

Electronic Supplementary Information

Fabrication of high-density silver nanoparticles on the surface of alginate microspheres for application in catalytic reaction

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Table S1. Conditions and results for the preparation of QC-Ag NPs.

Sample	c_{QC} (mg/mL)	ζ -potential (mV)	SPR position (nm)	Ag content (%)
QC-Ag1	1	20.7	402	11.6
QC-Ag2	0.5	16.8	402	20.8
QC-Ag3	0.25	17.3	398	34.4
QC-Ag4	0.1	16.4	400	56.7
QC-Ag5	0.05	15.9	400	72.4

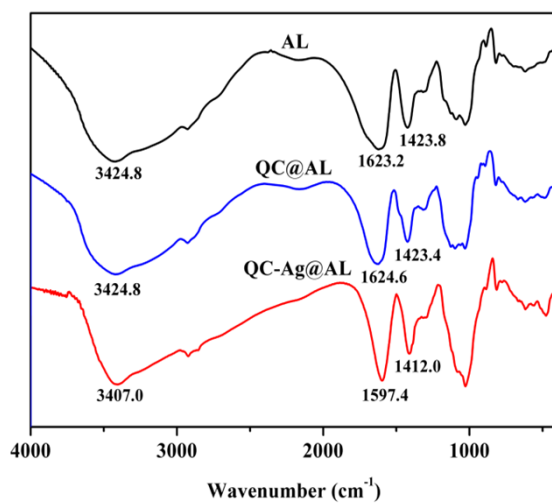


Fig. S1 FT-IR spectra of the AL, QC/AL and QC-Ag@AL microspheres.

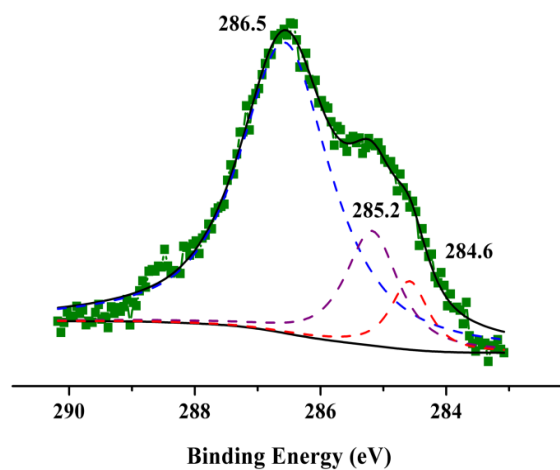


Fig. S2 XPS analysis of QC.

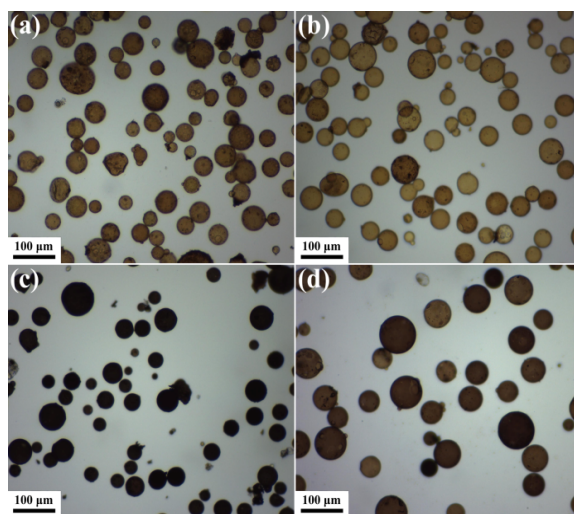


Fig. S3 Effects of pH value on the morphology of QC-Ag3@AL (above) and QC-Ag5@AL (below) microspheres (left: 0.1 M HCl, right: 0.1 M NaOH).

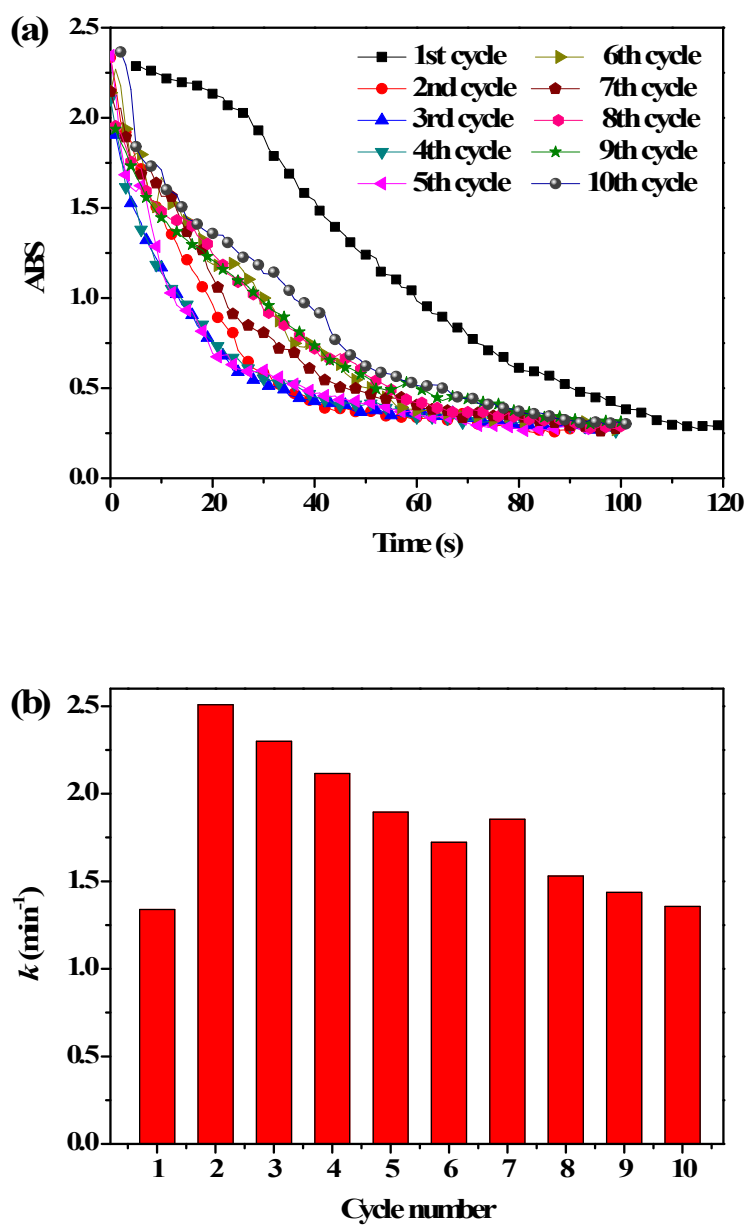


Fig. S4 (a) Plot of ABS against the reaction time for ten successive cycle reactions using QC-Ag4@AL microspheres as catalyst; (b) The reaction rate constant (k) for each cycle with QC-Ag4@AL microspheres as catalyst.