Electronic Supporting Information

Fast and Selective Reversed-Phase High-Performance Liquid Chromatographic Separation of UO_2^{2+} and Th^{4+} Ions using Surface Modified C_{18} Silica Monolithic Supports with Target Specific Ionophoric Ligands

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I. ^{1}H & ^{13}C NMR & FT-IR spectra of HBBTA

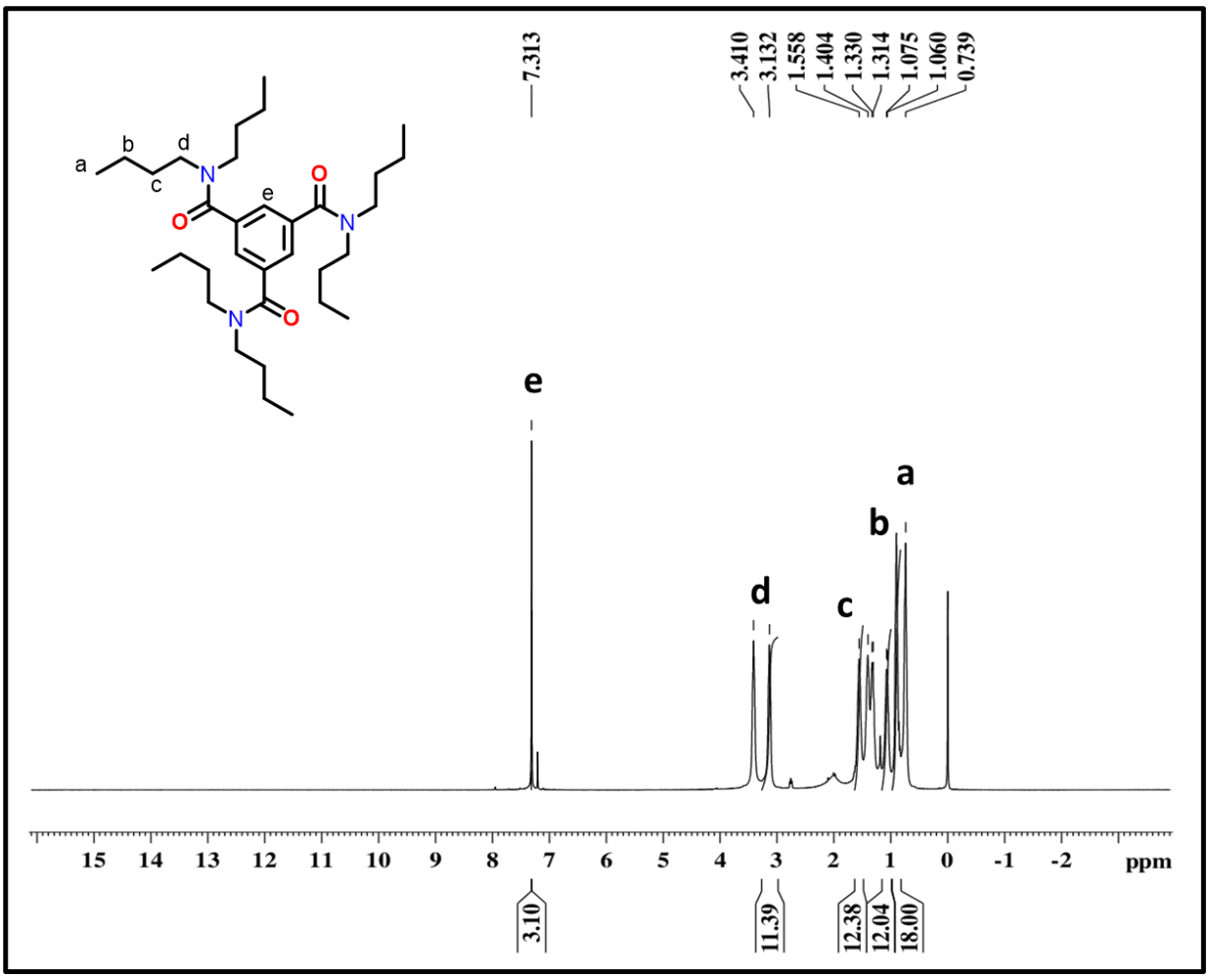

Fig. S1 ^{1}H NMR spectrum of HBBTA

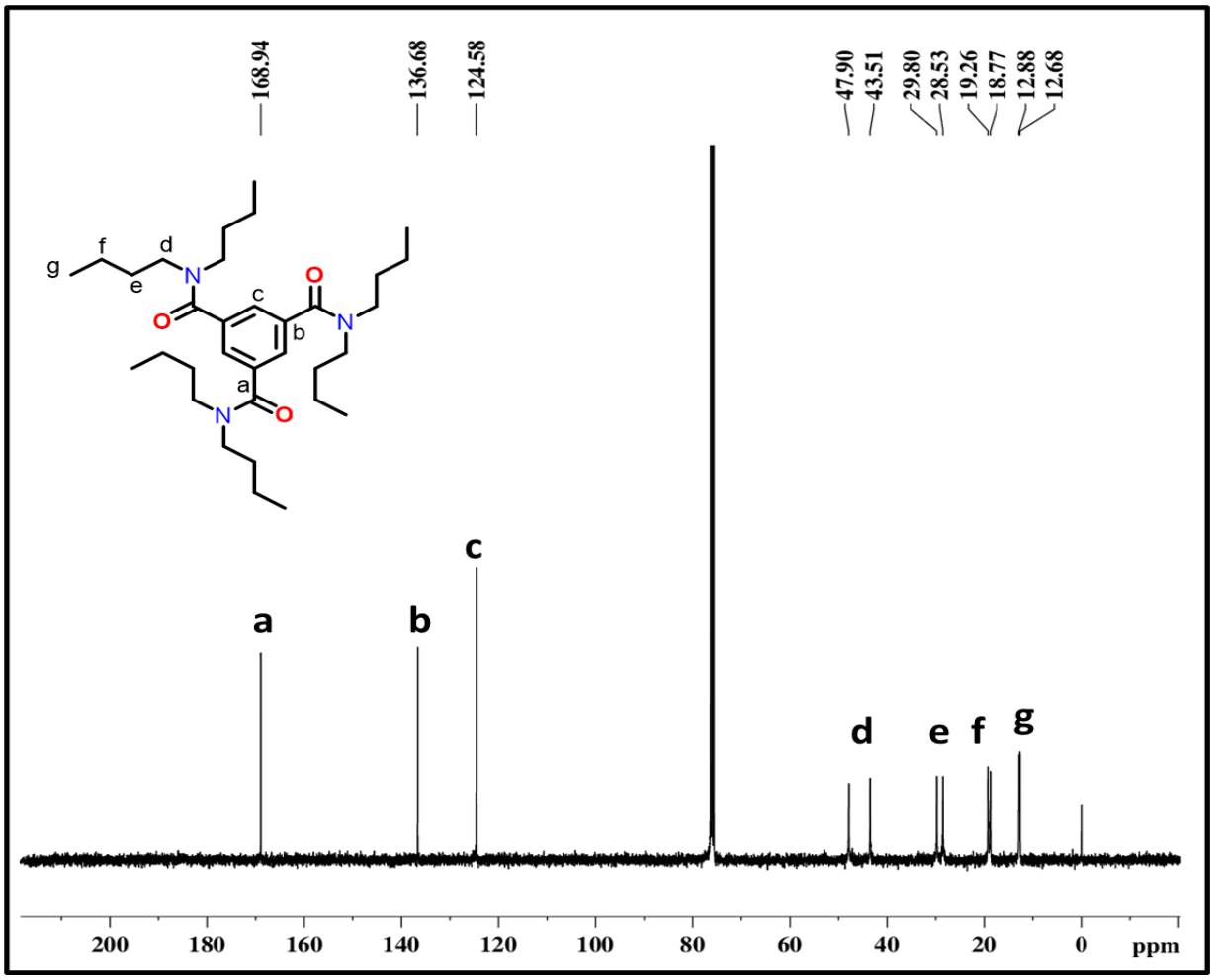

Fig. S2 ^{13}C NMR spectrum of HBBTA

