Hydration Dynamics Seen from the Inside: Possibilities of a Molecular THz Spectrometer

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Abstract:

The terahertz (THz) absorption bands of molecular hydration layers are generally swamped by absorption from bulk water. This limitation can be overcome by using a molecular probe. By time-resolving the fluorescence shift of the probe, a local dielectric complex permittivity spectrum is obtained. For ionic liquids, it is then possible to determine the conductivity without electrode