

Abstract template:

**Title**

Vibrational Spectroscopic Studies of Aqueous Interfaces: Salts, Acids, Base, and Nanodrops

**Reference**

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**Abstract**

The ubiquitous nature of water makes the study of water both practical and relevant. Yet in this advanced technological age, many important, fundamental questions remain unanswered about water and the aqueous interface. As we learn more about water, more questions arise. The fact that water molecules strongly hydrogen bond to one another explains, at the most basic level, the inherently high boiling point of water. Moreover, the surface structure of water, directly related to the hydrogen bonding between water molecules, is unique. It is the nature of the hydrogen bond that makes understanding water and aqueous interfaces such a challenge: hydrogen bonding is dynamic and is a strong intermolecular force, yet it is considerably weaker than a covalent bond. Due to the experimental and theoretical challenges presented by the hydrogen bond, the scientific community is far from a full understanding of bulk and surface water.

In this review, we focus on spectroscopic studies of surface water structure as it is affected by salts, acids, and ammonia. Cluster studies contribute to understanding the aqueous interface, and these are discussed along with studies of aqueous nanodrops.