

Supporting Information

Immobilization of trypsin via reactive polymer grafting from magnetic nanoparticles for microwave-assisted digestion

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Scheme S1. Schematic diagram of microwave-assisted protein digestion by trypsin immobilized magnetic nanoparticles modified with reactive polymer.

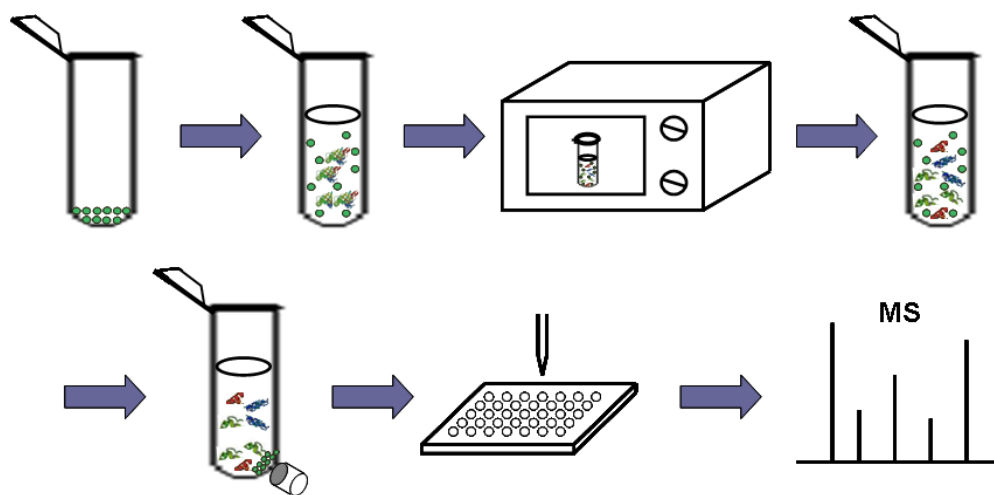
Figure S1. TEM images of Fe₃O₄@PGMA₁₄₇@ trypsin.

Figure S2. MALDI-TOF mass spectra of the supernatant from tryptic digestion of Cyt C (500 ng/μL, 20μL) with different incubation time at 37 °C.

Figure S3. MALDI-TOF mass spectra of the supernatant from tryptic digestion of Cyt C (500 ng/μL, 20μL) with different incubation time under microwave at 640 W.

Figure S4. MALDI-TOF MS spectra of tryptic peptides originated from Cyt C digested with trypsin-immobilized magnetic nanoparticles modified with reactive polymer (a) at 37 °C for 1 min, (b) under microwave at 640 W for 15 s.

Table S1. Identified Peptide Residues Digested with trypsin-immobilized magnetic nanoparticles modified with reactive polymer at 37 °C for 1 min and under microwave at 640 W for 15 s.



