Electronic Supplementary Material (ESI) for Faraday Discussions.

Supplementary Information

Are SAXS and SANS suitable to extract information on the role of water for electric double-layer formation at the carbon - aqueous electrolyte interface?

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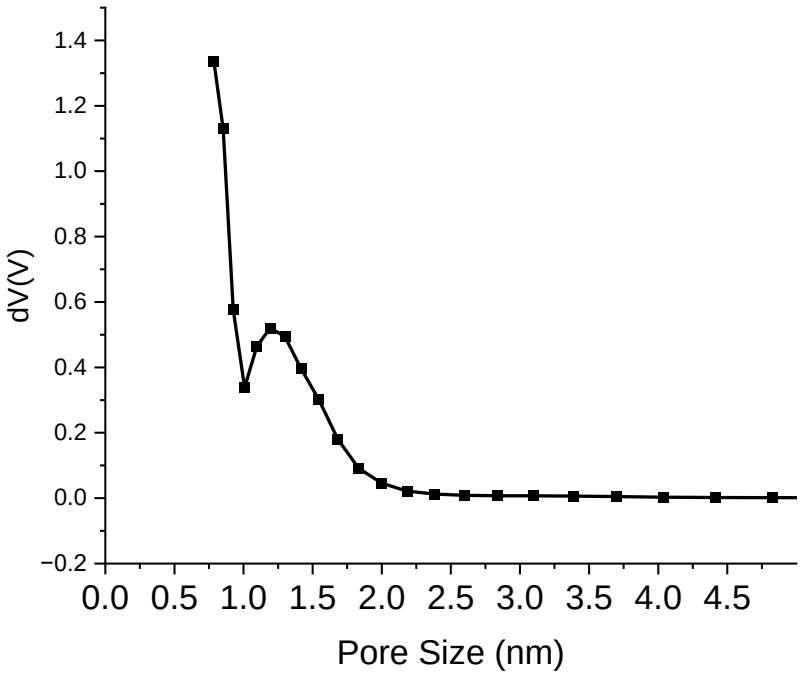
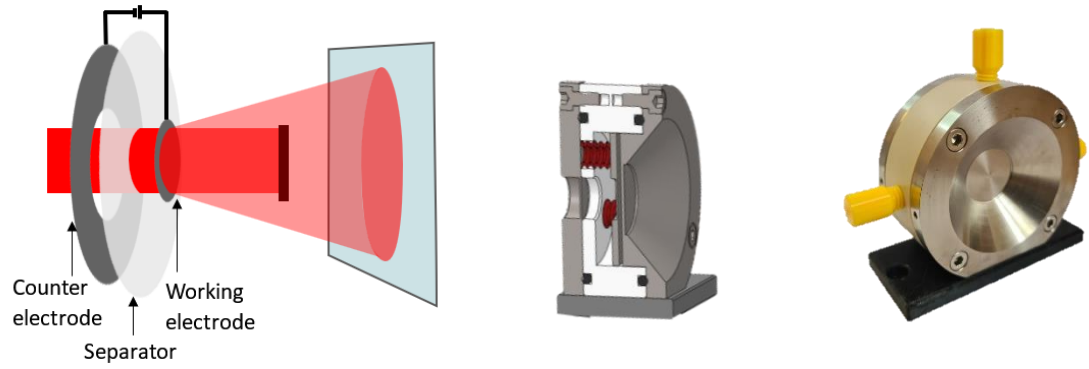
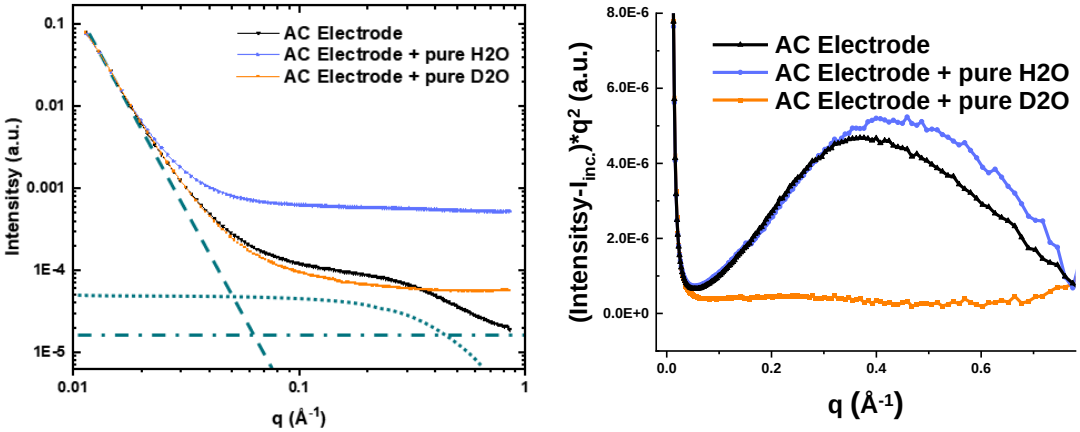


Supplementary 1: Pore size distribution of the used MSP-20X activated carbon electrode and 10 wt.% PTFE binder. Obtained from gas sorption analysis using N_2 at 77K and a slit pore QSDFT equilibrium kernel



Supplementary 2: Ring electrode set up and a technical sketch and photograph of the used electrochemical cell for SANS.



Supplementary 3: Left: as measured SANS signal of the "empty" carbon electrode and infiltrated with pure H_2O and D_2O (no ions) and right: Kratky plot of the scattering data after subtracting incoherent contributions showing a change in scattering shape.