

Synthesis of Supramolecular Polymers with Calix[4]arene and β -Cyclodextrin and Their Application in Heavy Metal Ions Absorption

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I. NMR spectra

Figure S1.1 The ^1H NMR spectrum of UPy

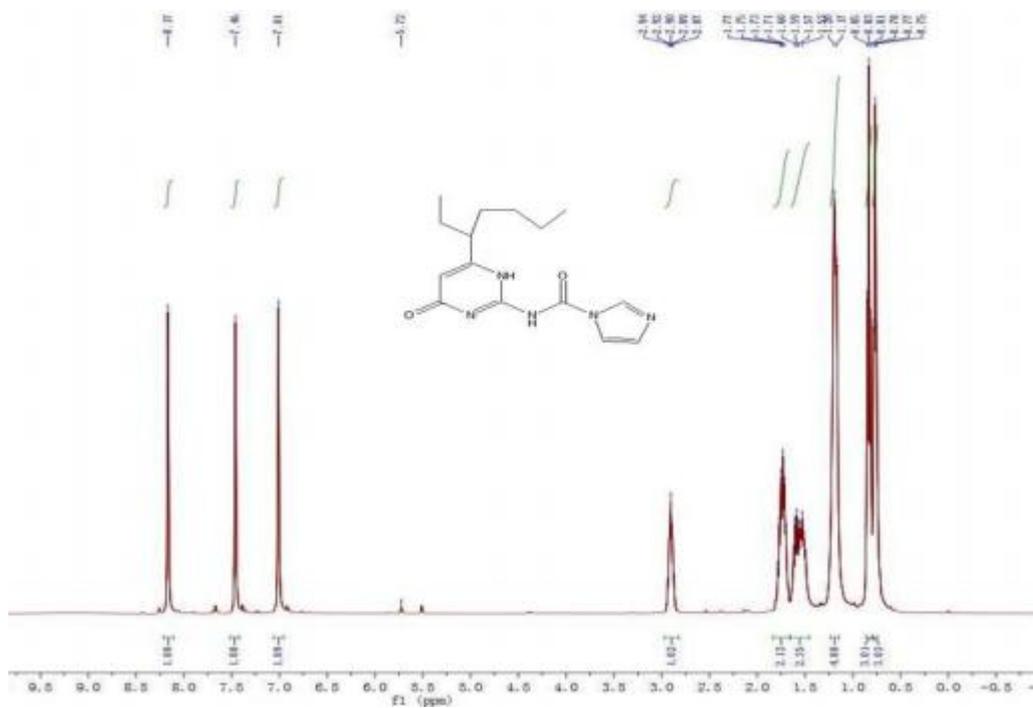


Figure S1.2 The ^1H NMR spectrum of b1

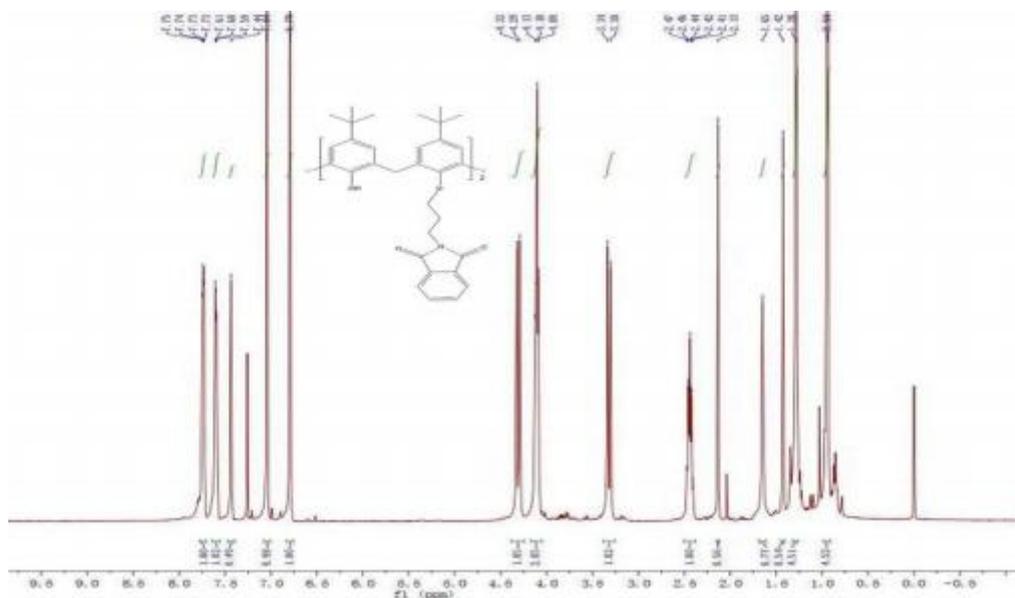


