Supplementary Materials

Spectroscopic Study of the Salicyladazine Derivative–UO_2^{2+} Complex and Its Immobilization to Mesoporous Silica

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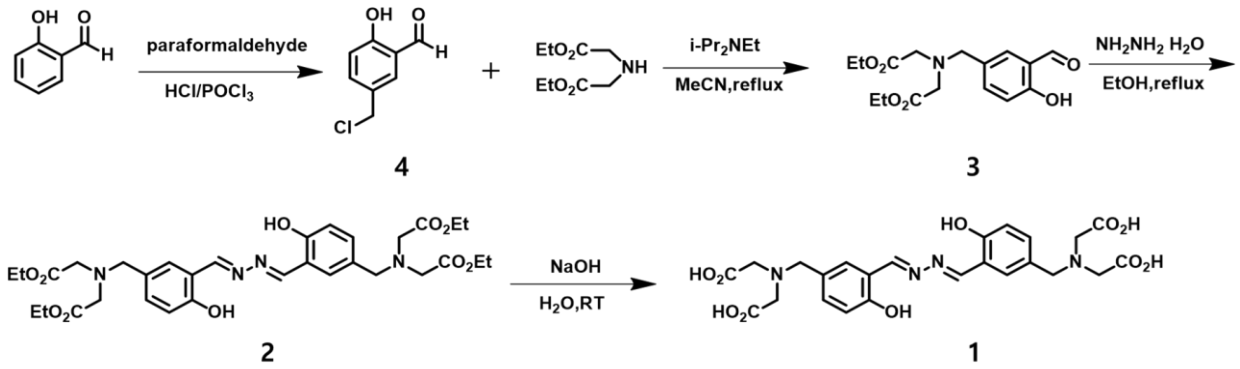

Scheme S1. Synthesis route of compound **1**.

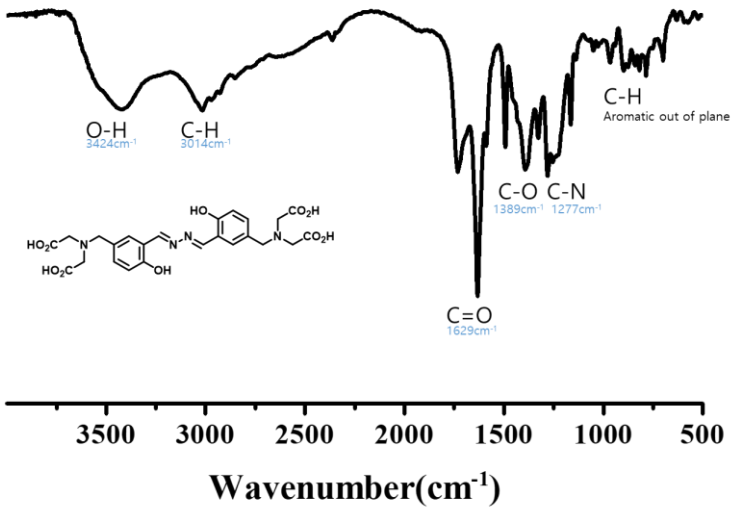

Figure S1. FT-IR spectrum of compound **1**.

