



2008 International Solvay Chair in Chemistry  
Inaugural Lecture - Solvay Colloquium

**“WATER MUSIC: THE LATEST WORD ON THE MOST  
IMPORTANT SUBSTANCE IN THE UNIVERSE”**

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**Abstract**

“As the third most abundant molecule in the Universe, the “universal solvent” in chemistry, and the basis of all life as we know it, water is a uniquely important substance. Nevertheless, our understanding of its fundamental nature remains incomplete, despite enormous efforts. This lecture will review recent advances in this understanding, facilitated by new developments in both experiment and theory. These include laser spectroscopy of water clusters, X-ray and Raman spectroscopy of liquid microjets, and laser spectroscopy of aqueous electrolyte surfaces. Currently debated subjects include the roles of water clusters in the atmosphere, the mechanism of aqueous evaporation, the nature of hydrogen bonding in liquid water, the effects of salts on this hydrogen bond structure (“Hofmeister effects”), the hydration structures of fundamental ions, the surface behavior of aqueous ions, and the pH of the liquid water surface.”

**Tuesday 22 April 2008 at 16h00**

*COFFEE AND TEA WILL BE SERVED AT 15H45 IN FRONT OF THE SOLVAY ROOM*

**« SALLE SOLVAY » - SOLVAY ROOM**

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