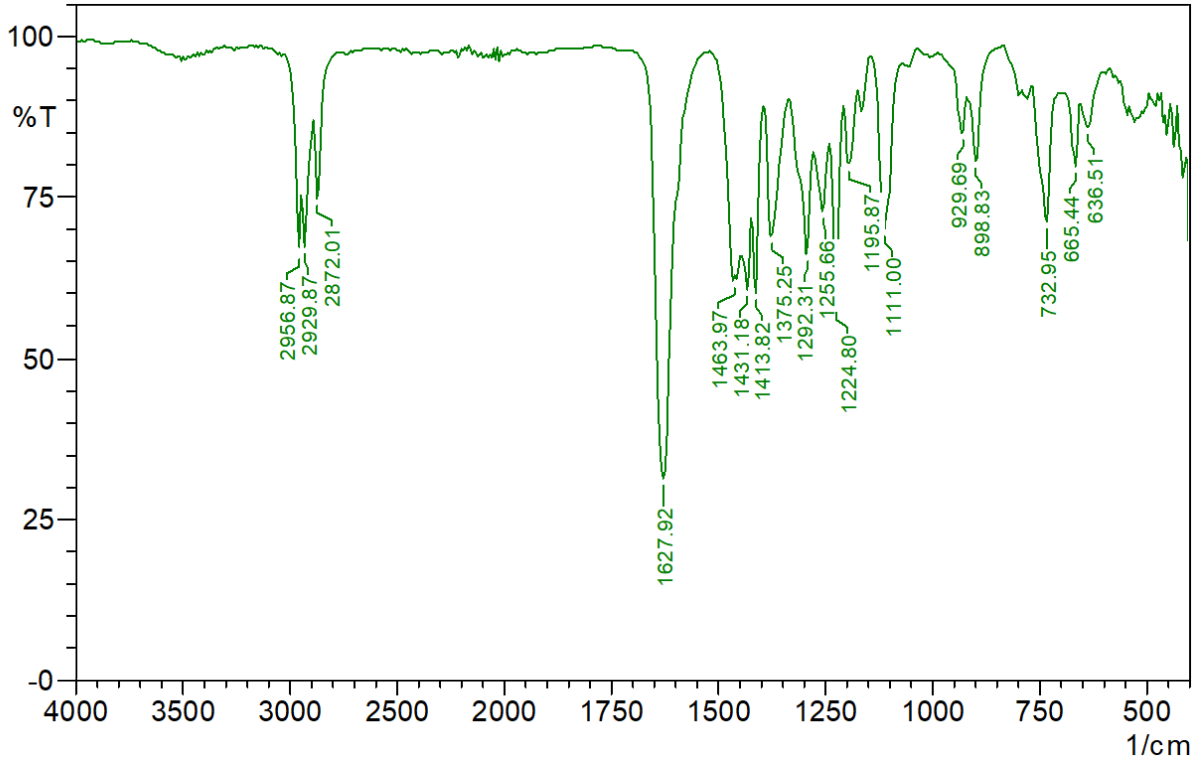

Fig. S3 FT-IR spectrum of HBBTA

II. ^{1}H & ^{13}C NMR & FT-IR spectra of HHBTA

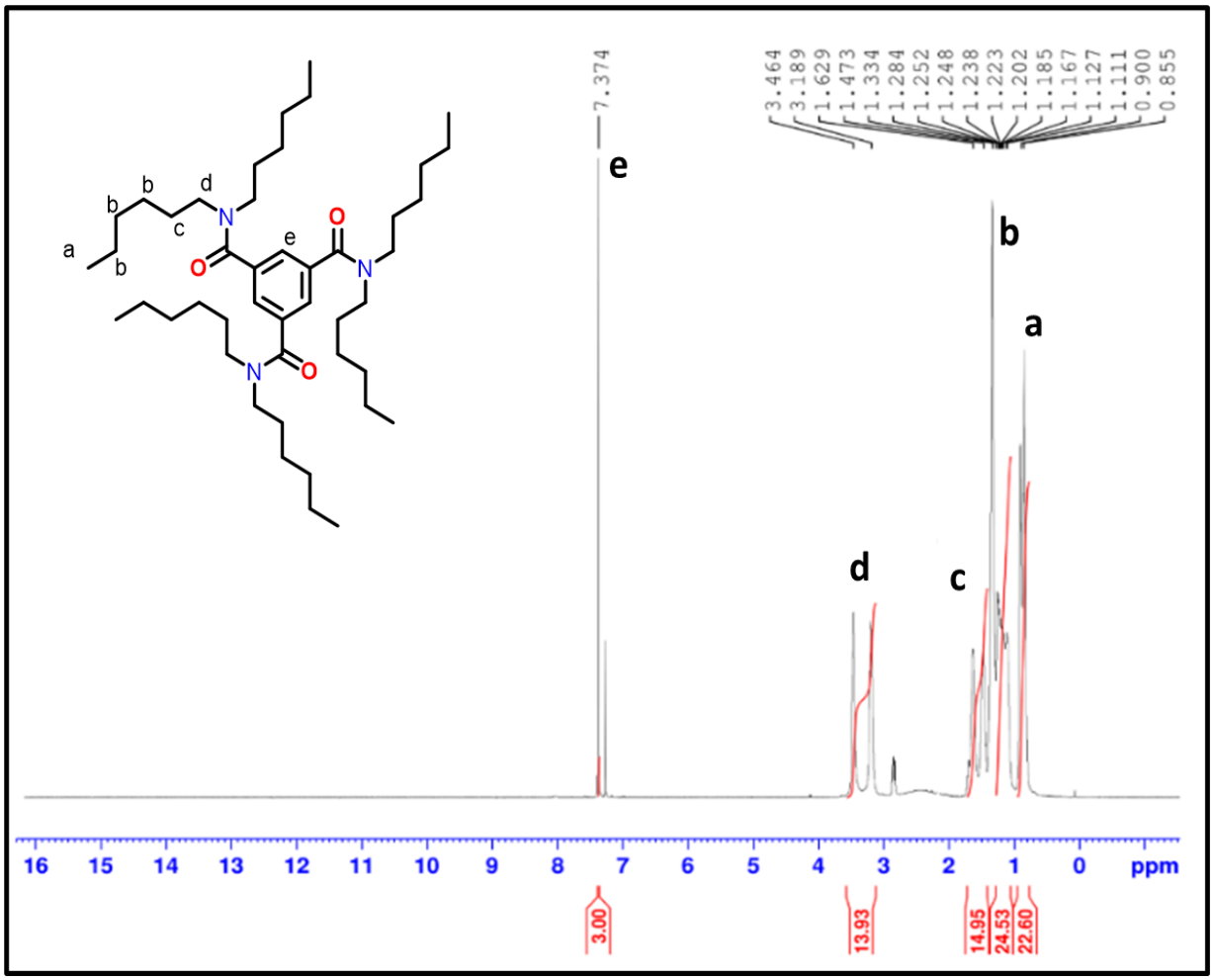

