics**, and **planetary geochemistry**. GCA aims to present studies of fundamental significance and broad relevance for understanding geochemical systems, mechanisms, and processes, and of interest to a broad and diverse audience of geochemists. The scope of the journal includes:

1. Physical chemistry of gases, aqueous solutions, glasses, and crystalline solids
2. Igneous and metamorphic petrology
3. Chemical processes in the atmosphere, hydrosphere, biosphere, and lithosphere of the Earth
4. Organic geochemistry
5. Isotope geochemistry
6. Meteoritics and meteorite impacts
7. Lunar science; and
8. Planetary geochemistry.

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Nixon R. M. (1975) *I Am Not a Crook*. Vantage Press, New York.

Butcher N. D., Baker R. B., Waxwright C. M., Tinker, Jr., D. R. C. and Taylor G. J. (1998) Sm-Nd, Rb-Sr, U-Th-Pb, Re-Os and K-Ar isotope systematics in 762 subangular pebbles from the bed of Oompa-Loompa Creek, Glacier National Park. In *Mesozoic Volcanic Activity in North America* (eds. P. M. Thieux and F. T. Frough). Cambridge Univ. Press, Cambridge. pp. 417-496.

Gibbs J. W. and Helmholtz H. L. (1997) Thermodynamic properties of triskadeka-biphenyl complexes of Fe⁺⁺ and Zn⁺⁺ in the range 80o-85oC at pH 4.5 in aqueous solution from the ice in which ALH 84001 was recovered. *Lunar Planet. Sci. XXVIII*. Lunar Planet. Inst., Houston. #7654(abstr.).

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