Figure S1.3 The ^1H NMR spectrum of b2

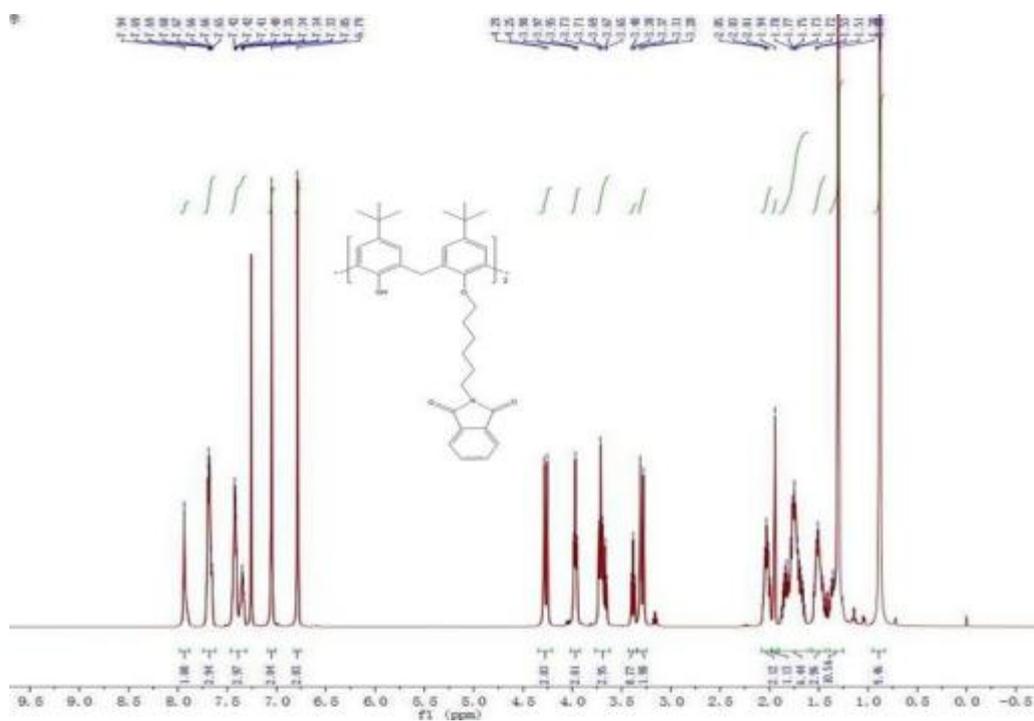


Figure S1.4 The ^1H NMR spectrum of b3

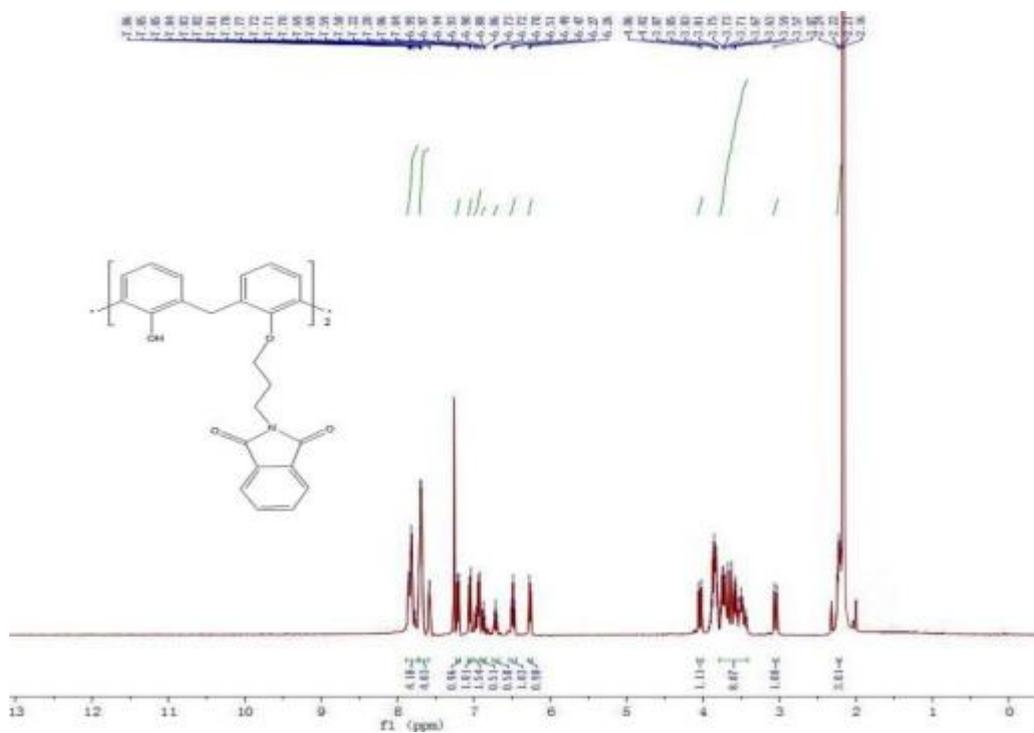


Figure S1.5 The ^1H NMR spectrum of b4

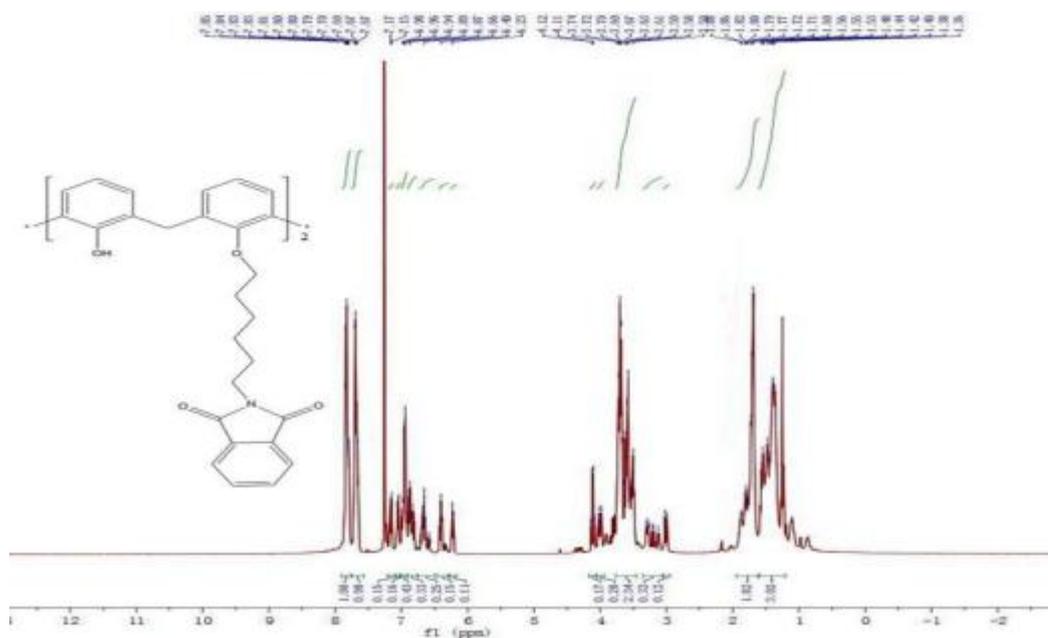


Figure S1.6 The ^1H NMR spectrum of fl

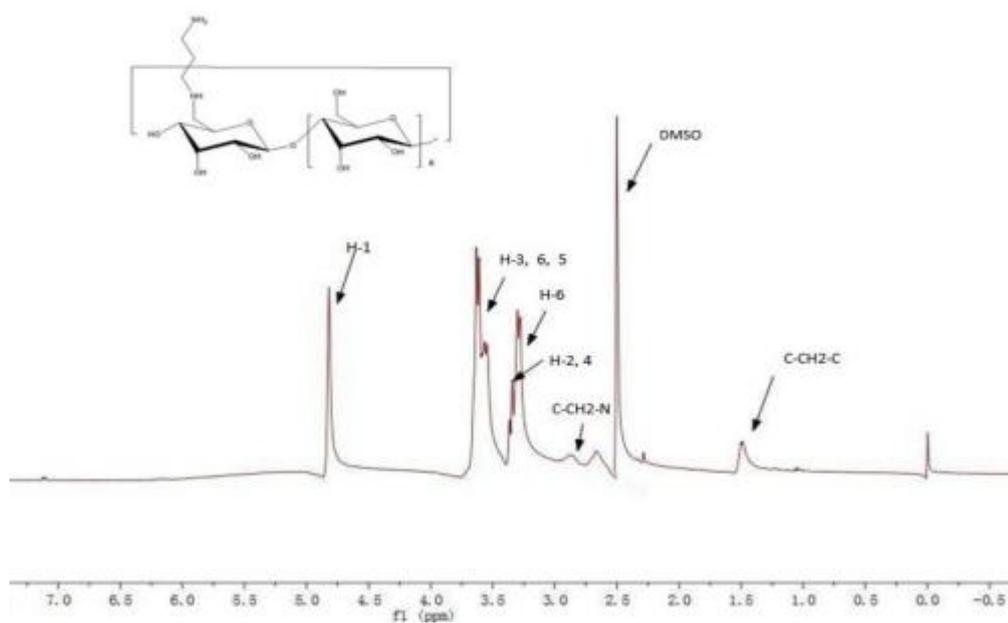


