Supporting Information
for

Aluminium glycinate functionalized silica nanoparticles for highly specific separation of phosphoproteins†

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Table Q1 EDAX of SiO$_2$ and AGNP

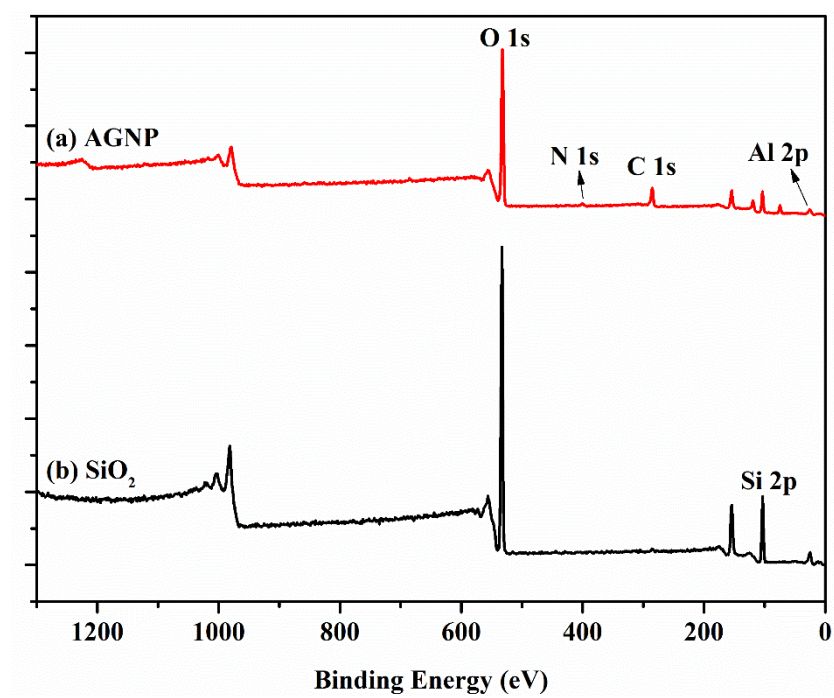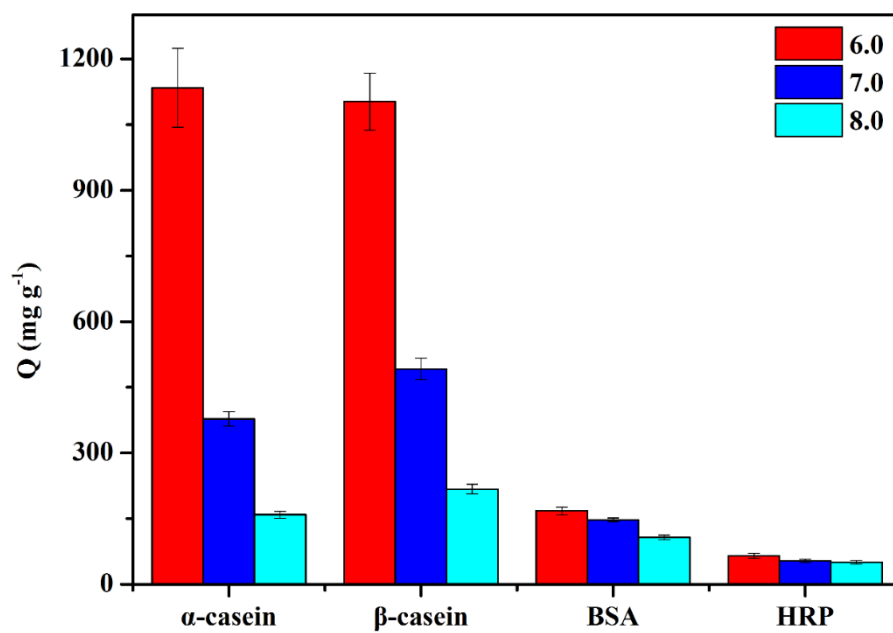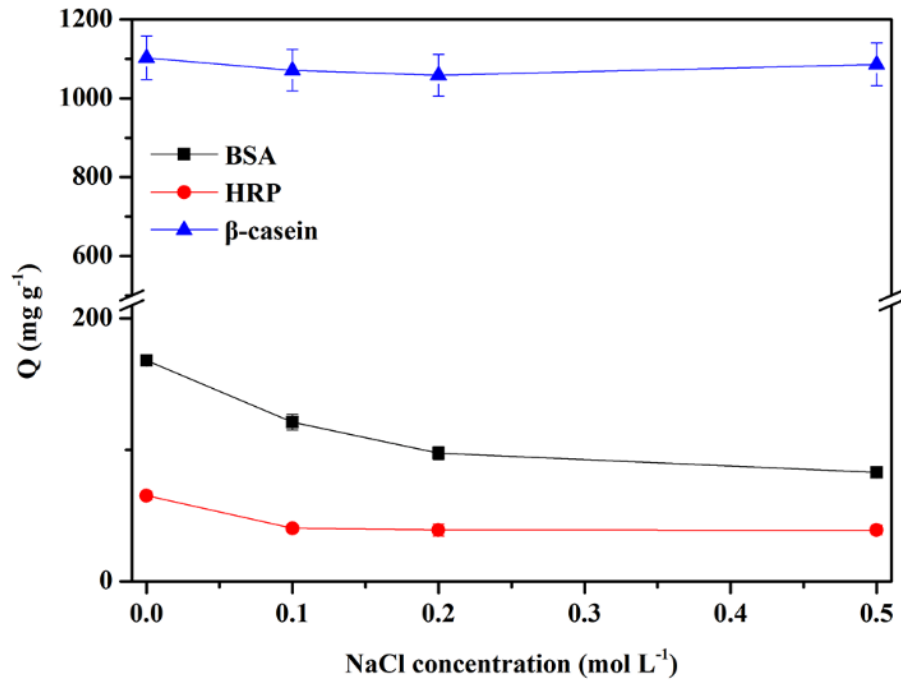| SiO$_2$	Element	Wt%	At%	AGNP	Element	Wt%	At%
	C	48.82	58.97		C	53.62	61.54
	O	37.38	33.90		O	42.27	36.43
	Si	13.80	7.13		Si	3.51	1.72
	Al	0	0		Al	0.6	0.31

