Electronic Supplementary Information (ESI)

Effective loading of cisplatin into a nanoscale UiO-66 metal–organic framework with preformed defects†

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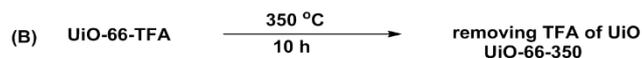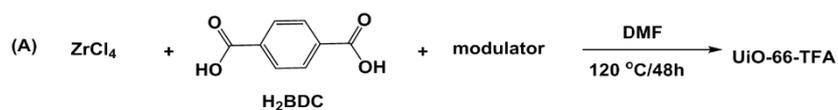
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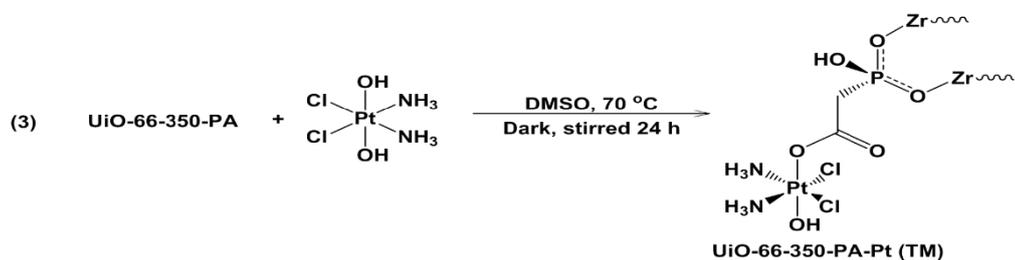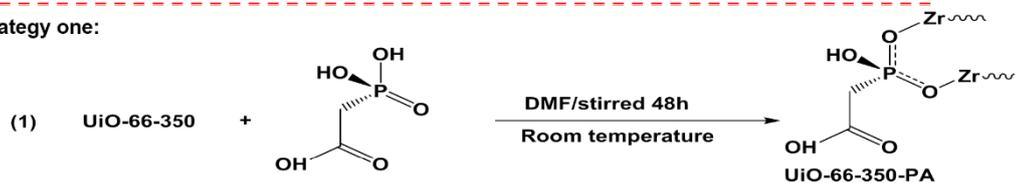
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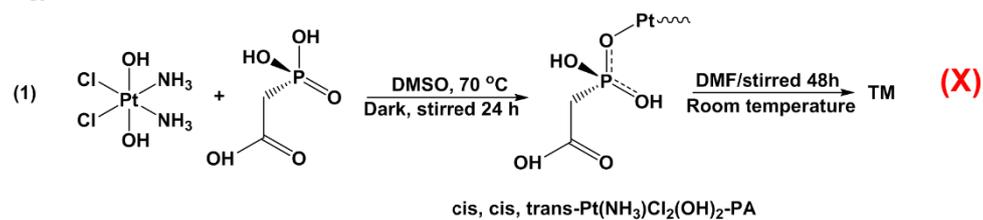Northern Territory 0810, Australia