Figure S1.9 The ^{13}C NMR spectrum of BC4PUPy

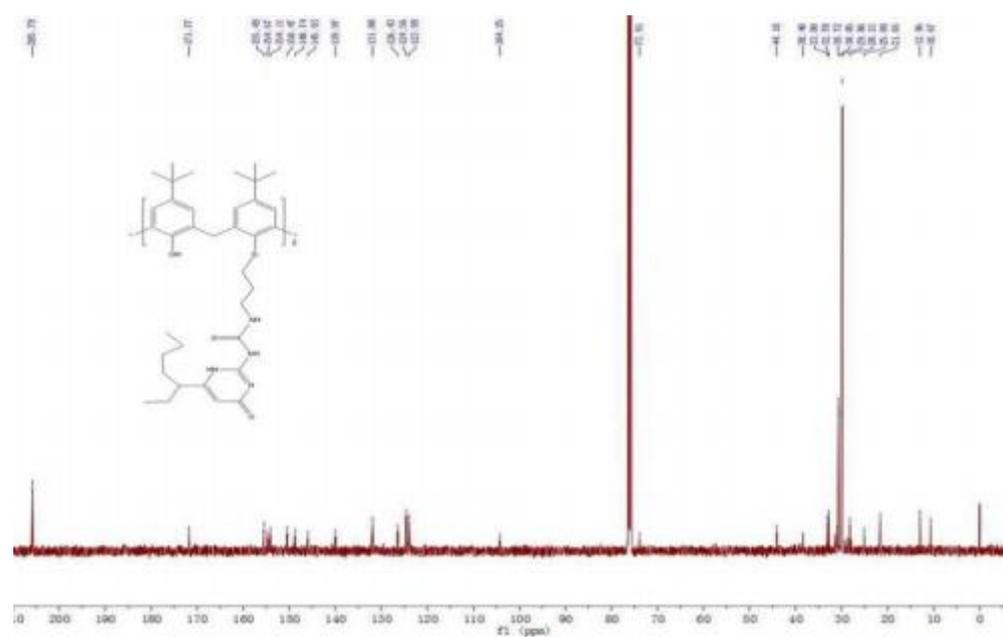


Figure S1.10 The ^1H NMR spectrum of BC4HUPy

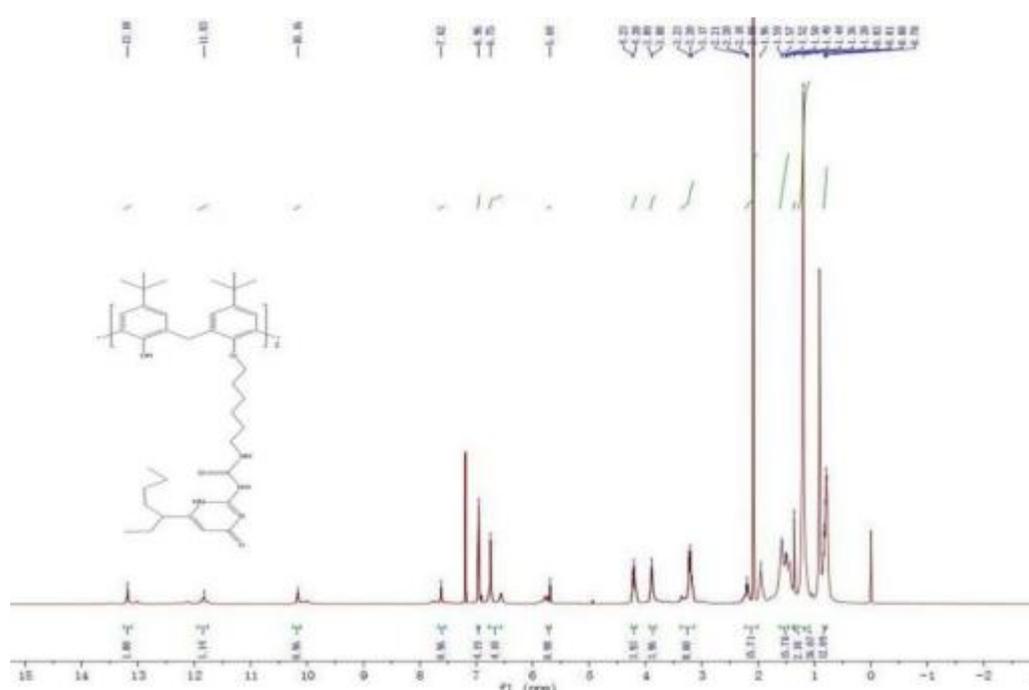


Figure S1.11 The ^{13}C NMR spectrum of BC4HUPy

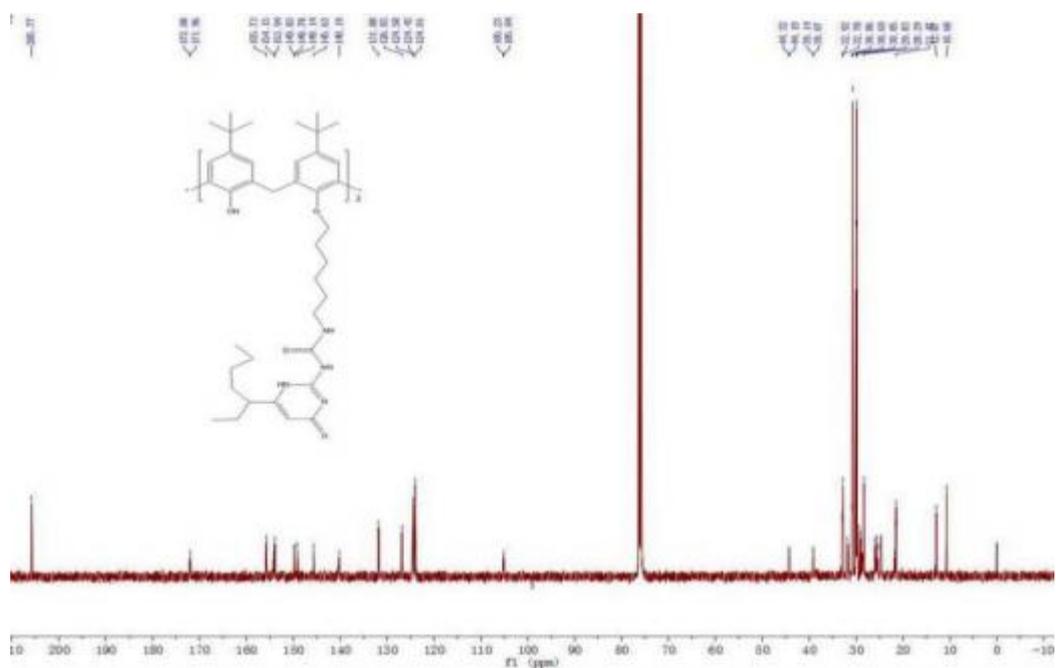


Figure S1.12 The ^1H NMR spectrum of C4PUPy

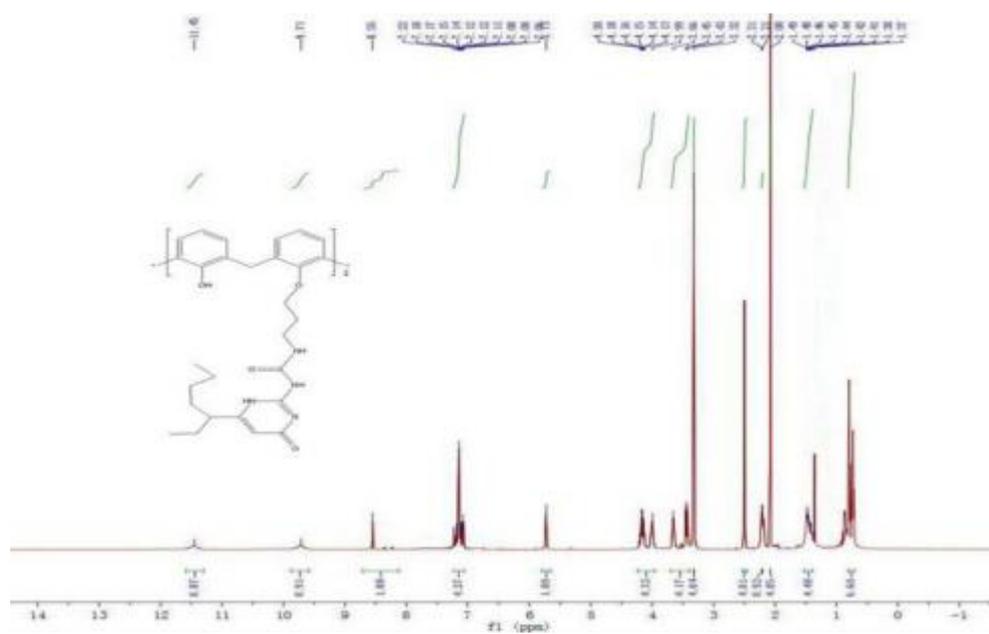