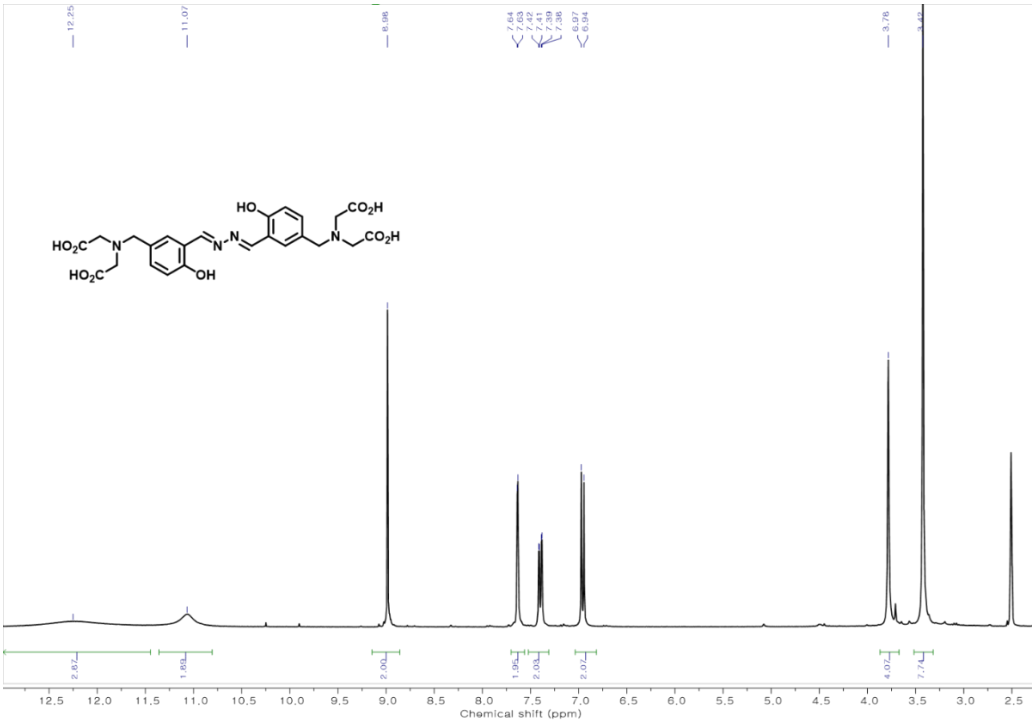

Figure S2. [1]H NMR spectrum of compound **1** in DMSO-d6.

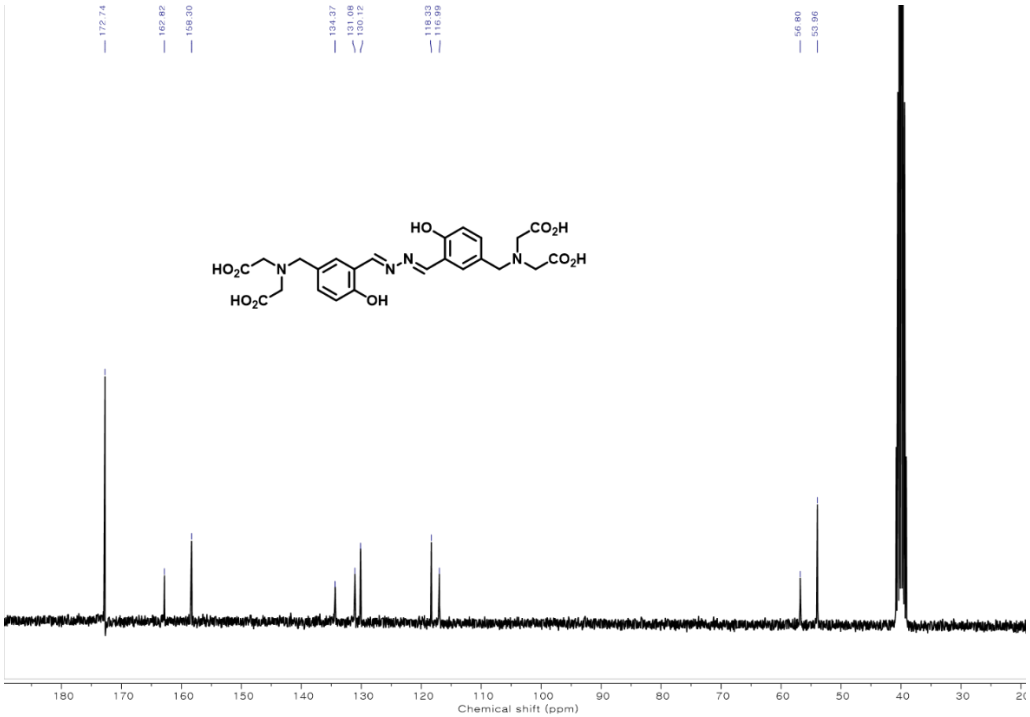

Figure S3. [13]C NMR spectrum of compound **1** in DMSO-d6.

