**A POLARON VIEW OF PROTON MOBILITY IN WATER**

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The diffusion constant of protons in water is about five times that of water molecules. In 1806, Grotthuss suggested that this increase was associated with proton hopping between water molecules (hydronium) without motion of the water molecules. In this talk, I will describe the Grotthuss mechanism in the context of the HP1 model for hydrogen bond networks.

1. D. W. Hone and P. A. Pincus “A Lattice Model of Hydrophobic Interactions”, EPL **76**, 952-958 (2006)