Fig. S4 ^{1}H NMR spectrum of HHBTA

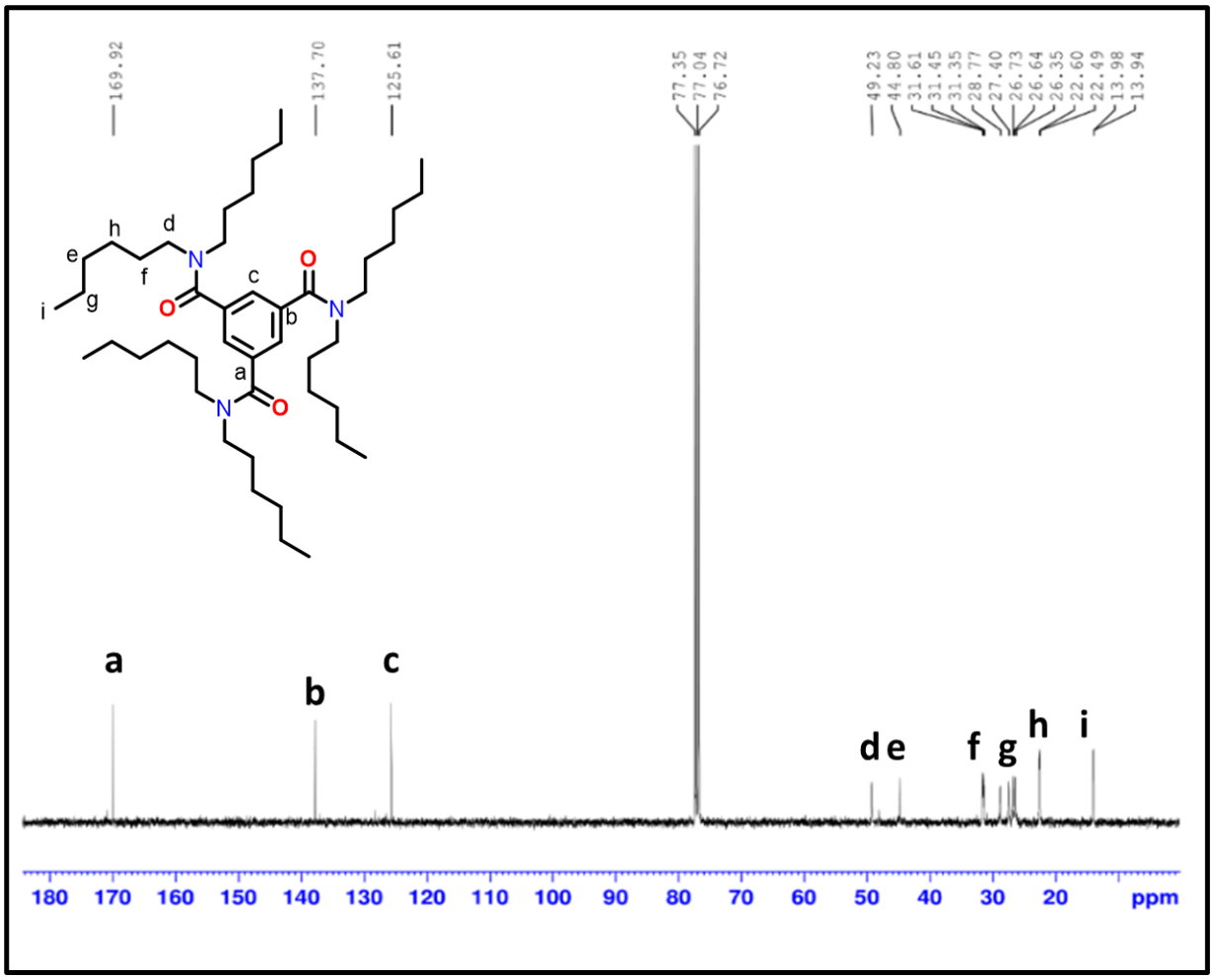

Fig. S5 ^{13}C NMR spectrum of HHBTA

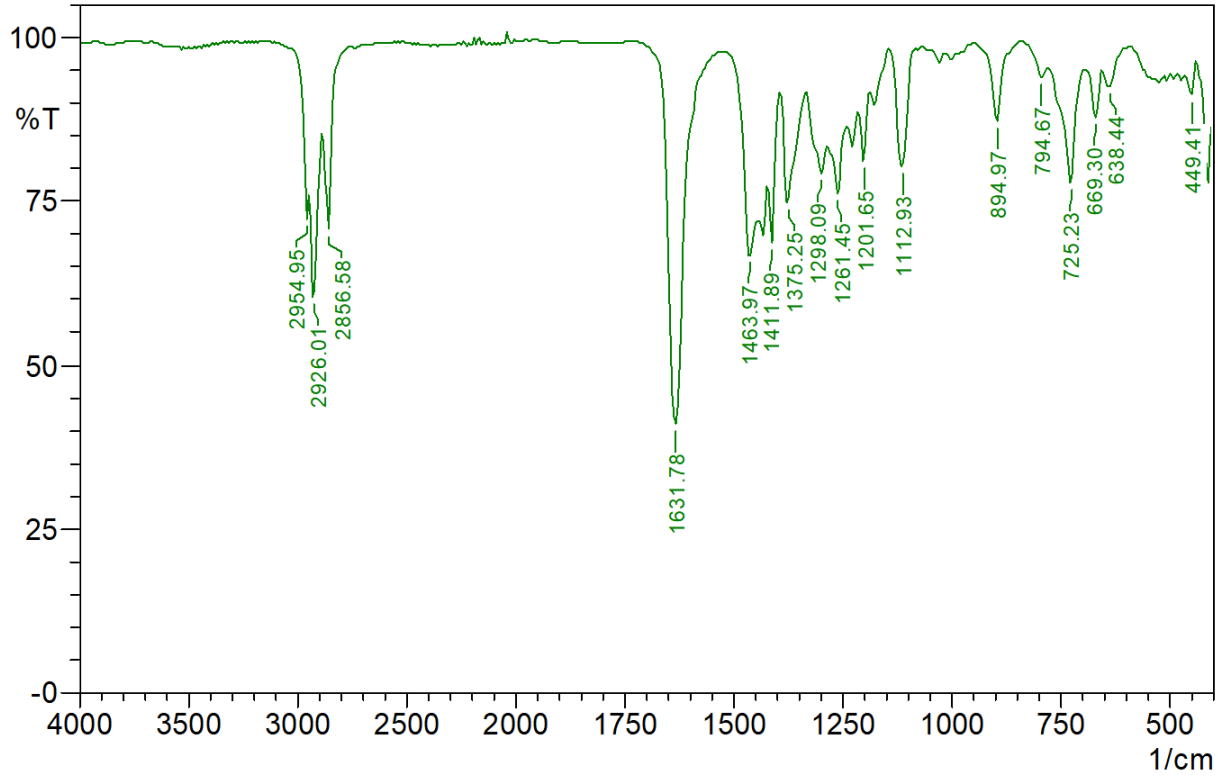

Fig. S6 FT-IR spectrum of HHBTA