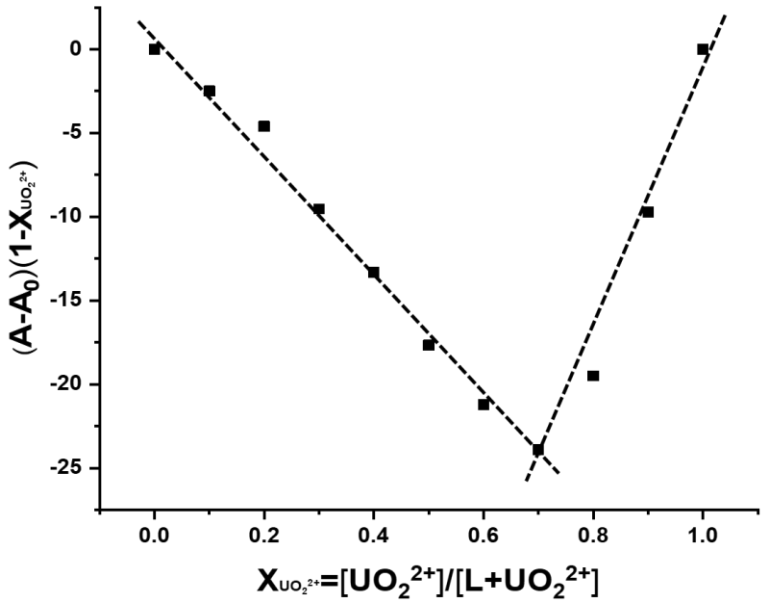

Figure S4. Job's plot for complex formed between compound **1** and UO_2^{2+}.

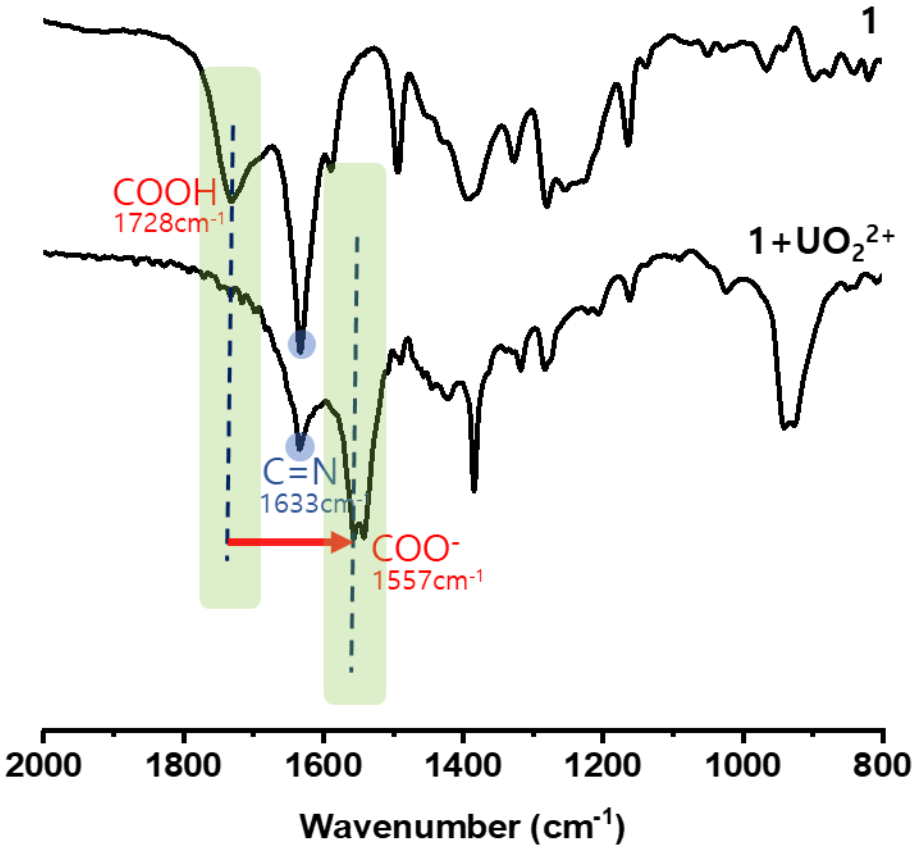

Figure S5. FT-IR spectra of **1** and **1** with UO_2^{2+}.

