

Electronic Supplementary Information

Facile Synthesis of Graphene Doped Poly(ionic liquid) Boronate Affinity Material for Specific Capture of Glycoproteins

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3.2 Characterization of TG@poly(ViOclm⁺Cl⁻-VPBA) monolithic material

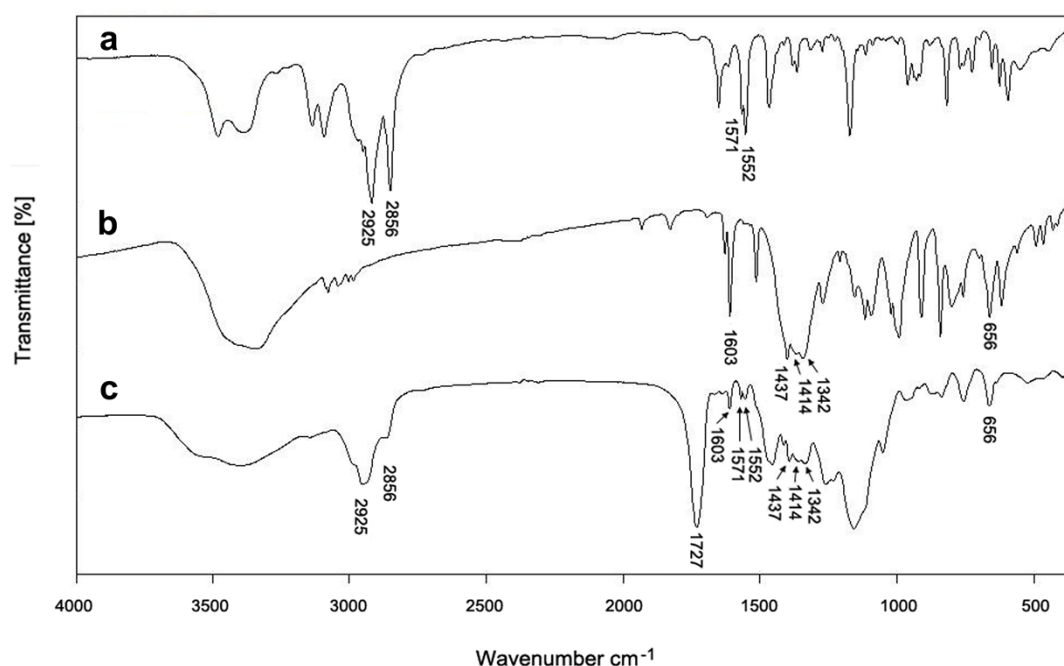


Fig. S1

Fig.S1: FT–IR spectra of the ViOclm⁺Cl[–] (a), VPBA (b) and TG@poly(ViOclm⁺Cl[–]–EDMA–VPBA) monolithic material (c).

Table S1. The C%, H%, N%, O% and S% (w/w) of the monolithic materials

monolith	C (%)	H (%)	N (%)	O (%)	S (%)
Poly(ViOclm ⁺ Cl [–] -EDMA-VPBA) monolith	59.32	7.5	3.12	26.36	0
TG@poly(ViOclm ⁺ Cl [–] -EDMA-VPBA) monolith	59.85	7.24	3.05	26.02	0.14

3.3. Recognition property of the resulting monolithic material

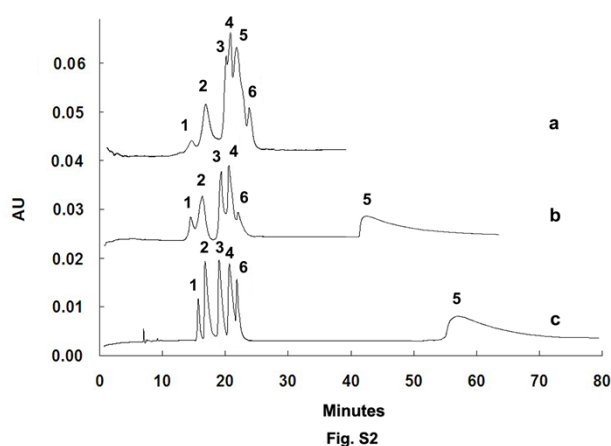


Fig.S2: Separation of proteins on the poly(ViOclm⁺Cl[–]–EDMA) monolith (a), poly(ViOclm⁺Cl[–]–EDMA–VPBA) monolith (b) and TG@poly(ViOclm⁺Cl[–]–EDMA–VPBA) monolith (c); CEC conditions: mobile phase, pH 4.0, 10mM Na₂HPO₄–H₃PO₄ buffer; applied voltage, -10 kV; injection, 5 psi for 25 s; detection wavelength, 210 nm. Analytes: 1, Cyt c; 2, Lyz; 3, BSA; 4, BHb; 5, OVA; 6, MB.

3.4. Enrichment of glycoproteins by TG@poly(ViOclm⁺Cl[–]–EDMA–VPBA) monolithic material

Table S2 Enrichment of proteins by TG@poly(ViOclm⁺Cl⁻-EDMA-VPBA) monolith

Protein	Linear regression	Linear regression coefficient (R ²)	Migration time (min) (RSD%, n=5)
Cyt C	y=0.0079x+0.1055	0.9928	13.51 (0.12)
Lyz	y=0.0064x+0.1240	0.9899	17.28 (0.16)
BHb	y=0.0072x+0.1465	0.9949	19.89 (0.11)
BSA	y=0.0069x+0.1024	0.9864	22.18 (0.20)
Mb	y=0.0067x+0.1216	0.9919	26.49 (0.35)
OVA	y=0.0109x+0.0955	0.9954	35.09 (0.32)
HRP	y=0.0098x+0.0728	0.9979	37.57 (0.28)

Y is the peak height (AU); x is the injection time (s) for 15-55 s.