Fig. S1. XPS of SiO$_2$ and AGNP.

Table S2 Textural characteristics of SiO$_2$ and AGNP.

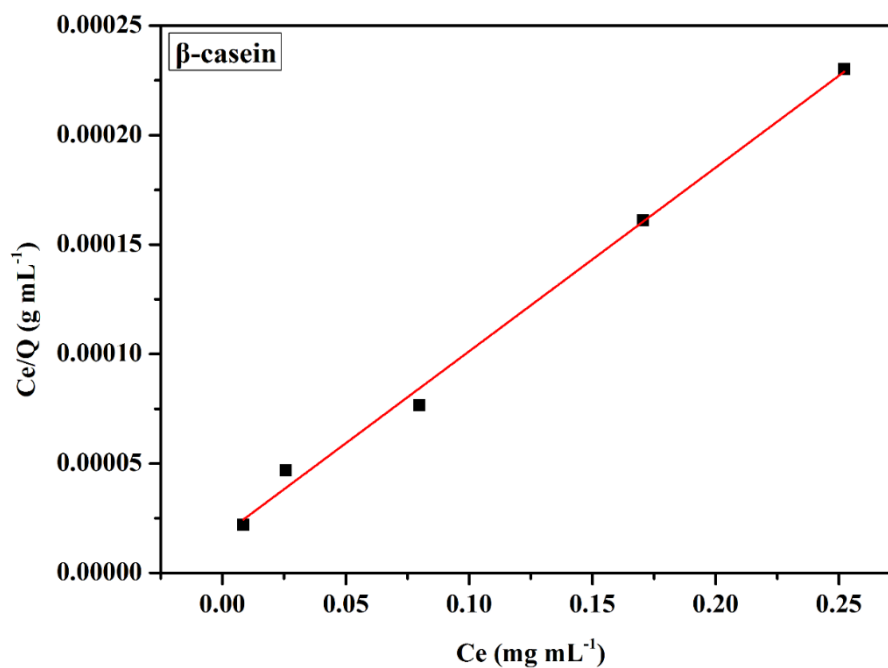|	Specific surface area（m^2/g）	Pore volume（cm^3/g）	Average pore size（nm）
SiO$_2$	64.21	0.274	17.07
AGNP	137.80	0.478	13.88

