

Article

Aqueous Strippable Polymer Coating for Highly Efficient Primary Radioactive Uranium Decontamination with Versatility on Diversified Surface

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Figures and tables

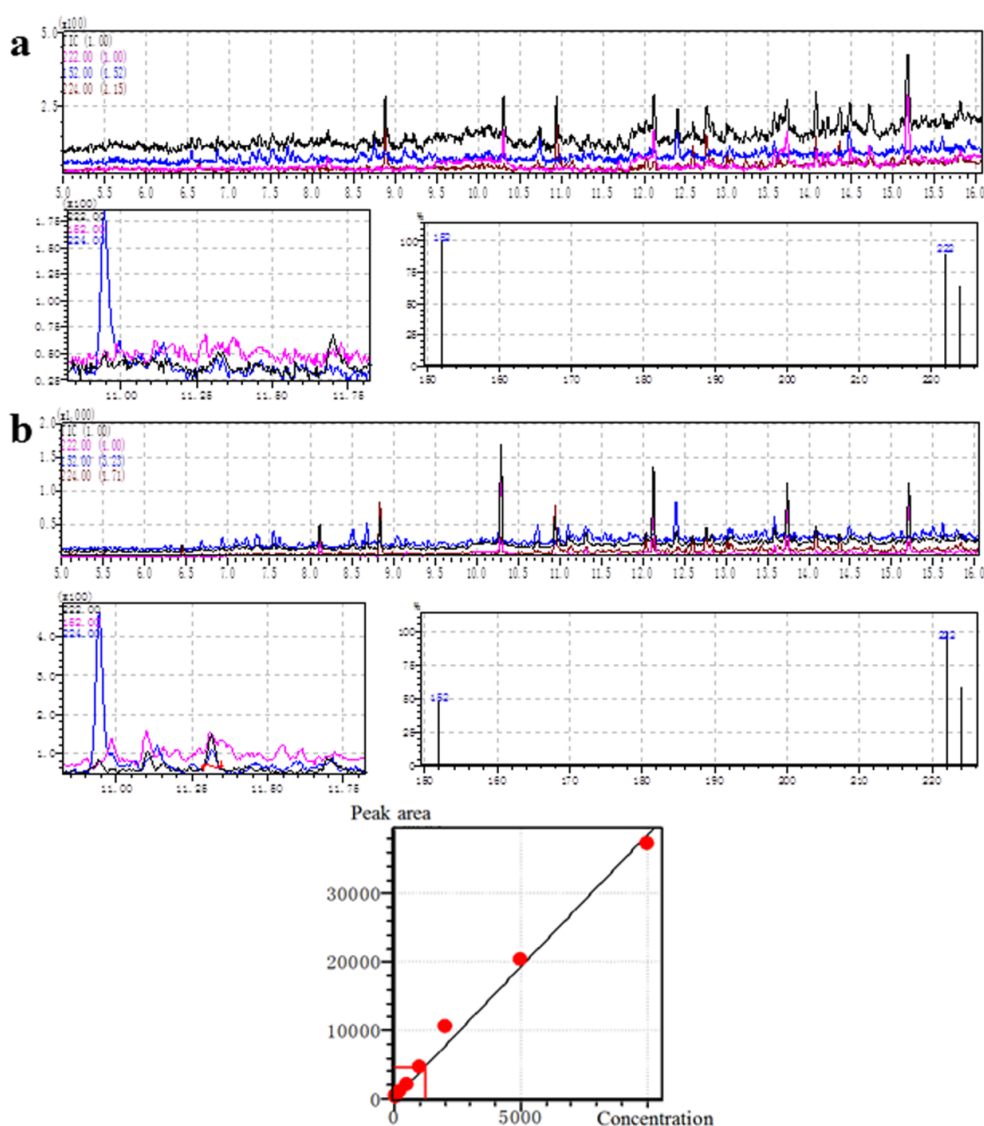


Figure S1. PCB standard curve and TIC curves of PCB detected by GC/MS.

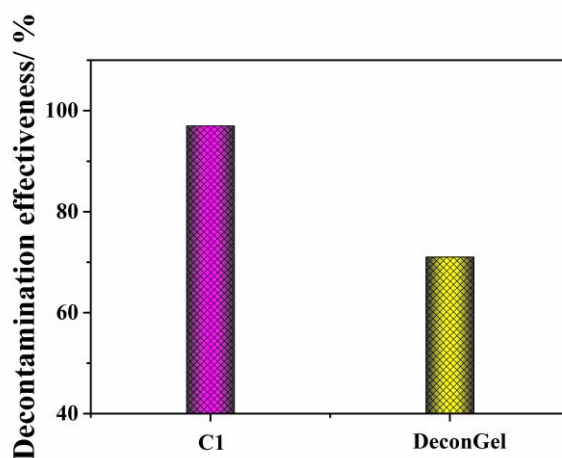


Figure S2. Decontamination effectiveness of polymeric coating C1 and DeconGel 1101

Table S1. Decontamination effectiveness of PCBs detected by GC/MS

Sam- ple	Contaminated level before decontamina- tion/ppb	Contaminated level after decontamina- tion/ppb	Decontamination Effi- cacy/%
	contaminated level	contaminated level	
C1	1208.81	0.00	100.0
C2	1208.81	131.34	89.3

Table S2. Repeatability of decontamination efficiency of polymeric coating C1 (1 g/L).