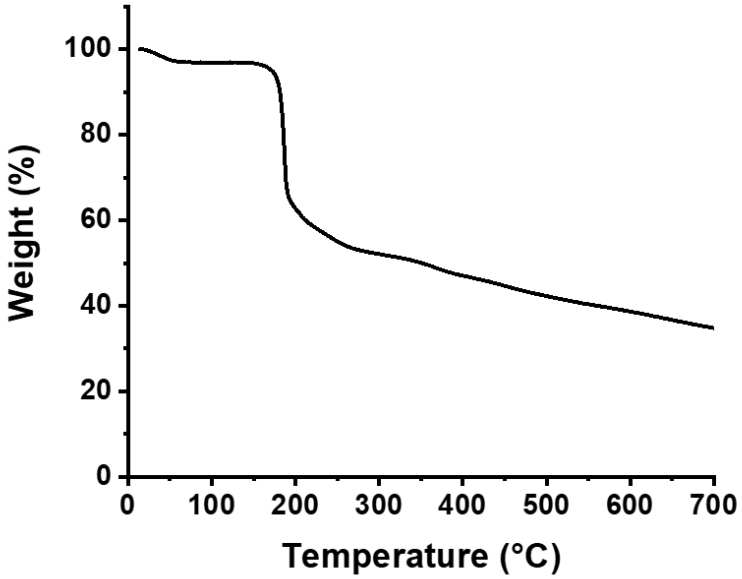

Figure S6. TGA thermogram of compound **1**.

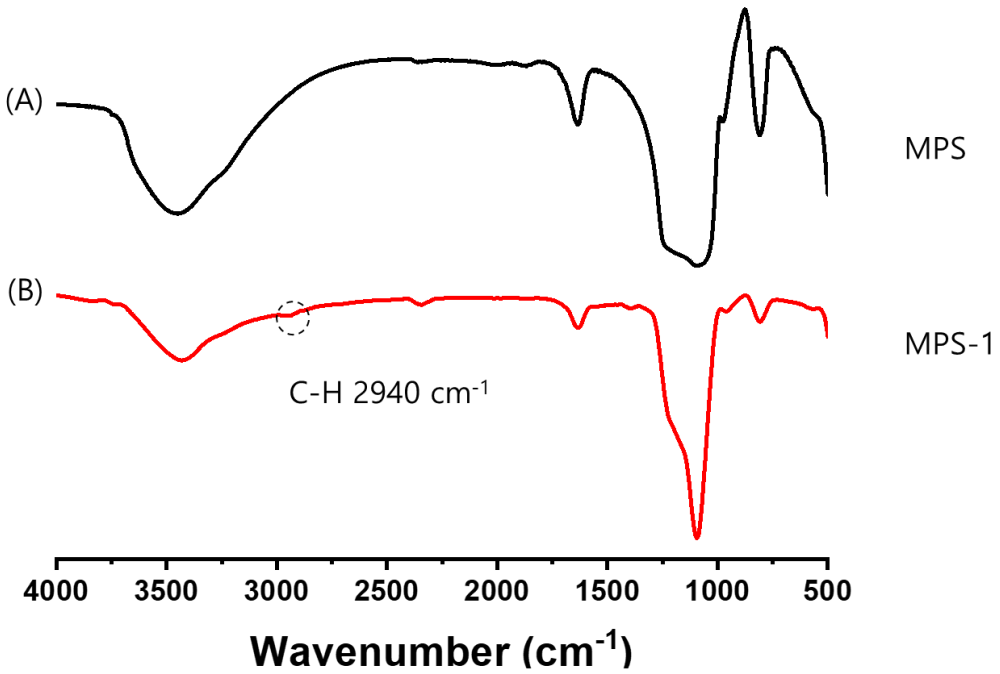

Figure S7. FT-IR spectra of (A) **MPS** and (B) **MPS-1**.