Figure S1.13 The ^{13}C NMR spectrum of C4PUPy

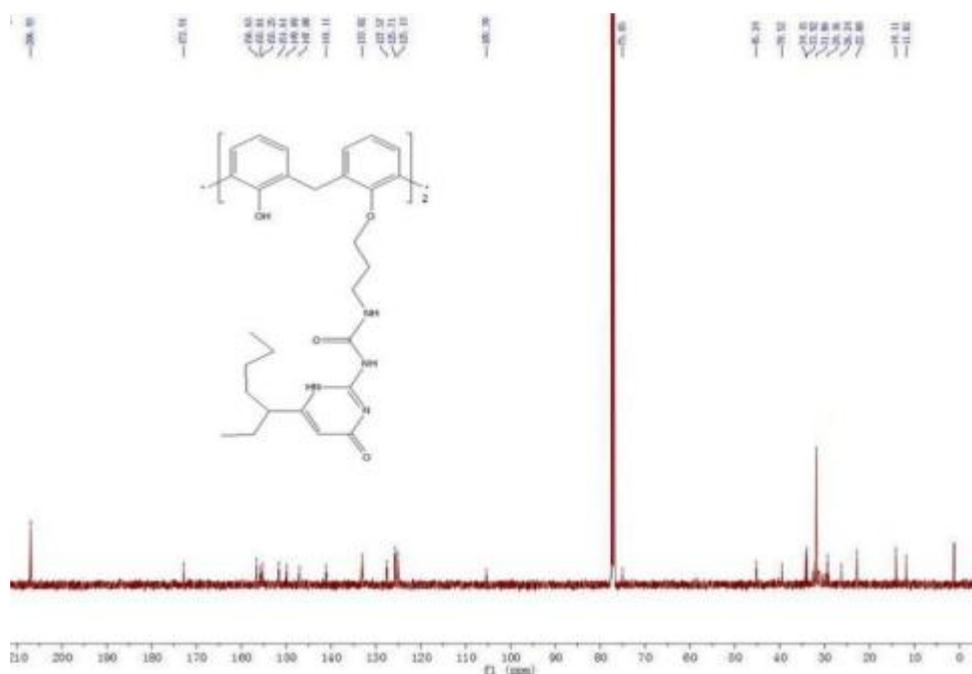


Figure S1.14 The ^1H NMR spectrum of C4HUPy

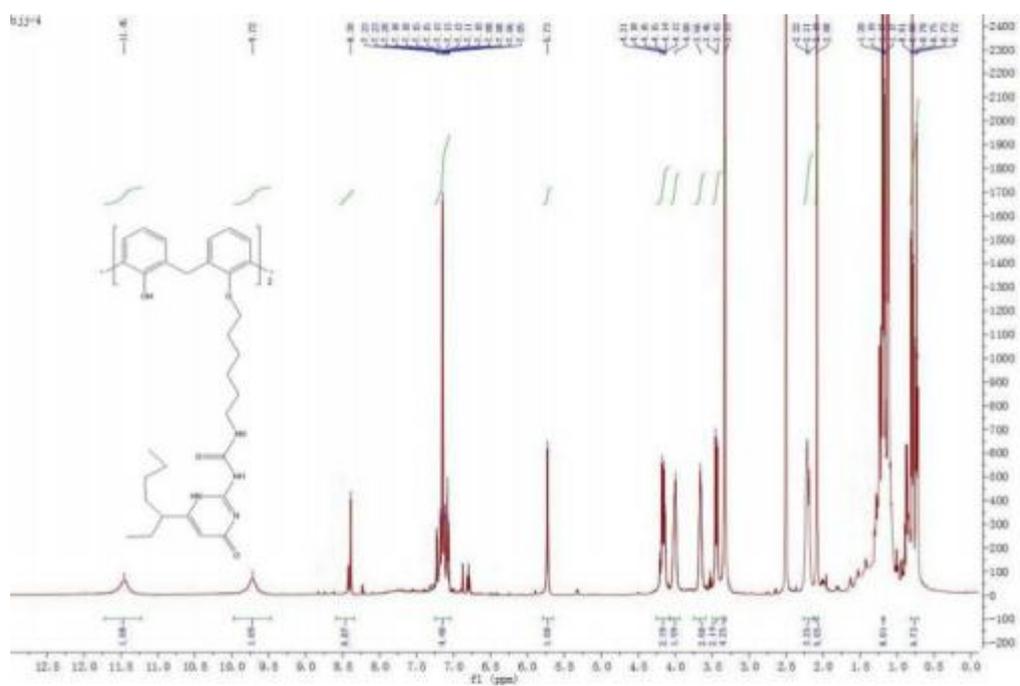


Figure S1.15 The ^{13}C NMR spectrum of C4HUPy

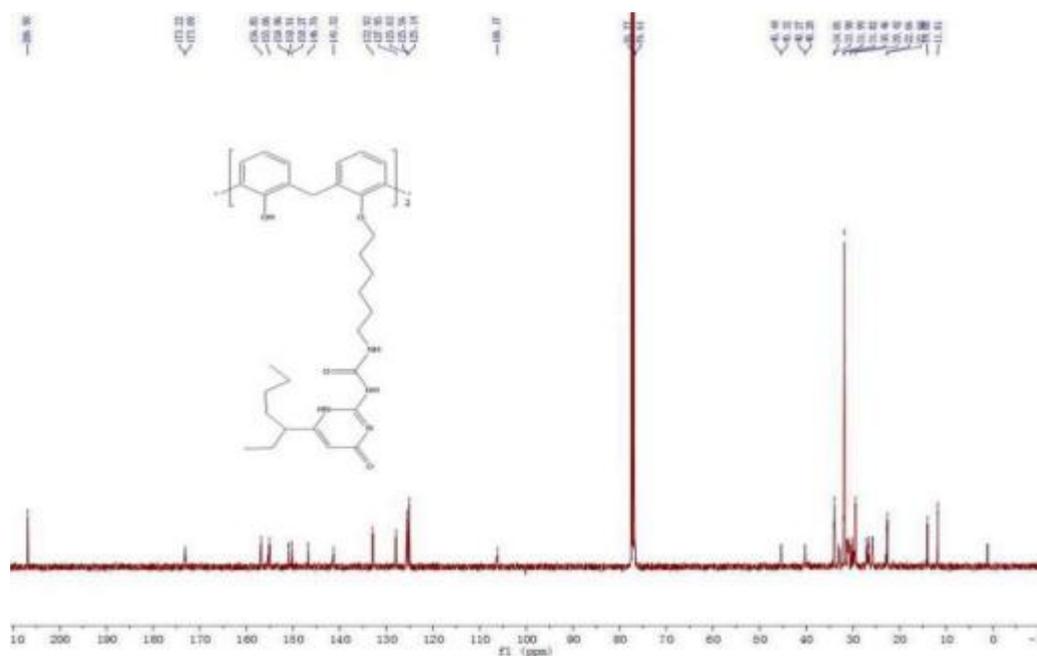


Figure S1.16 The ^1H NMR spectrum of β -CDPUPy

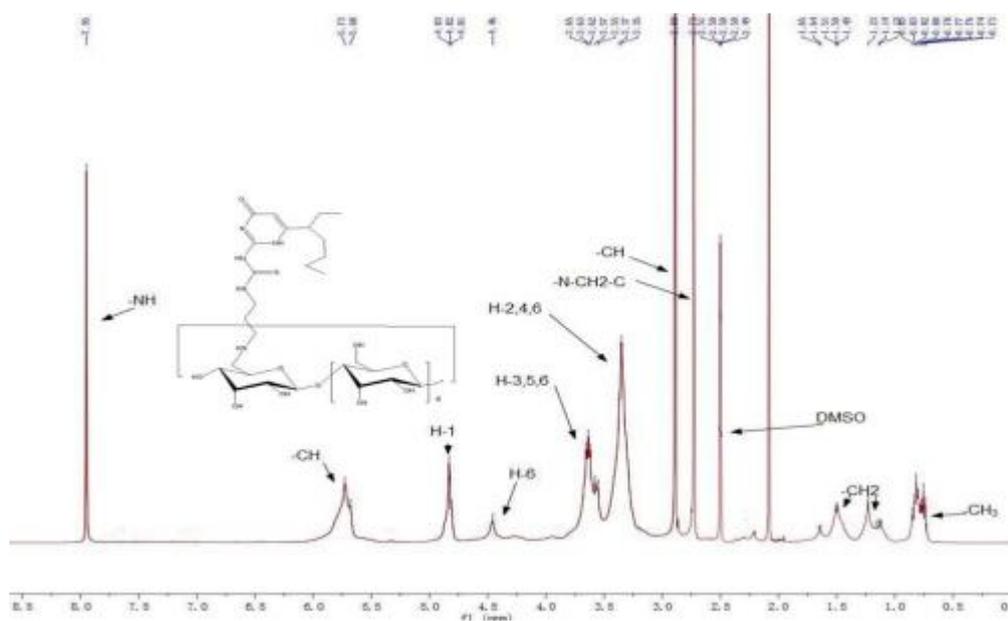