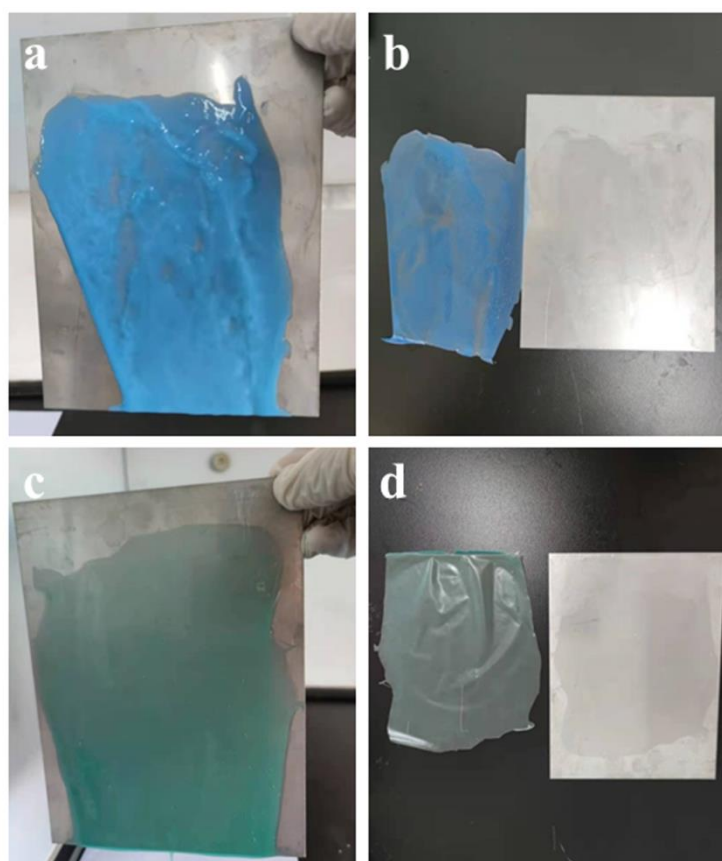
Sam- ple	Contaminated level before decontamina- tion/Bq cm ⁻²	Contaminated level after decontamina- tion/Bq cm ⁻²	Decontamination Effi- cacy/%
	contaminated level	contaminated level	
1	0.89	0.02	97.8
2	0.97	0.01	99.0
3	0.91	0.04	95.6
4	0.96	0.02	97.9
5	0.89	0.04	95.5

Table S3. Decontamination properties of C1 and decongel 1101 for high uranium level of 5 g/L and 25 g/L.

Sample	concentration of un- anium/g/L	Contaminated level before decon- tamination/Bq cm ⁻²	Contaminated level after decontami- nation/Bq cm ⁻²	Decontamina- tion Efficacy/%
		contaminated level	contaminated level	
C1	5	4.70	0.60	87.2±0.4
-1st	22.5	12.05	0.54	95.5±0.3
Decongel	5	4.41	1.47	66.7±0.6
-1st	22.5	14.20	4.47	68.5±0.6
C1	5	4.70	0.21	95.5±1.7
-2nd	22.5	12.05	0.09	99.3±0.1
Decongel	5	4.41	0.26	94.1±0.3
-2nd	22.5	14.20	0.75	94.7±0.1

Table S4. Decontamination efficiency of polymeric coating C1 applied on different surfaces.

Surface	Contaminated level before decontamination/Bq cm ⁻²	Contaminated level after decontamination/Bq cm ⁻²	Decontamination Efficiency/%
	contaminated level	contaminated level	
ceramic	0.60	0.02	96.7±1.6
aluminum	0.94	0.05	94.7±1.2
lacquered	1.01	0.06	94.1±1.3
glass	0.72	0.16	77.8±1.5
plastic	0.63	0.07	88.9±1.3

**Figure S3.** Photographs of decontamination for vertically placed: (a) (b) C1 and (c) (d) decongel.**Table S5.** Repeatability of tensile strength tests for polymeric coating C1 and DeconGel.

Sample	Tensile strength/Mpa		Elongation at break/%	
	C1	Decongel	C1	Decongel
1	36.4	33.3	329	236
2	36.8	32.7	339	237
3	35.1	34.3	299	229
4	35.4	28.1	302	164
5	34.9	33.6	308	234