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## DOM Distribution and Nutrient Dynamics in Freshwater Systems

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### Message from the Guest Editor

This Special Issue focuses on dissolved organic matter (DOM) plays a significant role in shaping biogeochemical processes and nutrient dynamics in freshwater ecosystems. DOM comprises a complex mixture of organic compounds derived from a variety of sources, including plant and animal wastes, microbial activities, and terrestrial runoff. Its distribution and interactions with nutrient cycles have profound implications for water quality, ecosystem functioning, and carbon cycling.

DOM plays an important role in nutrient dynamics by mediating the availability, transport, and cycling of nutrients in freshwater ecosystems. It acts as both a source and sink for nutrients such as nitrogen (N) and phosphorus (P). DOM can bind nutrients, making them less accessible to primary producers, or serve as a substrate for microbial degradation, releasing nutrients to the water column.

This Special Issue summarises new insights into the DOM dynamic interaction and the implications for nutrient limitation, algal growth, and overall ecosystem productivity.



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**Special** Issue



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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.

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