Figure S1.17 The ^{13}C NMR spectrum of β -CDPUPy

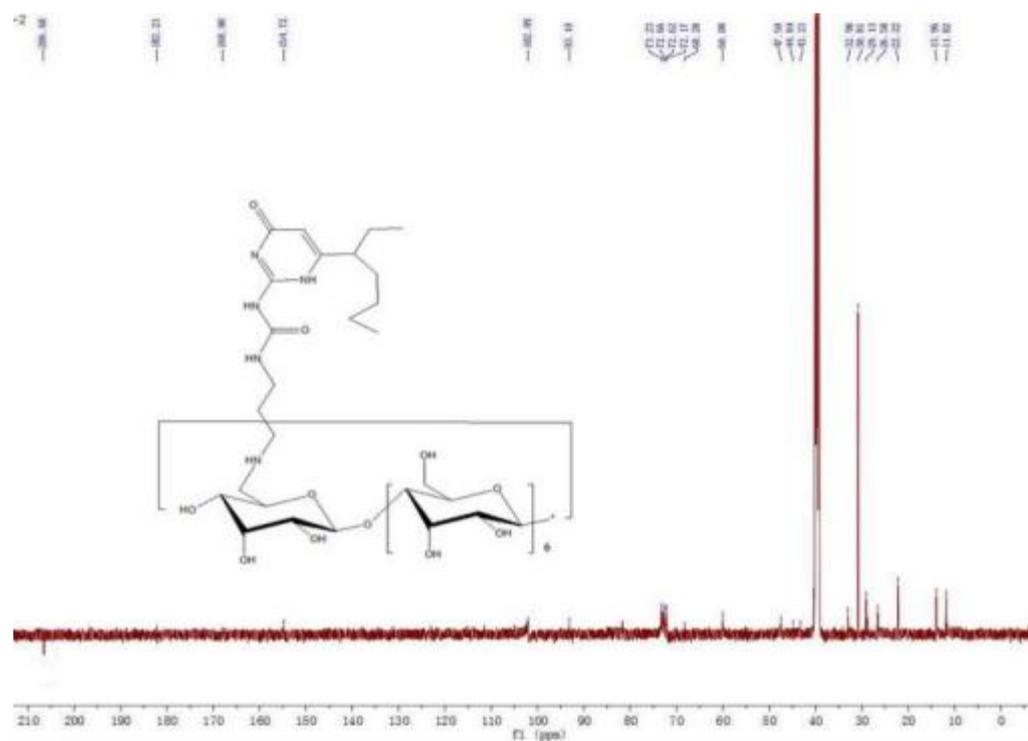


Figure S1.18 The ^1H NMR spectrum of β -CDBUPy

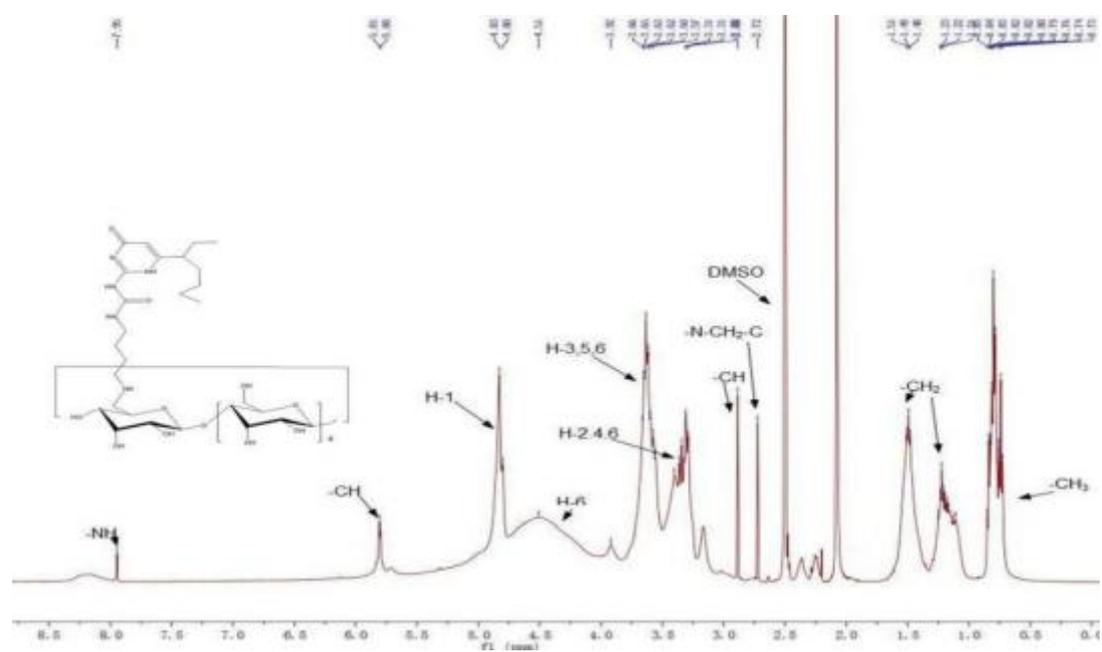


Figure S1.18 The ^{13}C NMR spectrum of β -CDBUPy

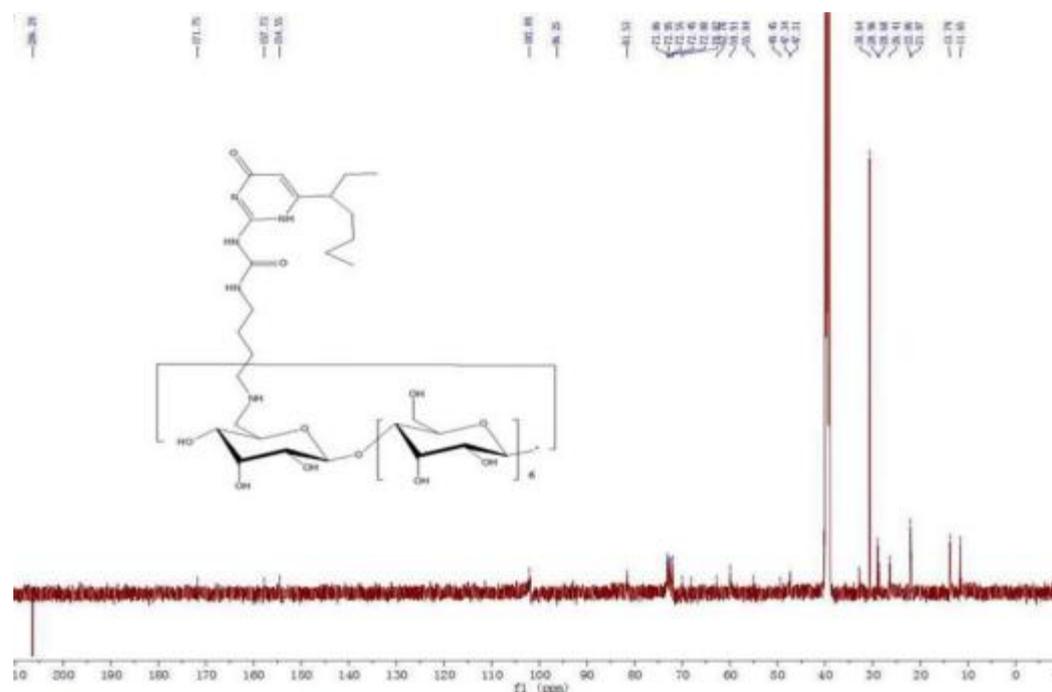


Figure S1.19 The ^1H NMR spectrum of β -CDHUPy