Contents

Scheme S1 Synthetic strategies and for loading cisplatin into UiO-66. The second strategy was halted because of difficulties encountered in preparing the cisplatin precursor.
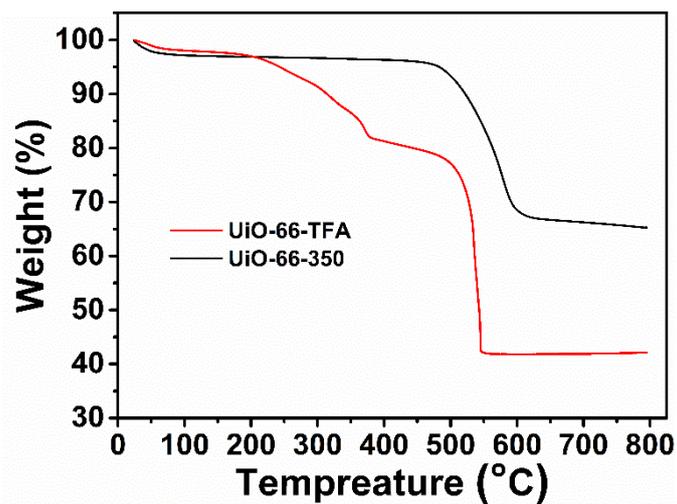
Fig. S1 TGA curves of UiO-66-350 (black) and UiO-66-TFA (red).
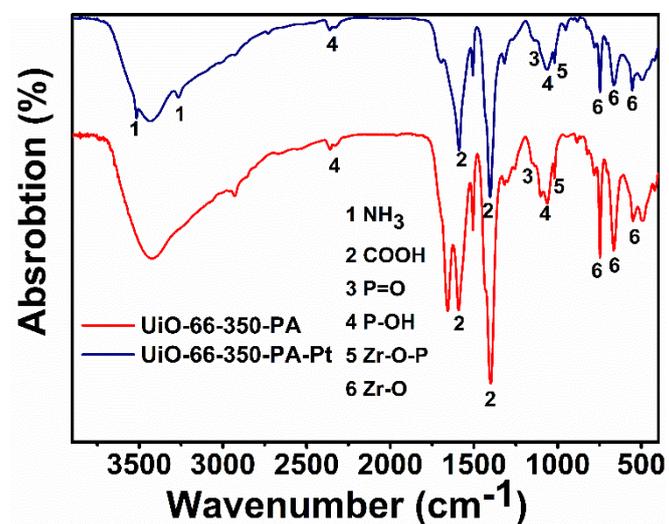
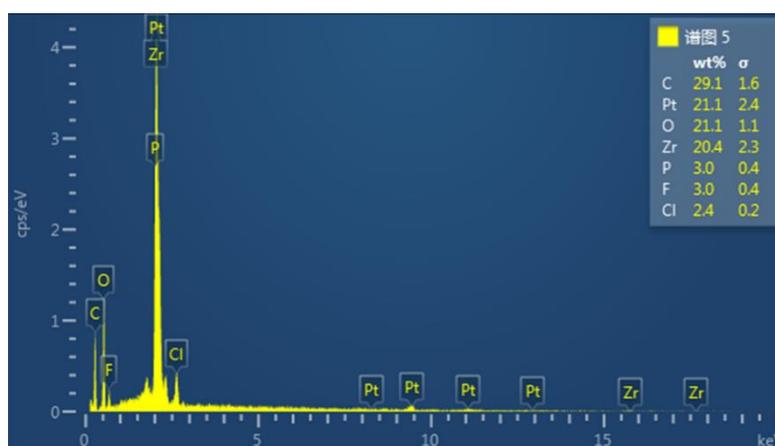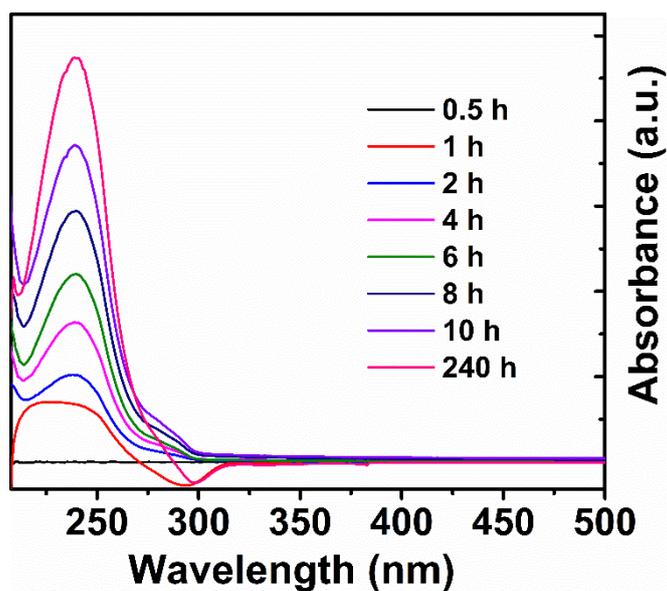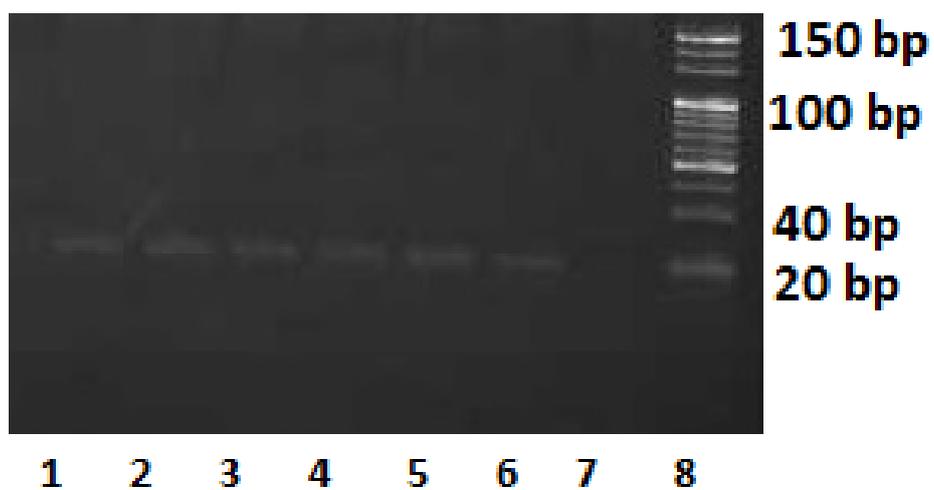**Fig. S2** FT-IR spectra of UiO-66-350-PA (red) and UiO-66-350-PA-Pt (blue).

Fig. S3 EDX spectrum of UiO-66-350-PA-Pt.

Fig. S4 UV-Vis spectra for release of cisplatin at different times.

Fig. S5 Agarose GE patterns for P-DNA loading into UiO-66-350-PA-Pt. Lane 1-7 DNA (50 nM) with UiO-66-350-PA-Pt at the concentrations of 5.4, 10.8, 27.0, 54.0, 162.0, 324.0 and 486.0 μM, respectively, Lane 8: DNA marker.

Table S1 The ICP analysis show the concentration of the elements in UiO-66-350-PA-Pt (the ratio of Zr : Pt : P is 9 : 1 : 1 corresponding to the Zr_6 : Pt : P being 1.5 : 1 : 1).

Element	C_v (mg/L)	C_d (mmol/L)
Zr	95.12	1.04
Pt	21.88	0.11
P	3.490	0.11

Table S2 BET surface area (S_{BET}) and total pore volume (V_p) of UiO-66-TFA, UiO-66-350, UiO-66-350-PA and UiO-66-350-PA-Pt.

Samples	$S_{BET}(m^2g^{-1})$	$V_P(cm^3g^{-1})$
UiO-66-TFA	1368	0.6246
UiO-66-350	1000	0.5433
UiO-66-350-PA	746	0.4460
UiO-66-350-PA-Pt	552	0.4044

Table S3 The ICP analysis showing the concentration of platinum at intervals after release. C_1 is the concentration after dilution of C_2 (the actual concentration) by 25 times.

Samples	C_1 (mg/L)	C_2 (mg/L)
1h	2.99	74.75
2h	3.64	91.00
4h	3.73	93.25
6h	3.84	96.00
8h	3.91	97.75
10h	4.14	106.00
240h	4.38	109.50