Special Issue

Advances in Isotope Tracer Techniques for Tracing and Quantifying Hydrological Processes

Message from the Guest Editors

The stable isotopes of water (18O and 2H) are valuable tools in hydrological investigations as they are incorporated within the water molecule and undergo systematic fractionations as they move through the water cycle. They can be used to label water sources and provide information on surface/groundwater interaction, residence times, flowpaths, and evaporation fluxes. When used in combination with solute isotope tracers (e.g. C, N, Sr, S and Cl) geochemical processes that are linked to the hydrological cycle can also be investigated.

Recent analytical and modelling advances such as the improved ability to measure noble gases, CFCs and the development of isotope-equipped hydrological models have expanded the isotope tracer toolkit available to hydrologists and hydrogeologists, providing the opportunity to develop new techniques that can be used to quantify and trace components of the hydrological cycle.

This Special Issue will aim to show the advances in isotope tracer techniques used to trace and quantify components of the hydrological cycle.

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In the context of global changes, the sustainable management of water cycles, going from global and regional water cycles to urban, industrial and agricultural water cycles, plays a very important role on the water resources and on their relationships with food, energy, biodiversity, ecosystem functioning and human health. *Water* invites authors to provide innovative original full articles, critical reviews and timely short communications and to propose special issues devoted to new technological and scientific domains and to interdisciplinary approaches of the water cycles. We ensure a critical review process and a quick turnaround between submission and final decision.

Editor-in-Chief

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