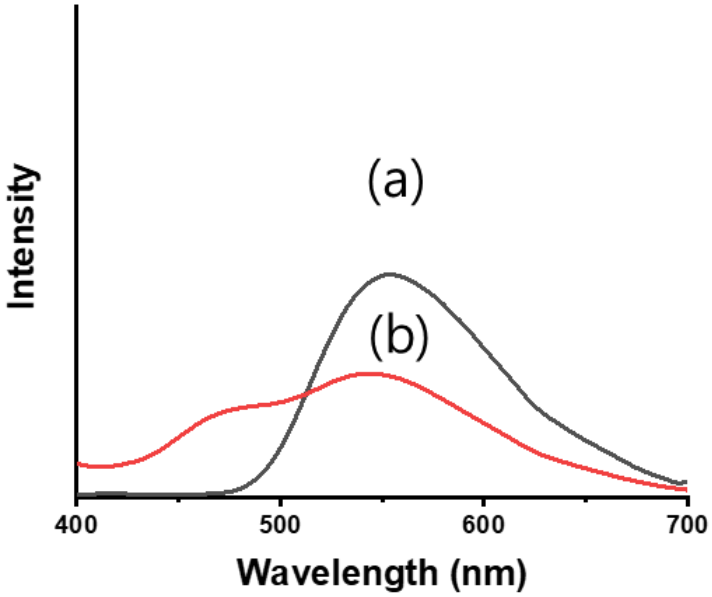

Figure S8. Fluorescence spectra of (a) **MPS-1** (2 mg) in 3.5% NaCl solution (2 mL) and (b) **MPS-1** (2 mg) with UO_2^{2+} solution (100 ppb) in 3.5% NaCl (2 mL).

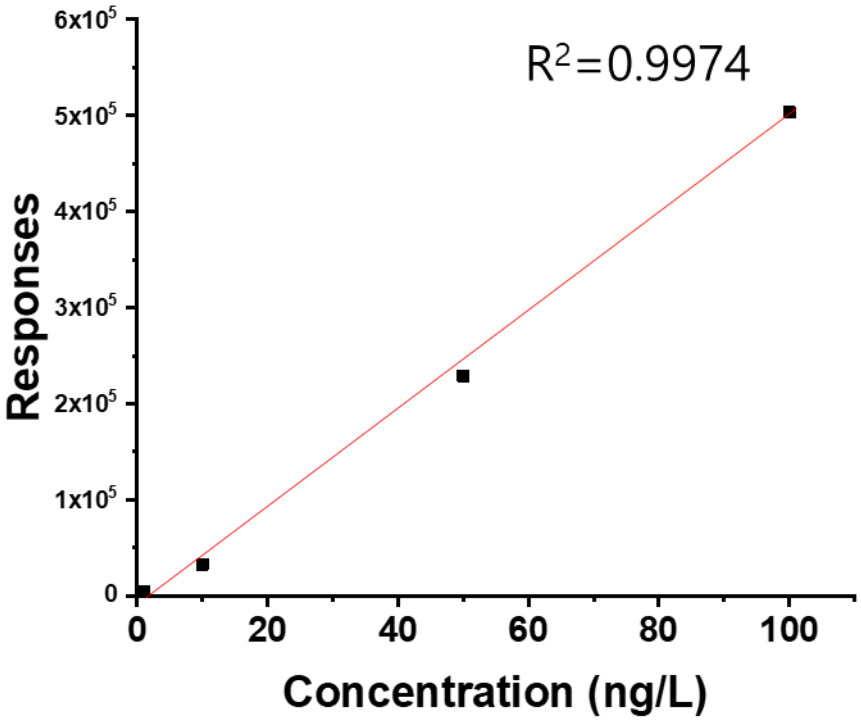

Figure S9. Linear equation of various concentrations of UO_2^{2+}.

Table S1. Adsorption Capacities of **MPS-1** for UO_2^{2+} (100 ppb) solution.[a]

MPS-1 (mg)	Removal of UO_2^{2+} (%)	SD	RSD(%)
1	69.65	4.14	13.64
3	96.28	0.44	12.02
5	95.16	0.60	12.47
MPS (mg)	Removal of UO_2^{2+} (%)	SD	RSD(%)
5	1.85	0.18	9.72

[a]SD = standard deviation; RSD = relative standard deviation.

