

Supplementary material:**Table S1:** Absolute MP2/aug-cc-pVTZ energies of investigated systems (in atomic units).

cluster	n		
	1	2	3
Cl ⁻ (H ₂ O) _n	-536.134	-612.488	-688.843
F ⁻ (H ₂ O) _n	-176.119	-252.482	-328.840
Na ⁺ (H ₂ O) _n	-238.041	-314.402	-390.758
Cl ⁻ (CH ₃ OH) _n	-575.337	-690.892	-806.444
F ⁻ (CH ₃ OH) _n	-215.323	-330.888	-446.446
Na ⁺ (CH ₃ OH) _n	-277.244	-392.807	-508.364

Table S2: Absolute CCSD(T)/aug-cc-pVDZ energies of investigated systems (in atomic units).

cluster	n		
	1	2	3
Cl ⁻ (H ₂ O) _n	-536.035	-612.334	-688.634
F ⁻ (H ₂ O) _n	-175.985	-252.294	-328.599
Na ⁺ (H ₂ O) _n	-237.980	-314.286	-390.587
Cl ⁻ (CH ₃ OH) _n	-575.219	-690.702	-806.181
F ⁻ (CH ₃ OH) _n	-215.171	-330.665	-446.152
Na ⁺ (CH ₃ OH) _n	-277.165	-392.656	-508.138