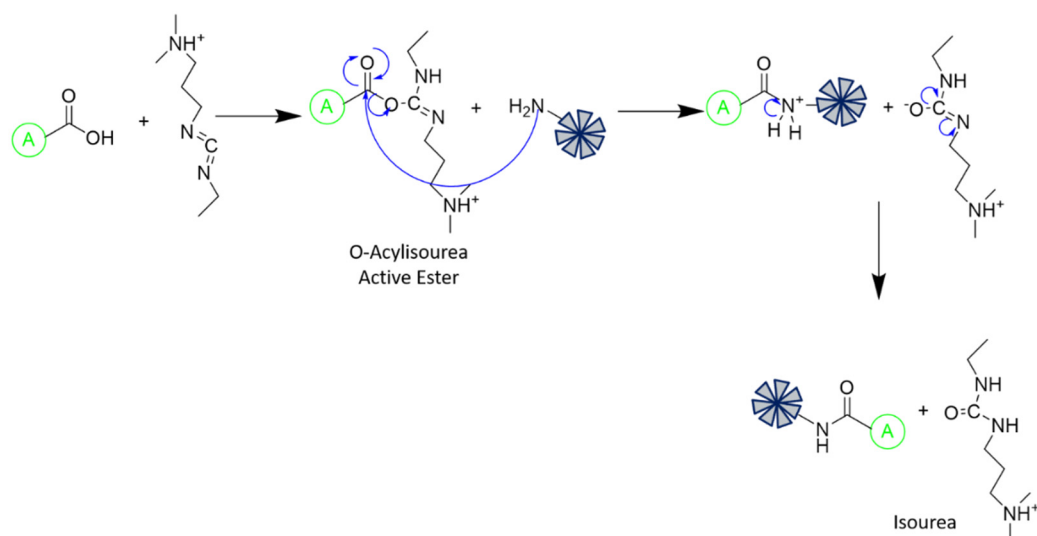


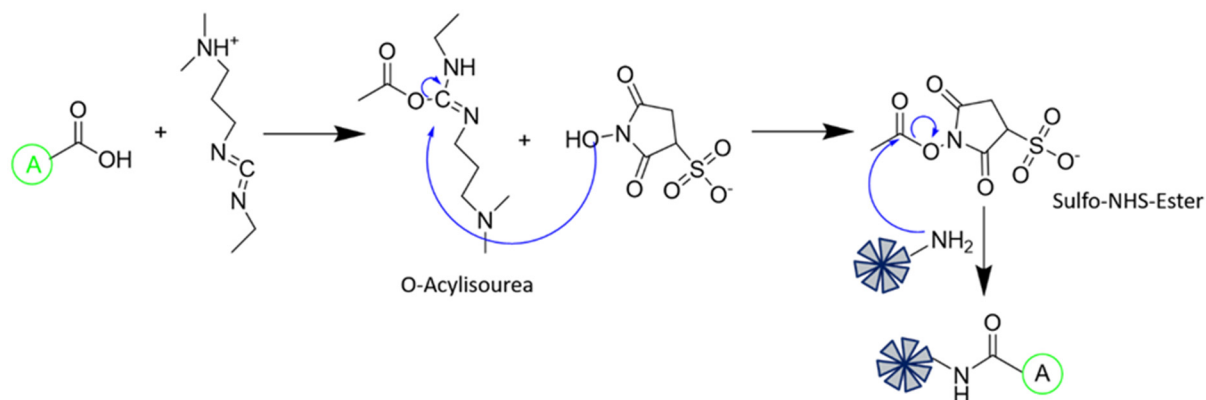
Supplementary Materials



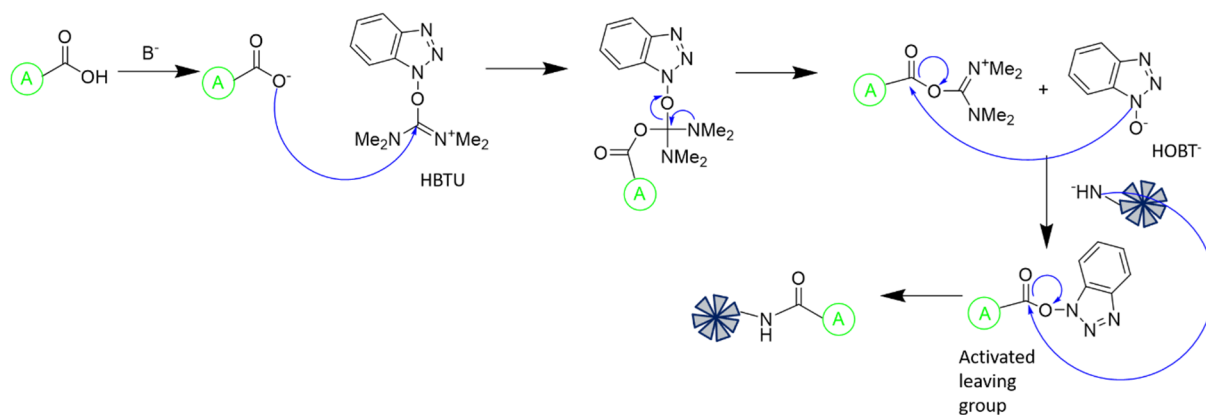
Scheme S1. Mechanism of cryptand grafting by EDC.

Table S1. Control experiments with APTES-STMS in MeOH: H₂O (80:20) and in pure water. The value “0” means that the measure is below the detection limit of ICP-AES apparatus (0.07 ppm)

	MeOH: H ₂ O (80:20)		H ₂ O		
	1.1 mM Na ⁺	5.5 mM Na ⁺	0.7 mM Na ⁺ pH=7	3.7 mM Na ⁺ pH=7	3.7 mM Na ⁺ pH=5
Capture efficiency (%)	6.2	0	0.13	0	0.6
Capture capacity (nmol _{Na⁺} ·mg ⁻¹ ¹ SiO ₂)	56.7	0	1	0	11



Scheme S2. Mechanism of cryptand grafting by EDC-NHS.



Scheme S3. Mechanism of cryptand grafting by HBTU.

Table S2. Control experiments with PEI-STMS in pure water. The value “0” means that the measure is below the detection limit of ICP-AES apparatus (0.07 ppm)

	0.197 mM Na ⁺ pH=7	0.98 mM Na ⁺ pH=7
Capture Capacity (nmol _{Na⁺} ·mg ⁻¹ _{¹SiO₂})	1.5	0
Capture Efficiency (%)	0.6	0