Highly Selective Detection of Silver in the Low ppt Range with Ion-Selective Electrodes Based on Ionophore-Doped Fluorous Membranes

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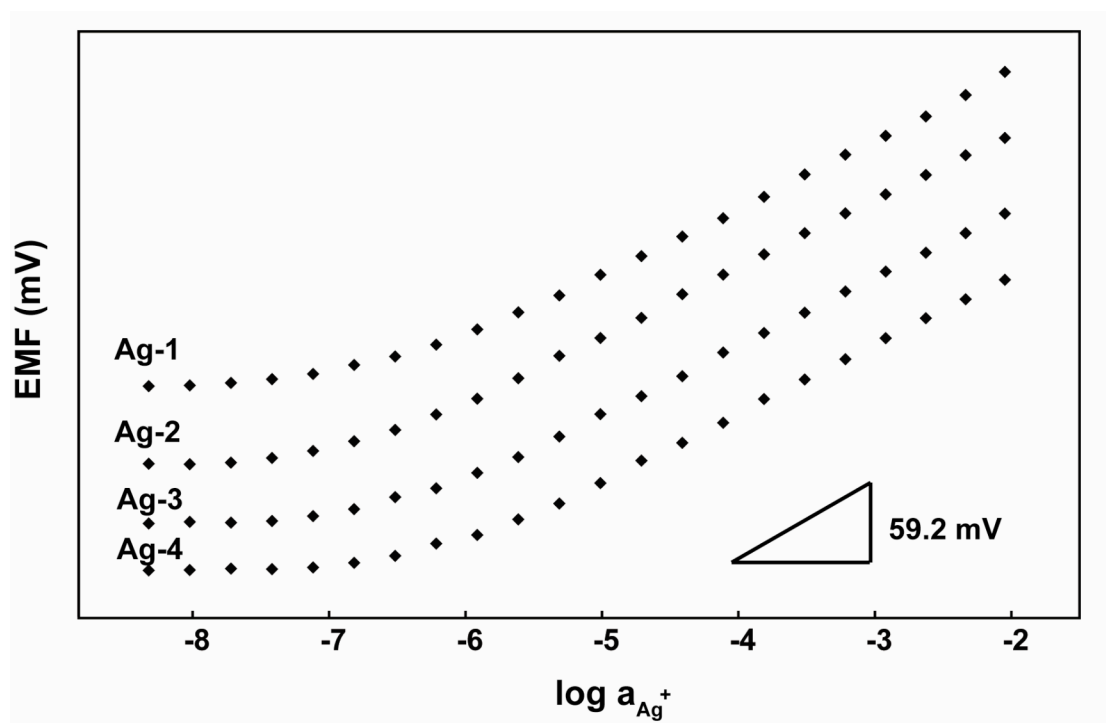
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Figure S1. Potentiometric Ag^+ response of ISEs with an inner filling solution containing 0.1 mM $AgNO_3$ and a sensing membrane of perfluoroperhydrophenanthrene doped with 1.0 mM borate salt (**3**) and one of four ionophores (3.0 mM) after conditioning in a 10 mM $AgNO_3$ solution for 5 h.
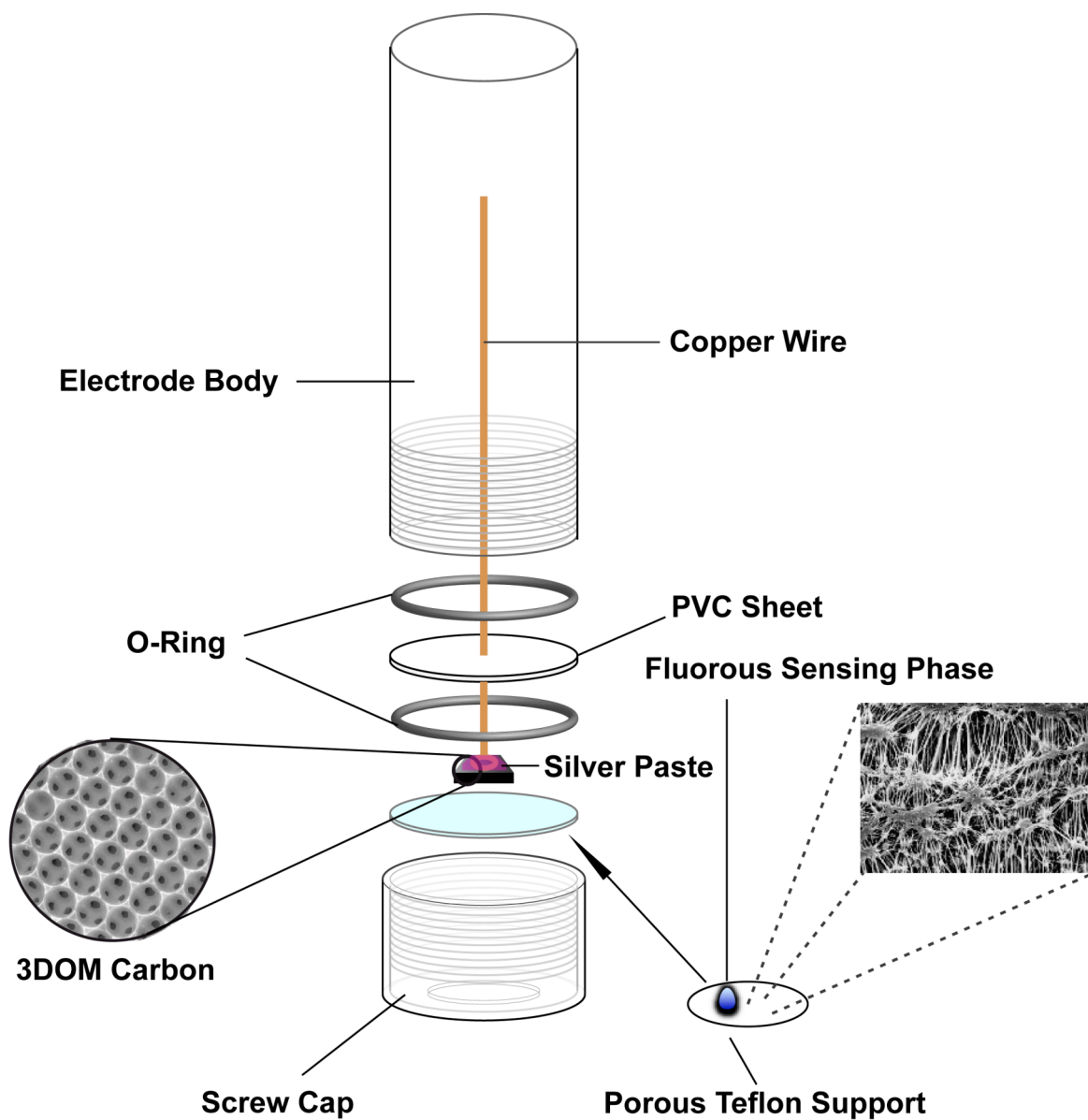
Figure S2. Schematic setup of 3DOM carbon-contacted Ag⁺-selective electrode with a fluorous membrane, as used for the low detection limit experiments.

Table S1. Silver Ion Selectivities ($\log K_{\mathrm{Ag,J}}^{\mathrm{pot}}$) of Fluorous Ionophore-Doped Electrode Membranes and an Analogous Fluorous Ionophore-Free Ion-Exchanger Membrane with Perfluoroperhydrophenanthrene (**1**) as Membrane Matrix

membrane composition		Ag$^+$ selectivity ($\log K_{\mathrm{Ag,J}}^{\mathrm{pot}}$)		
ionophore	ionic sites	K$^+$	Na$^+$	Cu^{2+}
none	**3** (1.0 mM)	–2.89±0.04	–3.96±0.08	–3.74±0.06
Ag-1 (3.0 mM)	**3** (1.0 mM)	–4.78±0.07	–6.42±0.09	–7.03±0.15
Ag-2 (3.0 mM)	**3** (1.0 mM)	–5.97±0.07	–7.60±0.09	–8.09±0.19
Ag-3 (3.0 mM)	**3** (1.0 mM)	–9.45±0.15	–10.93±0.21	–11.22±0.21
Ag-4 (3.0 mM)	**3** (1.0 mM)	–11.60±0.13	–12.94±0.14	–13.04±0.22