Scheme S1

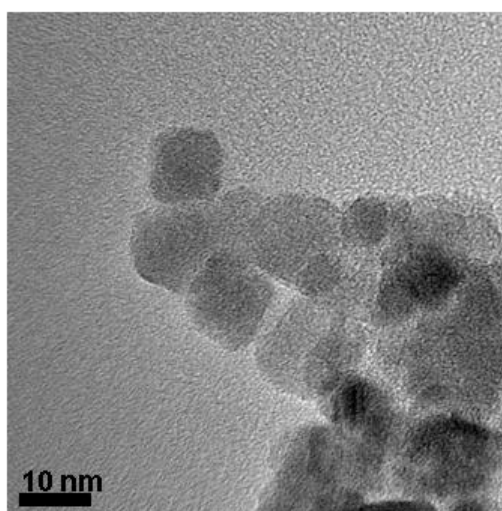


Figure S1

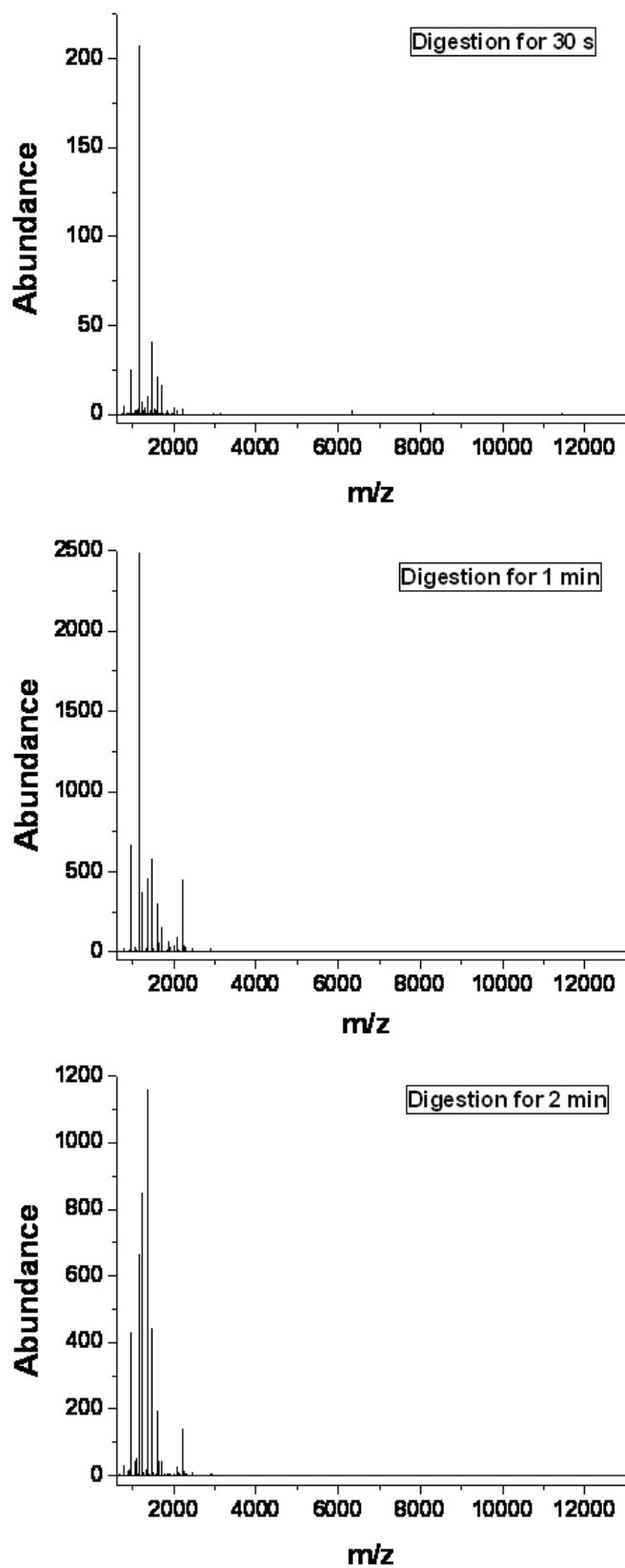


Figure S2

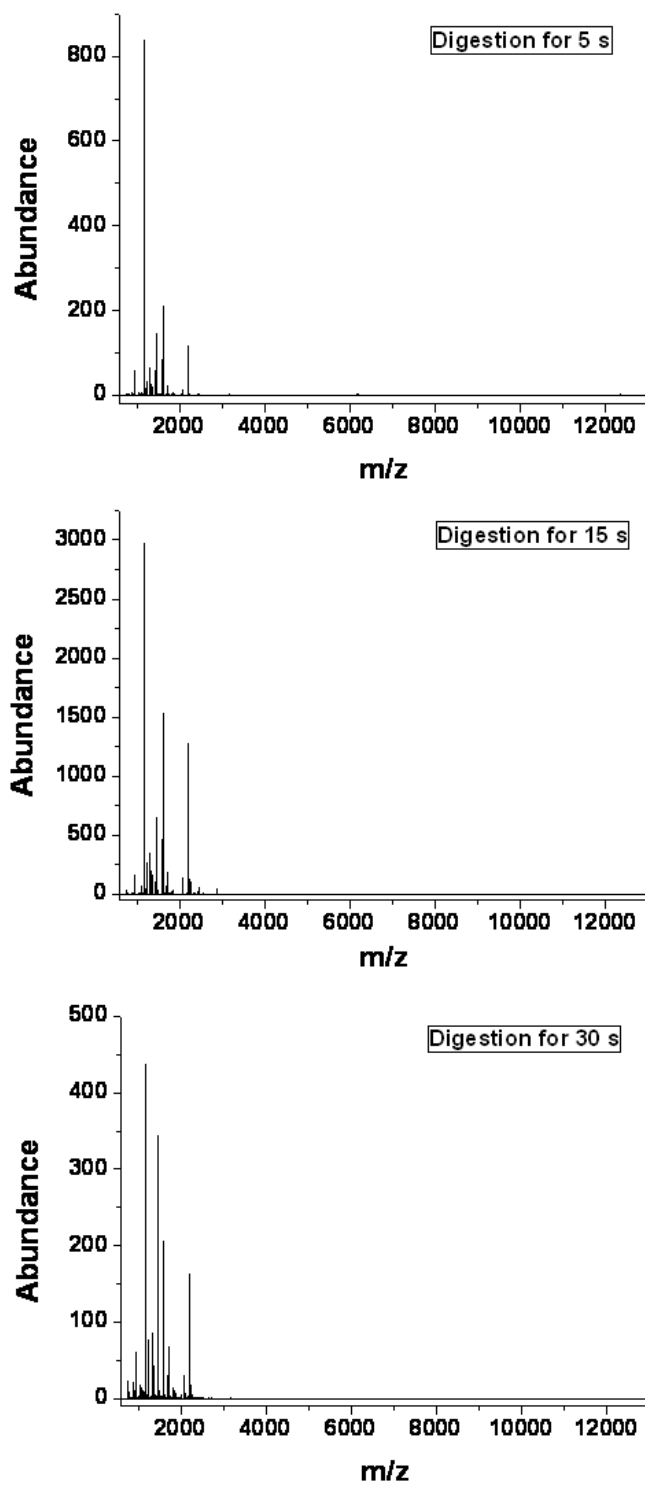


Figure S3

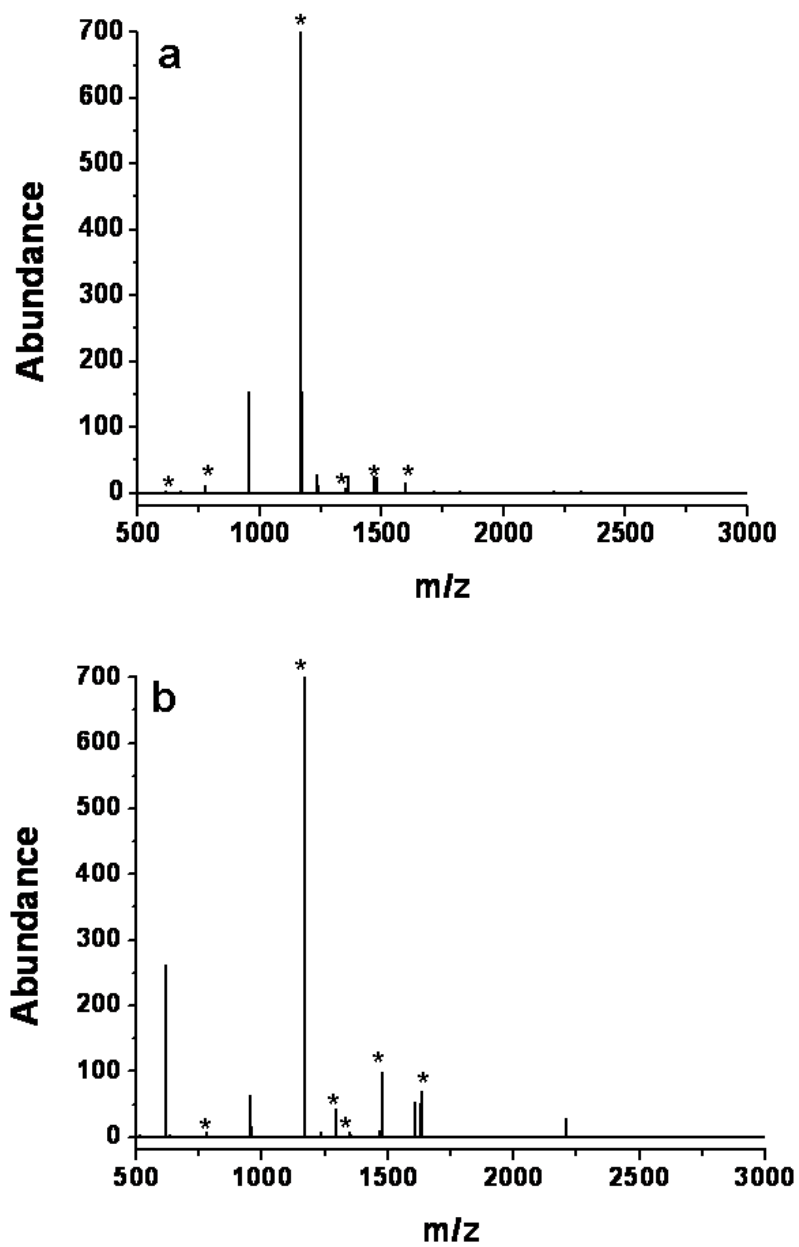


Figure S4

protein					
Cytochrome c					
(AC P00004) ^a					
37 °C			640 W		
position	MW	MC ^b	position	MW	MC ^b
1-6	678.296	0	81-87	779.395	0
81-87	779.281	0	29-39	1168.458	0
29-39	1168.466	0	29-40	1296.521	1
90-100	1350.501	1	90-100	1350.404	1
41-54	1470.399	0	41-54	1470.363	0
40-54	1598.428	1	10-23	1633.250	1
Seq. Cov. ^c	48%		Seq. Cov. ^c	55%	
Pep. Mat. ^d	6		Pep. Mat. ^d	6	

^a AC, ExPASy accession number. ^b MC, number of missed cleavages.
^c Seq. Cov.= sequence coverage. ^d Pep. Mat.= peptides matched.

Table S1