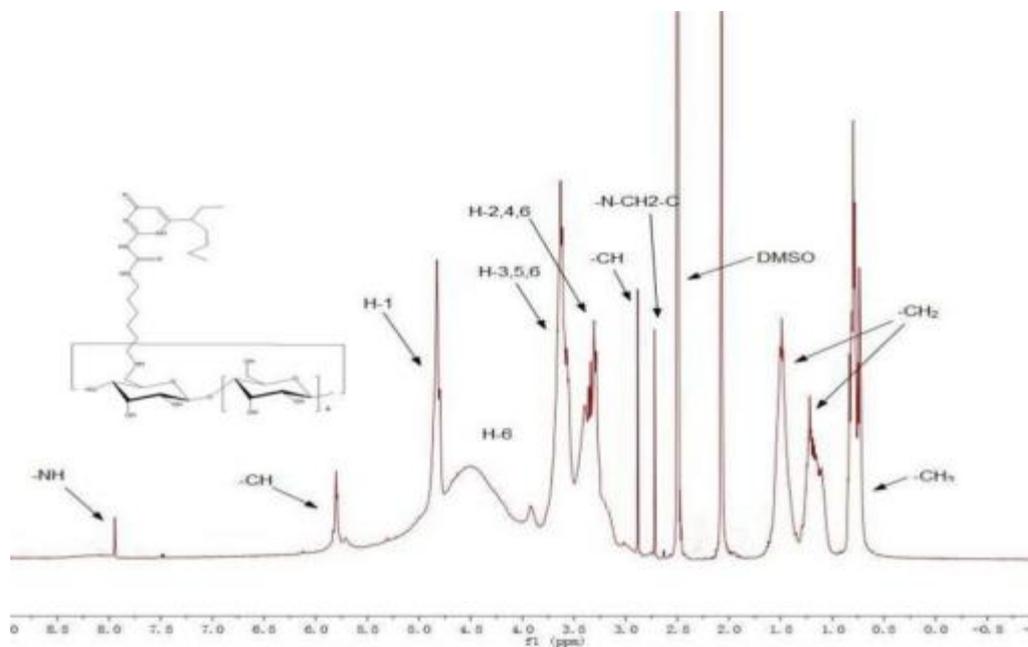
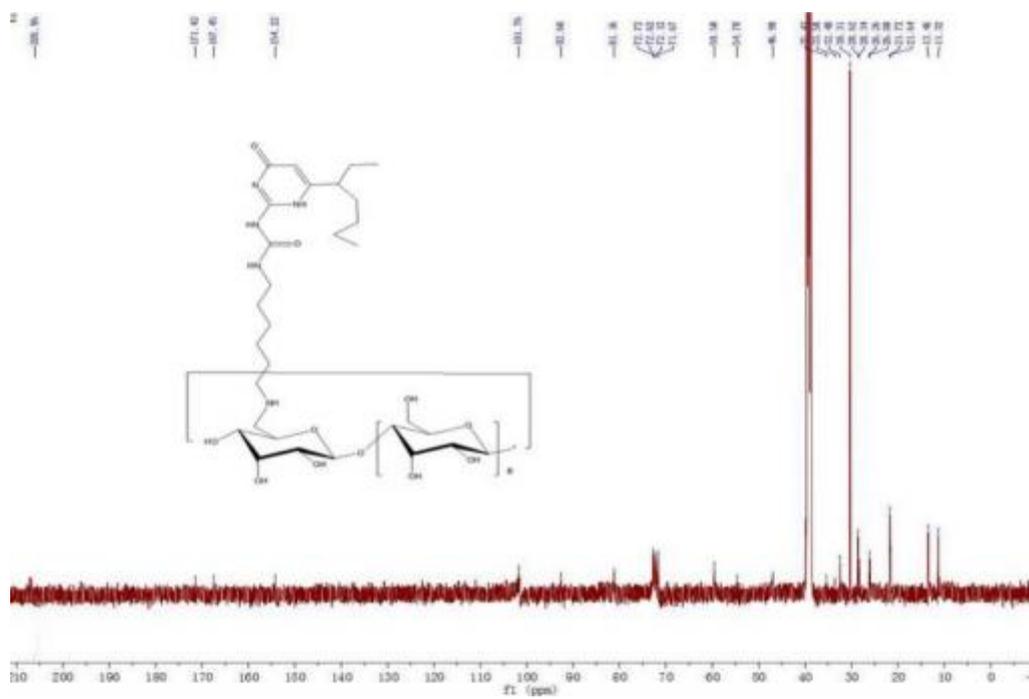


Figure S1.20 The ^{13}C NMR spectrum of β -CDHUPy



II. Adsorption rate of 5 chosen heavy metal ions in different pH solutions by title supramolecular polymers

Figure S2.1 Adsorption rate of Pb^{2+} in different pH solutions by supramolecular polymers with calixarene as main body (6 h)

