

Special Issue

Applications of Stable Isotopes in Understanding Hydrological and Hydrochemical Processes

Message from the Guest Editors

Stable isotopes of elements like hydrogen, oxygen, carbon, and nitrogen provide valuable insights into the mechanisms governing water cycle dynamics, solute transport, and biogeochemical interactions.

Researchers can unravel complex processes, such as source identification, flow pathways, mixing processes, and evaporation, as powerful tracers under varying natural and anthropogenic influences. This Special Issue aims to showcase advancements in isotopic techniques and their integration with hydrochemical modeling, offering novel perspectives to address emerging challenges in water resource management and ecosystem sustainability. Topics of interest include, but are not limited to: (1) Isotopic tracing of water sources, mixing, and flow pathways; (2) biogeochemical processes in surface and groundwater systems; (3) impact of land use and climate change on isotopic signals; (4) application of dual-isotope systems in hydrochemistry; (5) advances in isotopic analysis techniques and modeling; and (6) interdisciplinary studies integrating isotopic and hydrochemical datasets.

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Deadline for manuscript submissions

10 March 2026



Water

an Open Access Journal
by MDPI

Impact Factor 3.0
CiteScore 6.0



mdpi.com/si/227690

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Message from the Editor-in-Chief

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

Dr. Jean-Luc PROBST

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