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Liquid Water Structure and Dynamics

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Deadline for manuscript submissions:
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Message from the Guest Editor

Water is the most important chemical substance on Earth. It represents the best explored and least understood substances, as its so-called anomalies are famous. Attempts have been made to measure or calculate the structure of water beyond the H_2O molecule. It is a difficult task due to the hydrogen bond network which can be formed by two or more water molecules. The hydrogen bonds in liquid water are a primarily electrostatic attraction between one hydrogen atom covalently bound to the more electronegative oxygen, and the oxygen atom of a neighboring water molecule bearing a lone pair of electrons acting as the hydrogen-bond acceptor. Bonds are characterized by a binding energy of 21 kJ/mol, depending on the type of strength of interaction and the local geometry, and a lifetime in the picosecond range. The structure and dynamics of network is responsible for water's physical and chemical properties.

We welcome experimental or theoretical work that provides new advances in the understanding of the molecular structure and dynamics of liquid water and the hydrogen bond network. Special emphasis will be given to innovative methodologies, novel experimental approaches

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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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