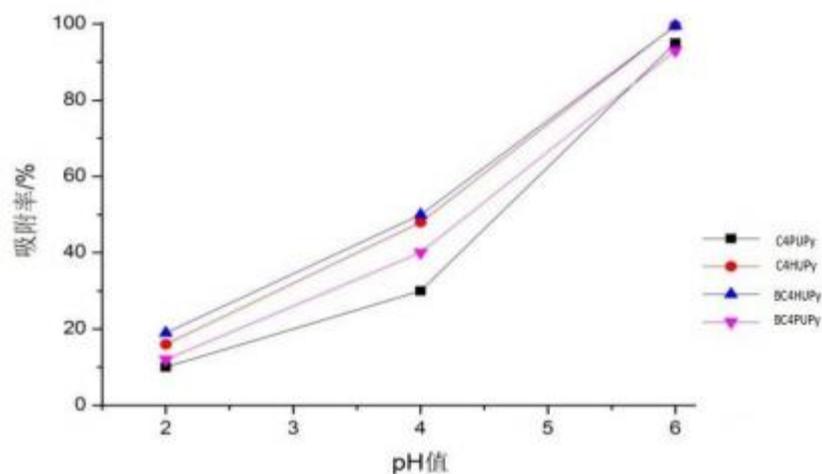


Figure S2.2 Adsorption rate of Pb^{2+} in different pH solutions by supramolecular polymers with β -CD as main body (6 h)

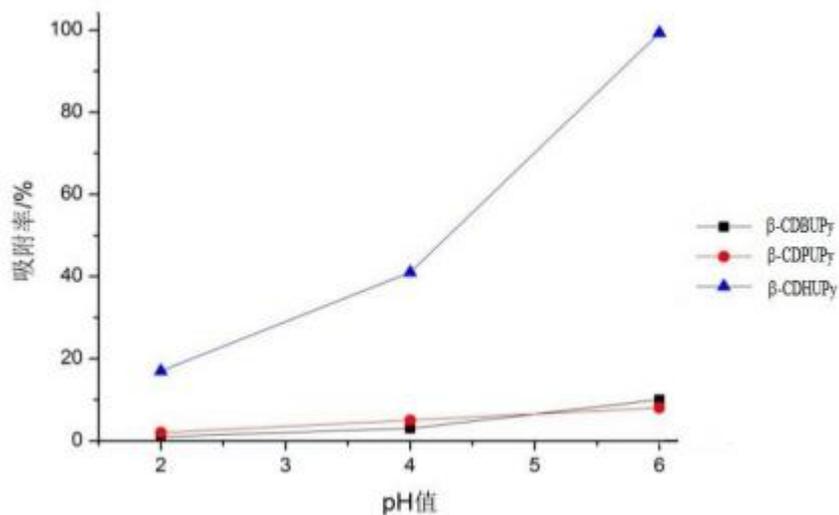


Figure S2.3 Adsorption rate of Cd^{2+} in different pH solutions by supramolecular polymers with calixarene as main body (6 h)

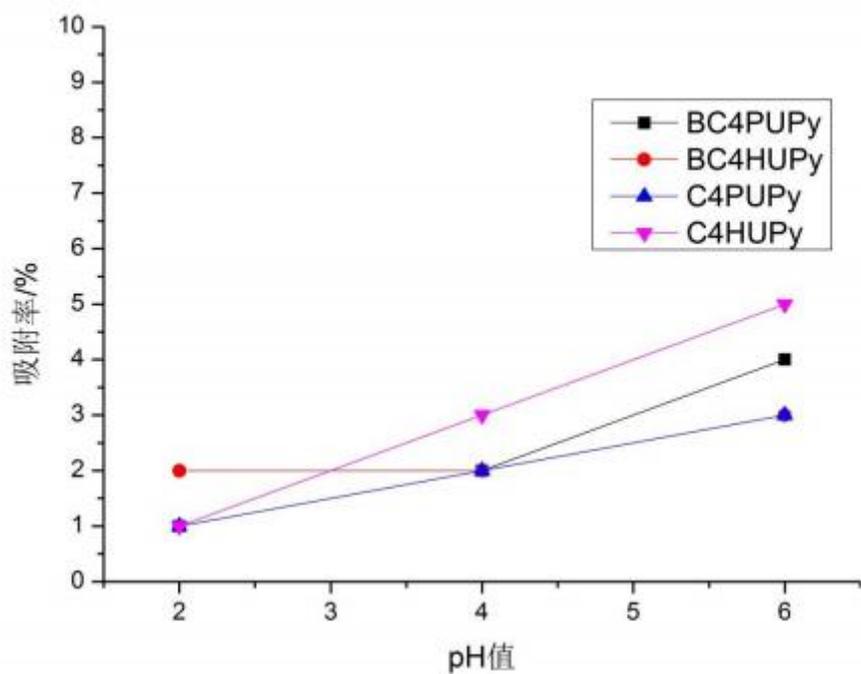


Figure S2.4 Adsorption rate of Cd^{2+} in different pH solutions by supramolecular polymers with β -CD as main body (6 h)

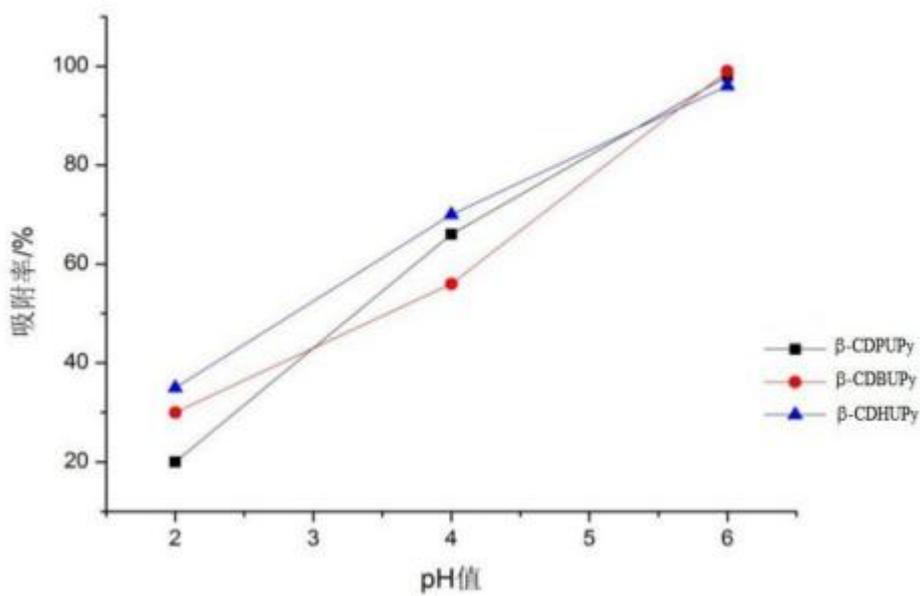


Figure S2.5 Adsorption rate of Zn^{2+} in different pH solutions by supramolecular polymers with calixarene as main body (6 h)

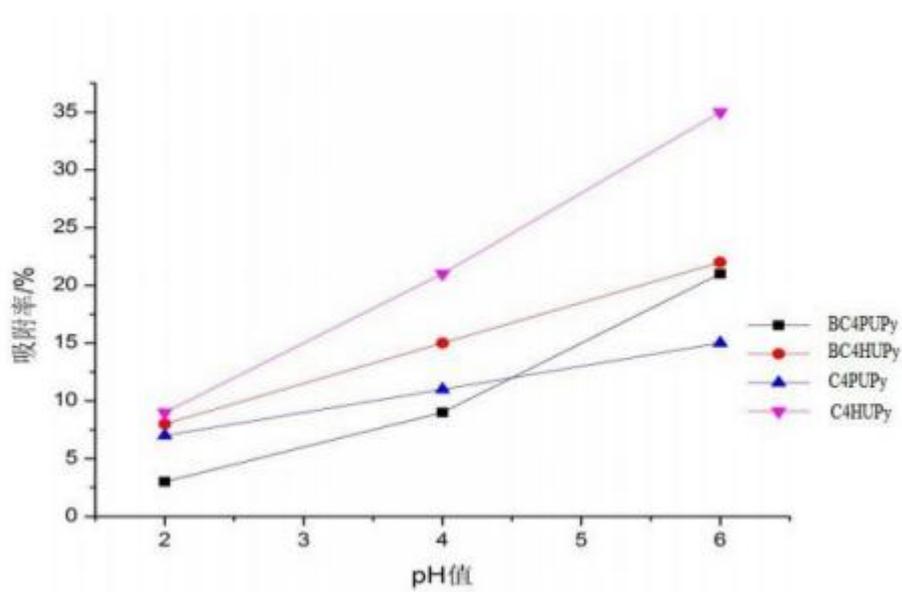


Figure S2.6 Adsorption rate of Zn^{2+} in different pH solutions by supramolecular polymers with β -CD as main body (6 h)