Fig. S2 Effect of pH on proteins adsorption.
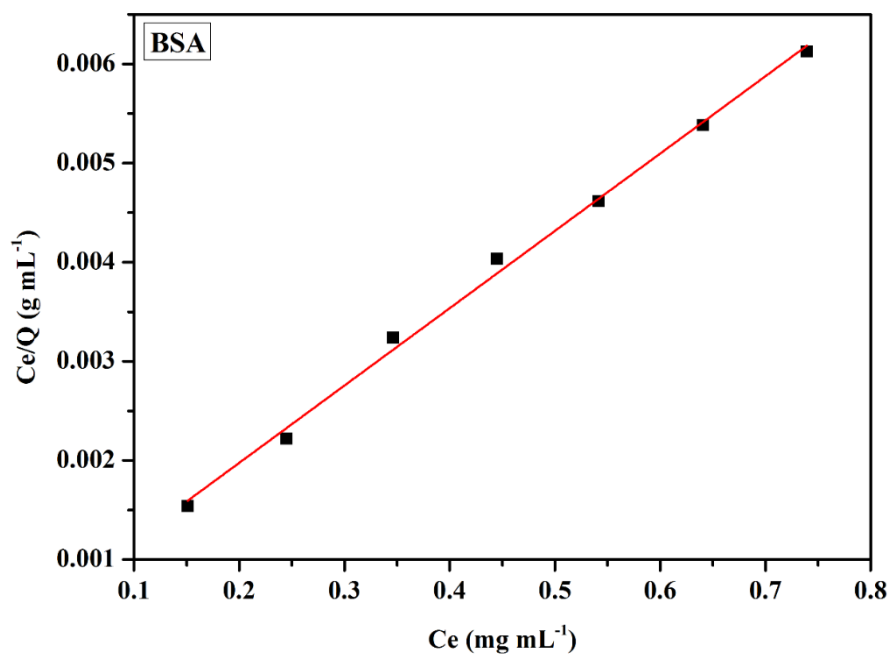
Fig. S3 Effect of ionic strength on proteins adsorption.
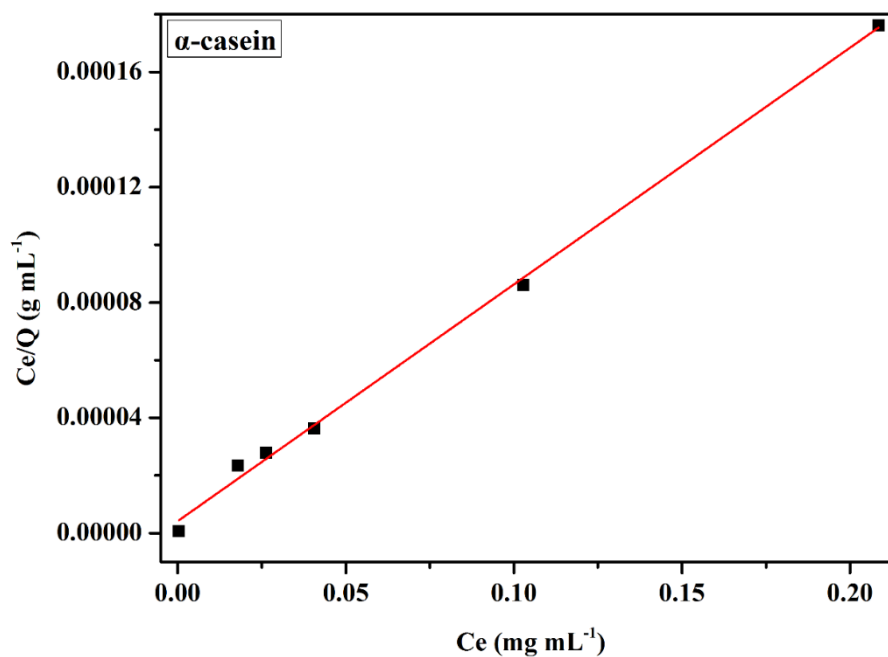
Fig. S4-1 Fitting of the adsorption isotherm of α-casein on AGNP by using the Langmuir model. The fitted parameters are summarized in Table 1.
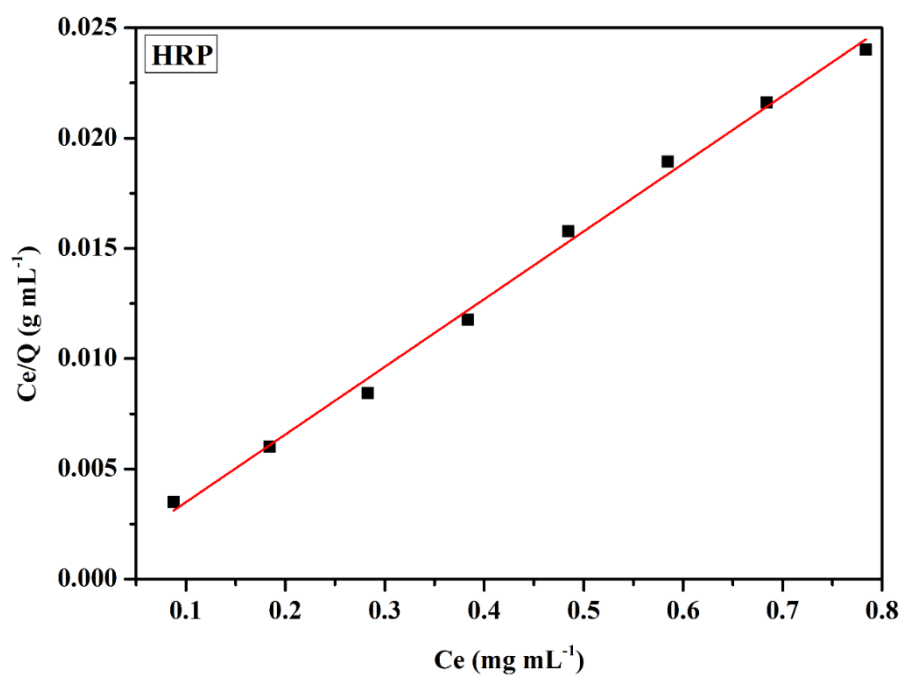

Fig. S4-2 Fitting of the adsorption isotherm of β-casein on AGNP by using the Langmuir model. The fitted parameters are summarized in Table 1.

Fig. S4-3 Fitting of the adsorption isotherm of BSA on AGNP by using the Langmuir model. The fitted parameters are summarized in Table 1.

Fig. S4-4 Fitting of the adsorption isotherm of HRP on AGNP by using the Langmuir model. The fitted parameters are summarized in Table 1.