Special Issue

Water Residence Times by Isotopic Techniques

Message from the Guest Editors

In hydrological and hydrogeological studies worldwide, mean residence time and residence time distribution assessment have demonstrated to be a significant tool for unravelling flow-paths at both catchments and aquifers scales. With reference to both surficial and groundwater bodies, MRT and RTD allow better understanding the mechanisms of recharge, exchange, and transfers of water molecules within the water cycle. This information is useful for pollution vulnerability and risk planning. The purpose of this Special Issue is therefore to collect a current picture of the use of such tools in hydrological and hydrogeological studies together with uncertainties and problems that may be related. Manuscripts regarding all recent advances in the characterization of RT, including new sampling strategies (e.g., high-frequency isotope monitoring) or modeling approaches to capture RTD will be welcome. Some examples of challenging questions are: -How can global climate change affect MRT and RTD? -How can RT knowledge help water quality management? -How can we reduce uncertainties (e.g., multitracing)? -How can groundwater–surface water interactions alter RT in both water bodies?

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Deadline for manuscript submissions

closed (10 February 2022)

Water

an Open Access Journal by MDPI

Impact Factor 3.0
CiteScore 6.0

mdpi.com/si/64455

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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

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