

SUPPORTING INFORMATION

Insights into the Origin of the Separation Selectivity with Silica Hydride Adsorbents

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SECTION S1. Potentiometric Titration Measurements.

The suspension was sonicated until homogeneous (>1 min) and stirred for 5 min followed by a potentiometric titration experiments. These experiments were performed with 50% (v/v) methanol/water solutions and involved the measurement of pH values of the solutions containing different silica/silica hydride particles at different mass concentrations being 0, 0.05, 0.1, 0.2, 0.5 and 1 mg/mL ($n=3$). Other details are provided in the Experimental Methods section of the main manuscript.

Table S1. Potentiometric titration results summarizing the dependency of the pH values on particle concentration with a 50% (v/v) MeOH aqueous solution containing different concentration of the studied particles.

Particle concentration (mg/mL)	pH values				
	Fused-silica	Hydride	DH	Cholesteryl	BDC18
0	6.74±0.04	6.74±0.04	6.74±0.04	6.74±0.04	6.74±0.04
0.05	6.85±0.03	6.75±0.07	6.69±0.08	6.98±0.03	6.70±0.06
0.1	7.09±0.05	7.06±0.03	6.95±0.01	7.05±0.09	6.68±0.01
0.2	7.18±0.03	7.12±0.02	6.75±0.05	6.43±0.03	6.66±0.02
0.5	6.81±0.05	6.73±0.05	6.44±0.02	6.16±0.03	5.97±0.02
1	6.66±0.09	6.58±0.10	6.24±0.01	5.93±0.02	5.50±0.07