III. ^{1}H & ^{13}C NMR & FT-IR spectra of HOBTA

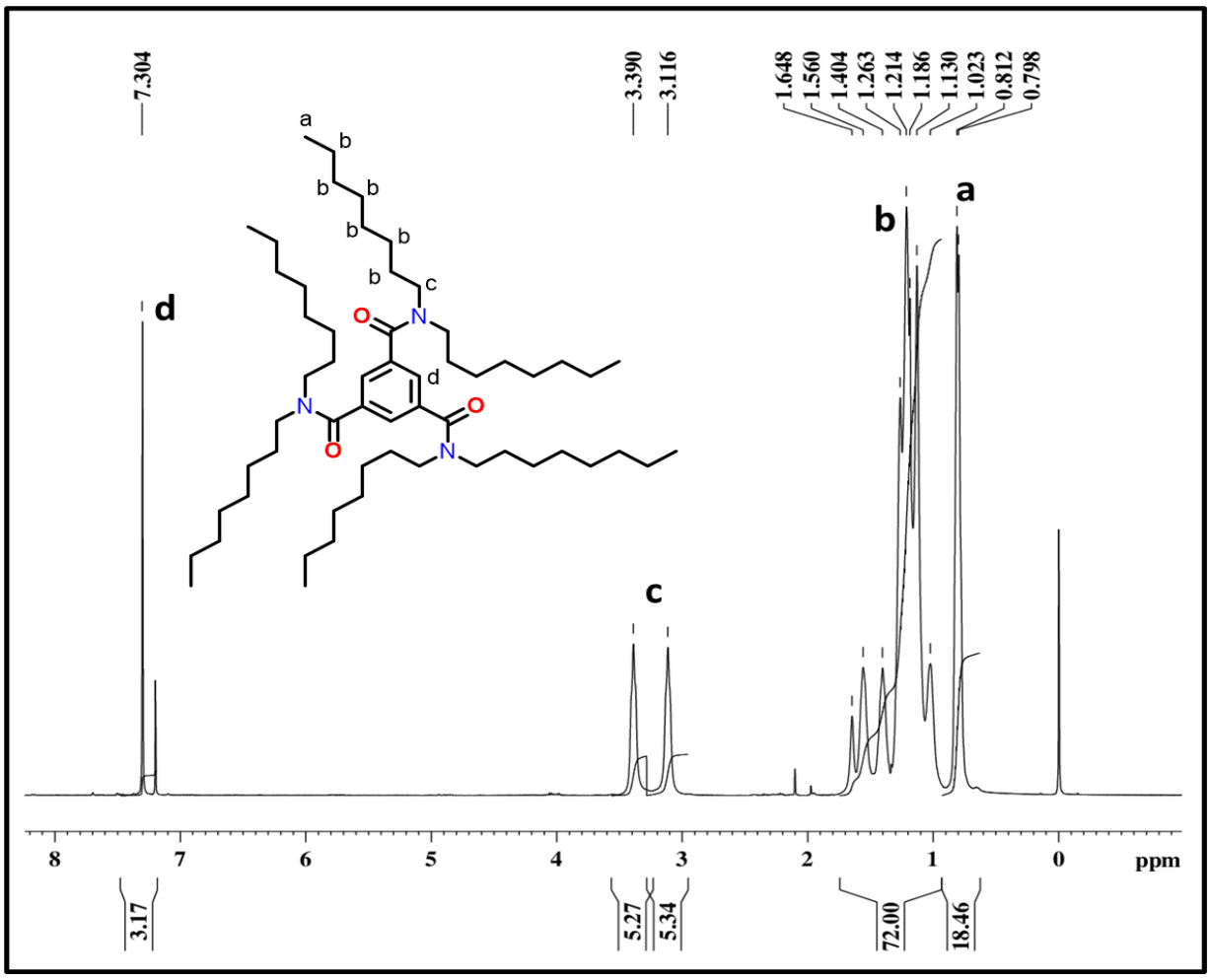

Fig. S7 ^{1}H NMR spectrum of HOBTA

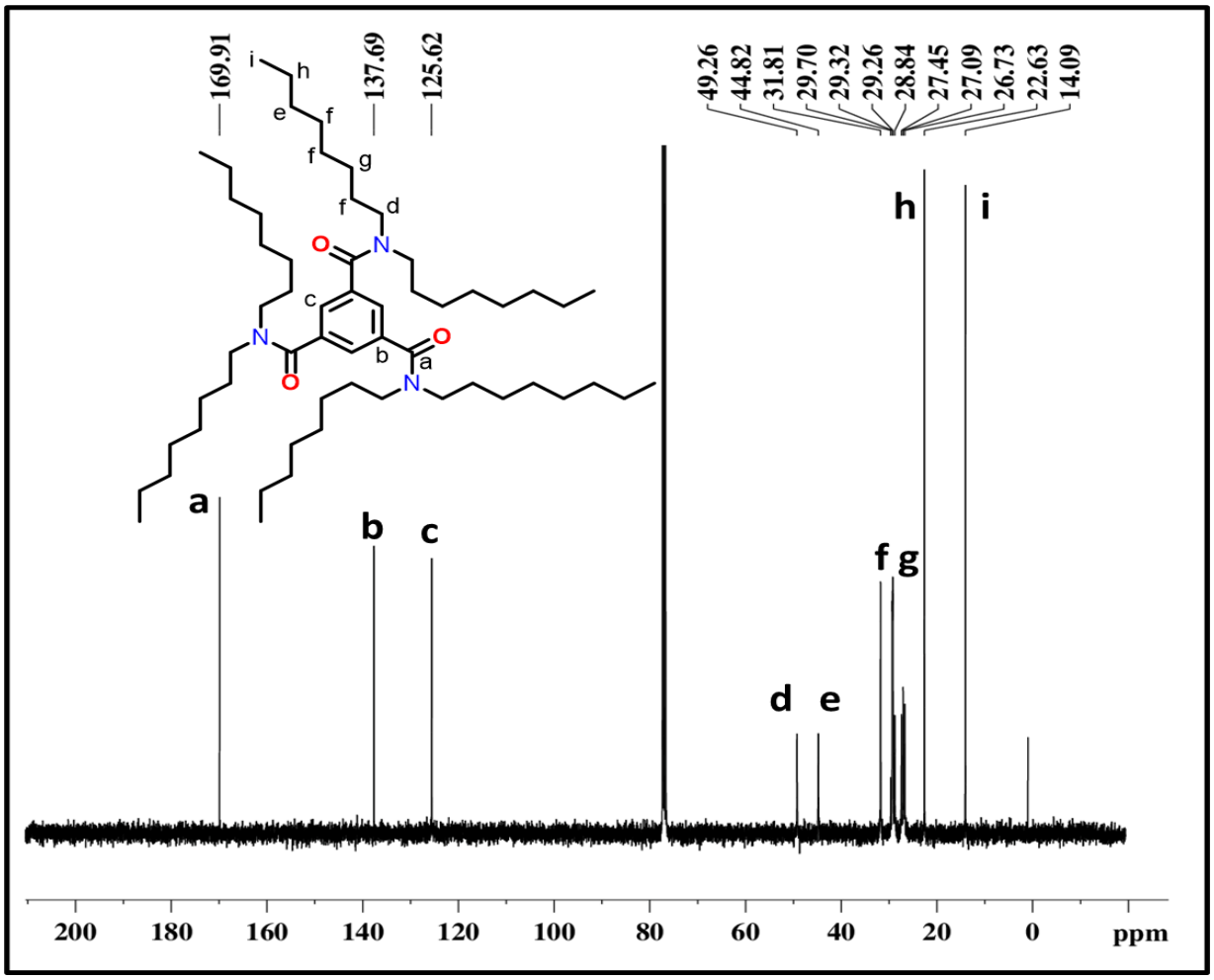