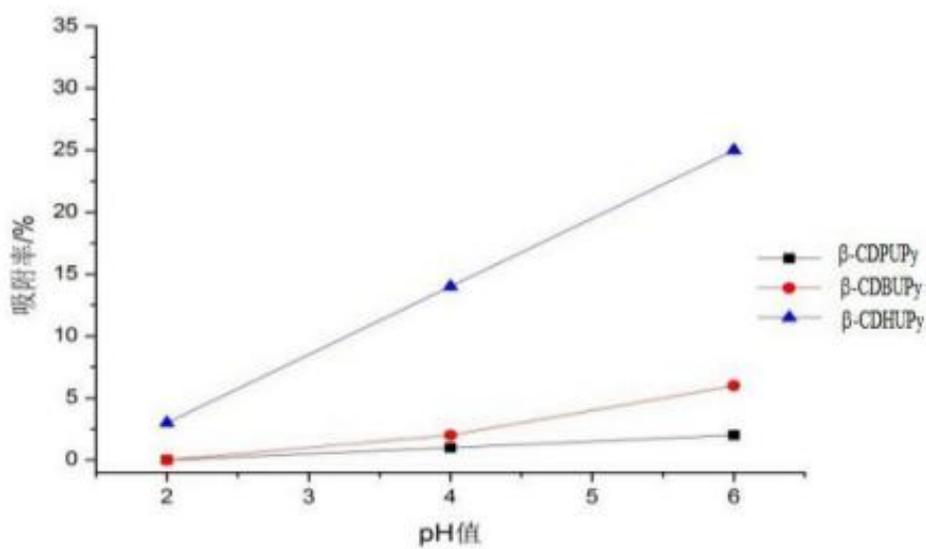


Figure S2.7 Adsorption rate of Ni^{2+} in different pH solutions by supramolecular polymers with calixarene as main body (6 h)

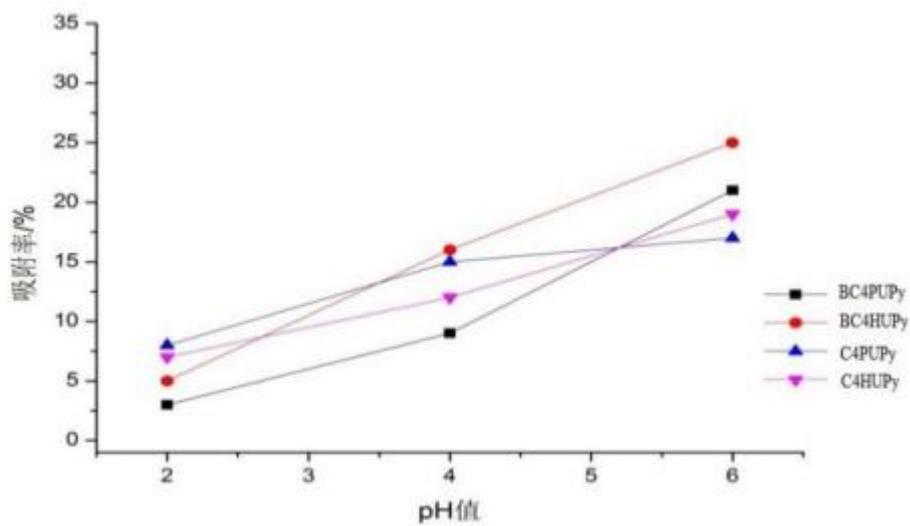


Figure S2.8 Adsorption rate of Ni^{2+} in different pH solutions by supramolecular polymers with β -CD as main body (6 h)

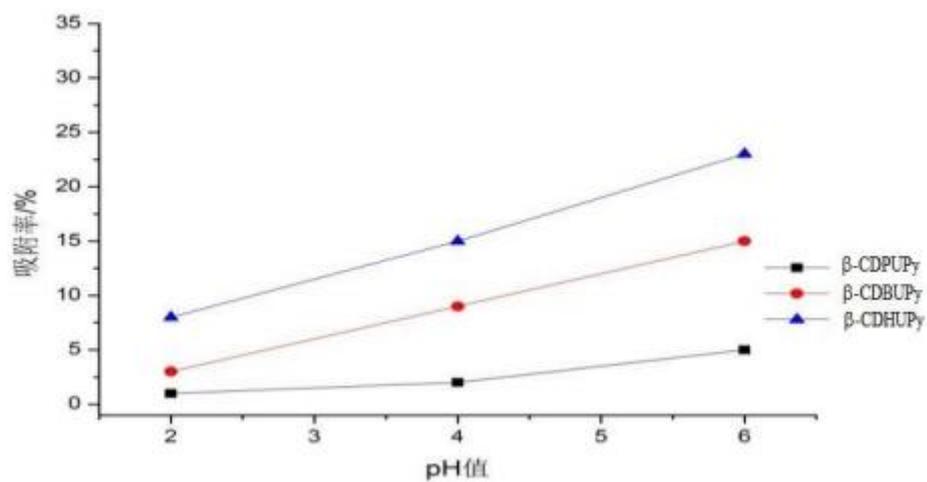


Figure S2.9 Adsorption rate of Cu^{2+} in different pH solutions by supramolecular polymers with calixarene as main body (6 h)

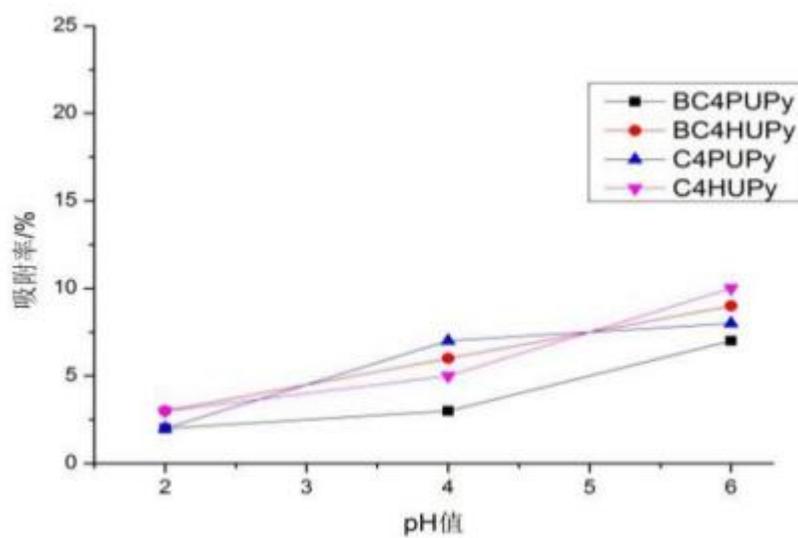


Figure S2.10 Adsorption rate of Cu^{2+} in different pH solutions by supramolecular polymers with β -CD as main body (6 h)

