

Special Issue on  
**Infiltration of Meteoric Fluids in Orogenic Systems**

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## CALL FOR PAPERS

The infiltration of meteoric fluids has been identified at different levels of the continental crust from the cool upper crust down to the hot middle crust through direct sampling and geochemical characterization of groundwater and geothermal fields or indirectly by identifying specific alterations in exhumed rocks. One of the key questions that remain is to understand how the surface fluids penetrate the crust to such a depth. The main hypothesis is that downward flow of surface fluids is triggered by the interplay among surface topography, orographic rainfall, existence of permeable pathways (faults and fractures), and a deep-seated thermal anomaly which enhances (or sustains) buoyancy-driven fluid convection. This special issue aims at focusing attention on the causes and consequences of meteoric infiltration in the continental crust, with special emphasis on orogenic systems.

Potential topics include but are not limited to the following:

- ▶ Role of continental-scale structures in channeling meteoric water infiltration
- ▶ Role of the emplacement of magmatic rocks in enhancing meteoric infiltration
- ▶ Role of the exhumation of metamorphic rocks in enhancing meteoric infiltration
- ▶ Capability of meteoric fluids in transporting elements in the crust
- ▶ Metallogenic consequences of the mixing between surficial and deep crustal fluids
- ▶ Relationships between altitude and the geochemical signatures of meteoric waters, streams, and resurgences
- ▶ Usefulness of these signatures in reconstructing paleotopographies and paleoclimates
- ▶ Spatial and temporal scales of meteoric circulations in mountain belts
- ▶ Measurement and/or modeling of these scales

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/geofluids/imfo/>.

**Lead Guest Editor**

Philippe Boulvais, Geosciences Rennes,  
Rennes, France

*philippe.boulvais@univ-rennes1.fr*

**Guest Editors**

Aude Gébelin, University of Plymouth,  
Plymouth, UK

*aude.gebelin@plymouth.ac.uk*

Stéphane Bonnet, University of  
Toulouse, Toulouse, France

*stephane.bonnet@get.omp.eu*

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