Fig. S8 ^{13}C NMR spectrum of HOBTA

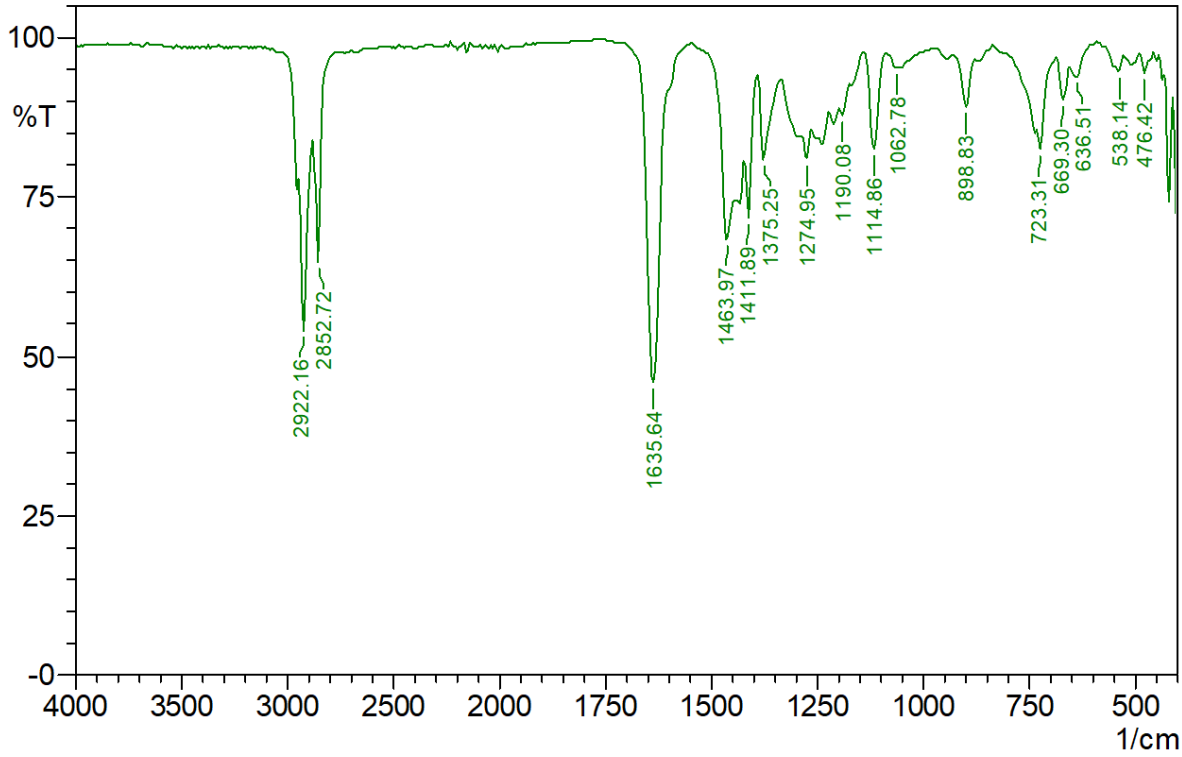

Fig. S9 FT-IR spectrum of HOBTA

IV. ^{1}H & ^{13}C NMR & FT-IR spectra of HDBTA

