



Isotope Hydrological Tools to Understand Groundwater-Surfacewater Interactions

Guest Editor:

Dr. Anna-Kaisa Ronkanen

Water Resources and
Environmental Engineering,
University of Oulu, P.O. Box 4300,
90014 Oulu, Finland

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Message from the Guest Editor

This Special Issues of Geosciences aims to provide valuable insight into isotopes and environmental tracer tools, techniques and applications to study catchment scale hydrology by gathering high-quality original research articles, reviews and technical notes.

Due to continuous deterioration of water quality in surface and groundwater storages and increase in different type of pollution problems, there are clear needs to understand how human activities and different catchment properties create a continuum and ends up to specific problems in water quality or amount of water at catchment scale. Isotopes and other environmental tracers offer valuable and environmentally friendly tools to identify water origin, water flow processes and mixing of different water fractions not only at catchments scale but also globally. These tools are quite much used for decades but since more recently the analysis techniques have been developed resulting that the smaller concentrations can be detectable. Groundwater-surface water interactions have dynamic characteristics (producing seasonal and annual fluctuation), which is still quite poorly understood.





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Editor-in-Chief

Prof. Dr. Jesus Martinez-Frias

Instituto de Geociencias, IGEO
(CSIC-UCM), C/ Del Doctor Severo
Ochoa 7, Edificio
Entrepabellones 7 y 8, 28040
Madrid, Spain

Message from the Editor-in-Chief

Understanding the Earth's origin and its bio-geological evolution, the multiple implications of the geosciences (as a coherent set of interconnected disciplines), and the sociocultural and ethical interdisciplinary approaches, will be crucial for a better understanding of Nature, and also for undertaking scientifically based political decisions.

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Geosciences Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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