



GEOCHIMICA ET COSMOCHIMICA ACTA

Journal of The Geochemical Society and The Meteoritical Society

AUTHOR INFORMATION PACK

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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:

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- 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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Isotope physiology and paleodiets of mammals, Geology of Old World paleoanthropologic sites, Stable isotopes as climatological indicators, Environmental geochemistry, Surface exposure dating using cosmogenic isotopes

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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

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Metamorphic processes, growth and dissolution kinetics, pattern formation, fluid migration, travertines, fracturing and porosity formation/evolution coupled to reactions, spheroidal weathering.

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Isotope geochemistry and historical geobiology

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Paleoclimate, geomicrobiology, preservation of organic matter

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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.

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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).

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cosmochemistry - meteorites - interplanetary dusts - comets - asteroids - organic matter - ices - Raman spectroscopy - Infrared spectroscopy

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

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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

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

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Bells J. D. and Whistles H. P. (1995) Asperity-limited tectonic lithofacies juxtaposition in the northeastern South-Central Mountains, West Virginia. *J. Geophys. Res.* **447**, 7767-7776.

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. Froug). 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.).

Harvard J. (1787) Investigations on why the ground in New England is so rocky. Ph. D. thesis, Yale Univ.

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