Supplementary information

Fig. S1  Radial distribution functions for the F-O pairs confined in the different CNTs: (a) F-O_H, (b) F-O_W. The capital letter F represents fluorine, O corresponds to oxygen and the subscripts W and H represent water and hydronium.

Fig. S2  Radial distribution functions for the F-H pairs confined in the different CNTs: (a) F-H_H, (b) F-H_W. The capital H corresponds to hydrogen.
Fig. S3  Normalized statistical distributions of the pair-potential energy $E_{ij}$ for the fluorine-hydronium (a) and fluorine-water (b) pairs that classified as hydrogen bonded by the geometric criterion. $h(E_{ij})$ denotes the probability of molecular pairs of pair-potential energy $E_{ij}$. 