

Electronic supplementary information (ESI)

**Adsorption Performance of Functionalized Chitosan-Silica Hybrid Materials toward
Rare Earths**

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Table S1: TGA results and corresponding organic content by water correction.

	Residual mass (%)	LOI (%)	Organic content (%)
C	0.0	100.0	94.0
Chitosan-silica ⁱ	73.5	26.5	25.0
EDTA-CS	68.9	31.1	30.3
Chitosan-silica ⁱⁱ	67.9	32.1	25.8
DTPA-CS	70.4	29.6	28.2

ⁱ A first batch of chitosan-silica was made to subsequently functionalize with EDTA.

ⁱⁱ A second batch chitosan-silica was made to subsequently functionalize with DTPA.

Table S2: ICP results and corresponding organic content.

	Silicon (Si) content (%)	Silica (SiO₂) content (%)	Organic content (%)
Chitosan-silica ⁱ	32.6	69.8	30.2
EDTA-CS	30.6	65.5	34.5
Chitosan-silica ⁱⁱ	34.5	73.8	26.2
DTPA-CS	32.2	68.9	31.1

ⁱ A first batch of chitosan-silica was made to subsequently functionalize with EDTA.

ⁱⁱ A second batch chitosan-silica was made to subsequently functionalize with DTPA.

Table S3: CHN results and corresponding organic content by calculation.

	C (%)	H (%)	N (%)	Organic content (%)
Chitosan	41.11	7.90	7.45	100.0
Chitosan-silica ⁱ	9.08	1.40	1.60	22.1
EDTA-CS	11.56	2.15	2.18	28.1
Chitosan-silica ⁱⁱ	10.47	3.23	1.59	25.5
DTPA-CS	12.28	3.37	2.14	29.8

ⁱ A first batch of chitosan-silica was made to subsequently functionalize with EDTA.

ⁱⁱ A second batch chitosan-silica was made to subsequently functionalize with DTPA.