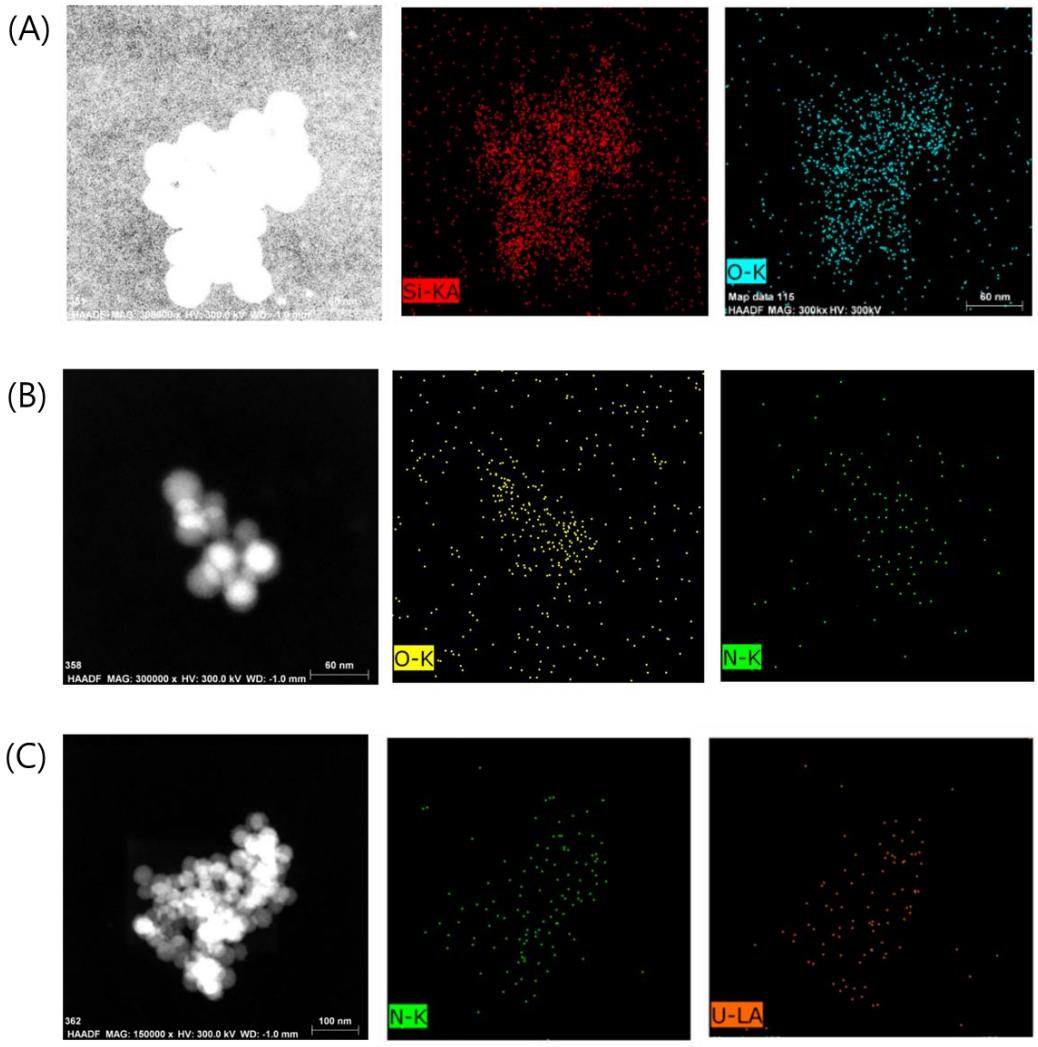

Figure S10. TEM EDX mapping of (A) **MPS** (B) **MPS-1** and (C) **MPS-1** with UO_2^{2+}.

Table S2. Adsorption Capacities of **MPS-1** (5 mg) with various metal ions (100 ppb) solution.

Removal of metal ion (%)								
UO_2^{2+}	Na^+	Mg^{2+}	Ca^{2+}	Cu^{2+}	Ag^+	Ni^{2+}	Mn^{2+}	Pb^{2+}
95.26	5.21	15.18	42.31	27.54	21.87	23.11	17.59	26.62