Electronic Supplementary Information (ESI) for

Impact of Surface Wettability on Dynamics of Supercooled Water Confined in Nitrogen-Doped Ordered Mesoporous Carbon

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Figure S1. Adsorption-desorption isotherms of OMC, OMC-1.9N and OMC-4.1N. The isotherms of OMC-1.9N and OMC-4.1N has been vertically offset by 100 cm$^3$/g and 150 cm$^3$/g.

Figure S2. TEM images of (A) OMC; (B) OMC-1.9N and (C) OMC-4.1N.
Figure S3. MSD results for cooling rate of 0.8K/min from room temperature to 4K and then reheating at 2K/min. Similar trends in sample, with the more hydrophobic 0N sample showing the most mobility. The legend denotes whether the MSD measured was on the cooling trend (C) or heating trend (H) for the 0%N, 1.9%N, and 4.1%N.

Figure S4. Linear regression of $1/\Gamma$ as a function of $1/Q^2$ for different OMCs as an alternative route to determine the diffusivity of water and the time between jumps. Error bars throughout the text represent one standard deviation.

Figure S5. $\tau_o$ as a function of 1000/T for different OMCs. This does not appear to be Arrhenius.
Figure S6. Elastic incoherent structure factor (EISF) calculated from Lorentzian fits of full energy window scans. Decreasing values indicate a decrease in the elastic scattering fraction of the sample. This suggests at all temperatures, the more hydrophobic OMC-0N has the largest dynamic fraction of protons, while the OMC-4.1N has the lowest fraction. This would indicate, that although the dynamics of the water remains quite similar from the FWHM trends, the fraction of water participating in the motion as measured by HFBS decreases with increasing hydrophilicity.