Supporting information

Multifunctional Ag@MOF-5@chitosan non-woven cloth composites for sulfur mustard decontamination and haemostasis

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Table S1. The amount of silver and MOF-5 per gram of Ag^m@MOF-5@ chitosan

m	Ag (mg)	MOF-5 (mg)
20	1.45	156.51
40	2.78	155.89
60	4.06	155.55
80	5.49	154.83
100	5.72	154.65
120	5.90	154.40

The silver content increased gradually with the concentration of silver nitrate solution, and the content of MOF-5 slightly reduced.

Table S2. Composition of the HD-containing standard solutions.

Entry	Diluted HD solution (μL)	Petroleum ether (μL)	The blue reagent (μL)	Absolute ethyl alcohol (μL)
1	0	100	200	100
2	20	80	200	100
3	40	60	200	100

4	60	40	200	100
5	80	20	200	100
6	100	0	200	100

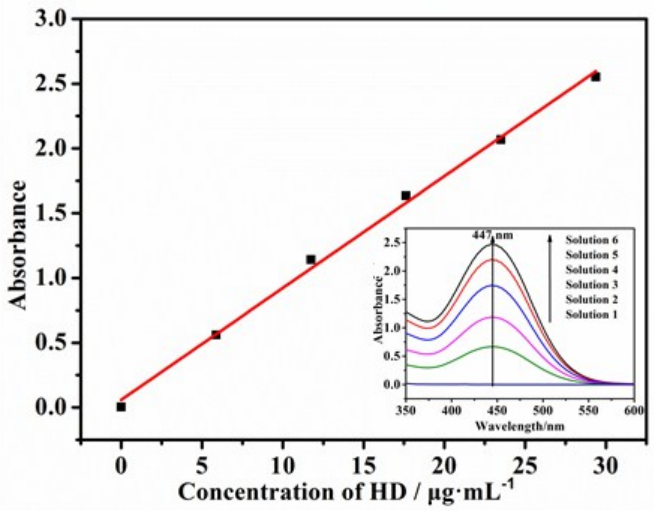


Fig. S1. Calibration curve of UV-vis. absorbance of the HD-containing solution. Insert image is UV absorbance of HD standard solution at 445 nm versus concentration of HD.

The standard solution of HD shows a absorption peak at λ_{max} = 447 nm in its UV–visible spectrum (Fig. S1). The calibration curve for the determination of HD is obtained by plotting absorbance (λ_{max} = 447 nm) against the concentration of HD (Table S2 and Fig. S1), with the regression equation $y = 0.058 + 0.086\,x$ (R = 0.999), where y is the absorbance value and x is the residual concentration of HD.

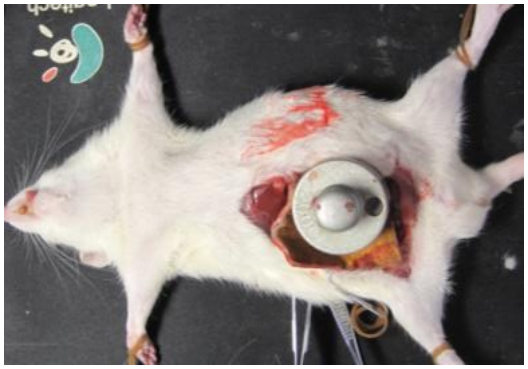


Fig. S2 Wound model with Wistar rats

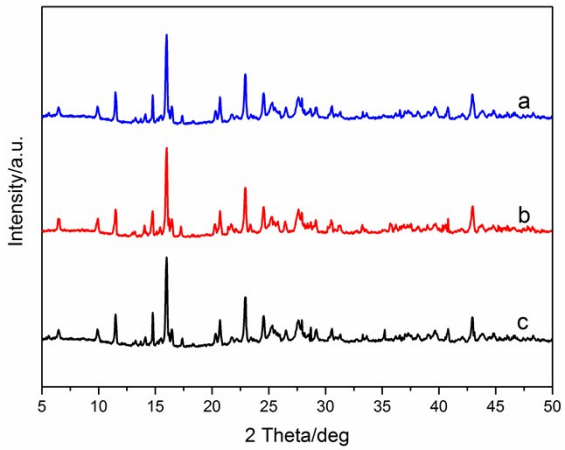
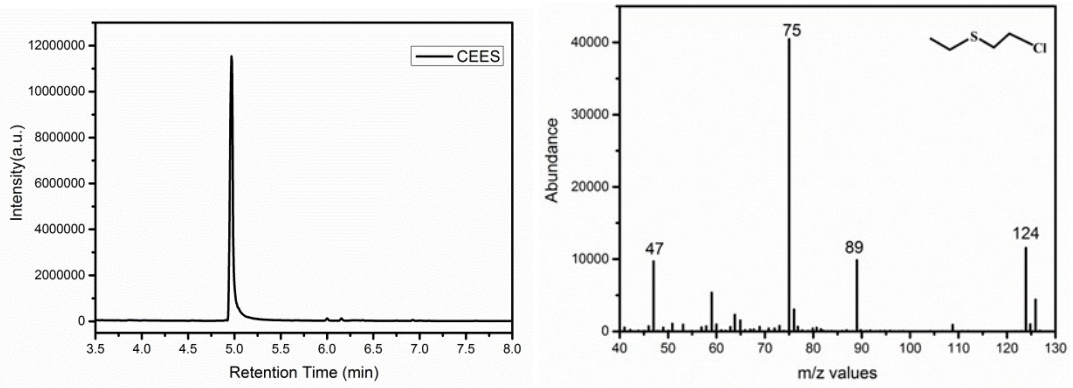


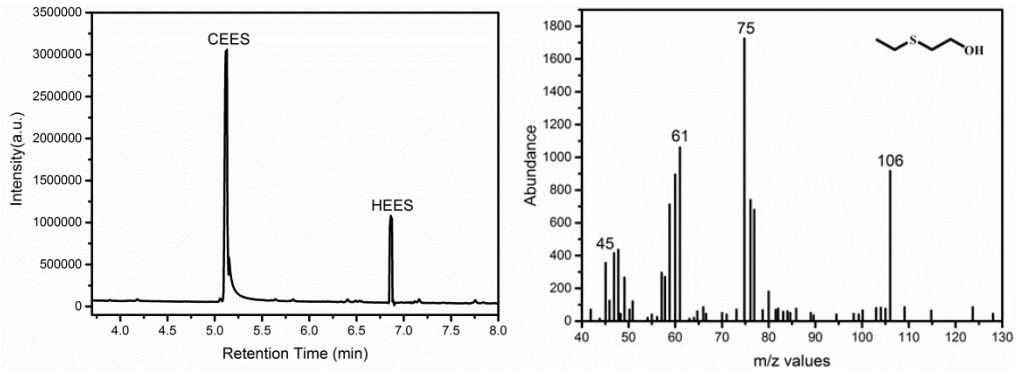
Fig. S3 Powder XRD patterns of Ag^{20}@MOF-5 (line a), Ag^{40}@MOF-5 (line b) and Ag^{60}@MOF-5 (line c)



(a) (b)

Fig. S4 GC-MS spectra of the extracted suspension from 2-CEES decontaminated by MOF-5: GC spectrum (a) and mass spectrum for 2-CEES (b). Note: chitosan and MOF-5@chitosan showed

nearly the same spectra.



(a) (b)

Fig. S5 The GC–MS spectra of the products extracted from the 2-CEES solution after being decontaminated by Ag^{80}@MOF-5@chitosan**:** GC spectrum (a), mass spectrum for HEES (b). Note: Ag^{80}@MOF-5 showed nearly the same spectra.