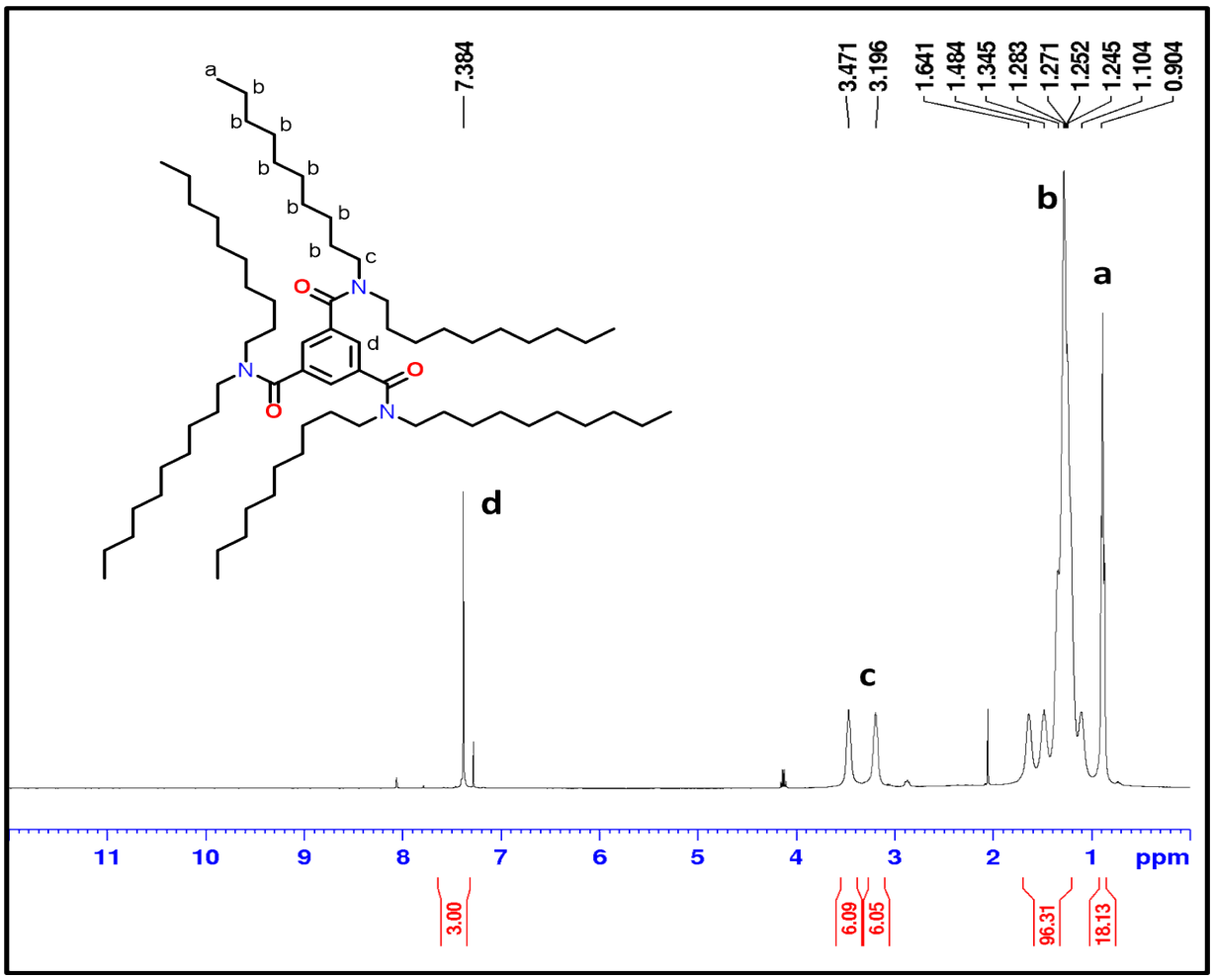

Fig. S10 ^{1}H NMR spectrum of HDBTA

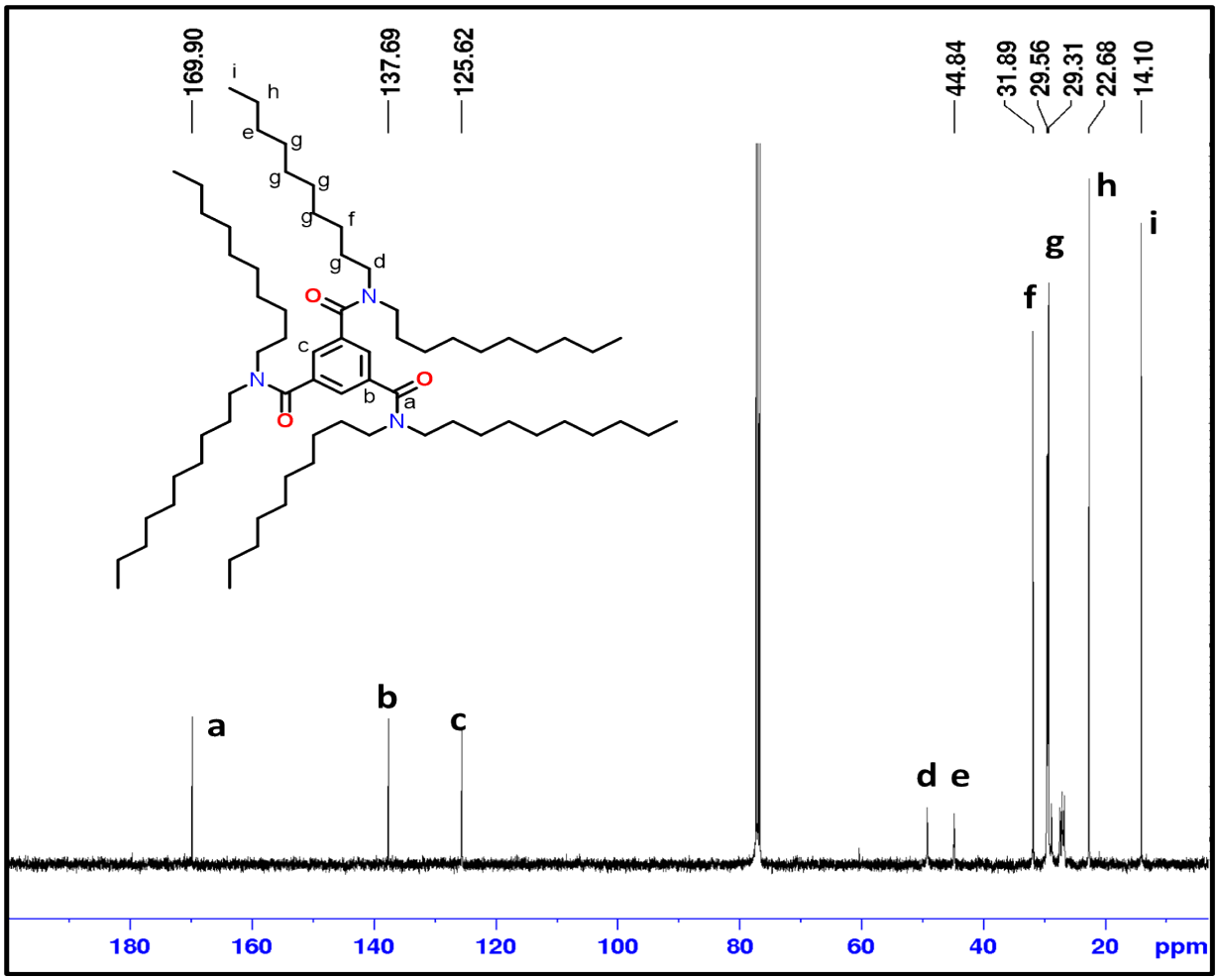

Fig. S11 ^{13}C NMR spectrum of HDBTA

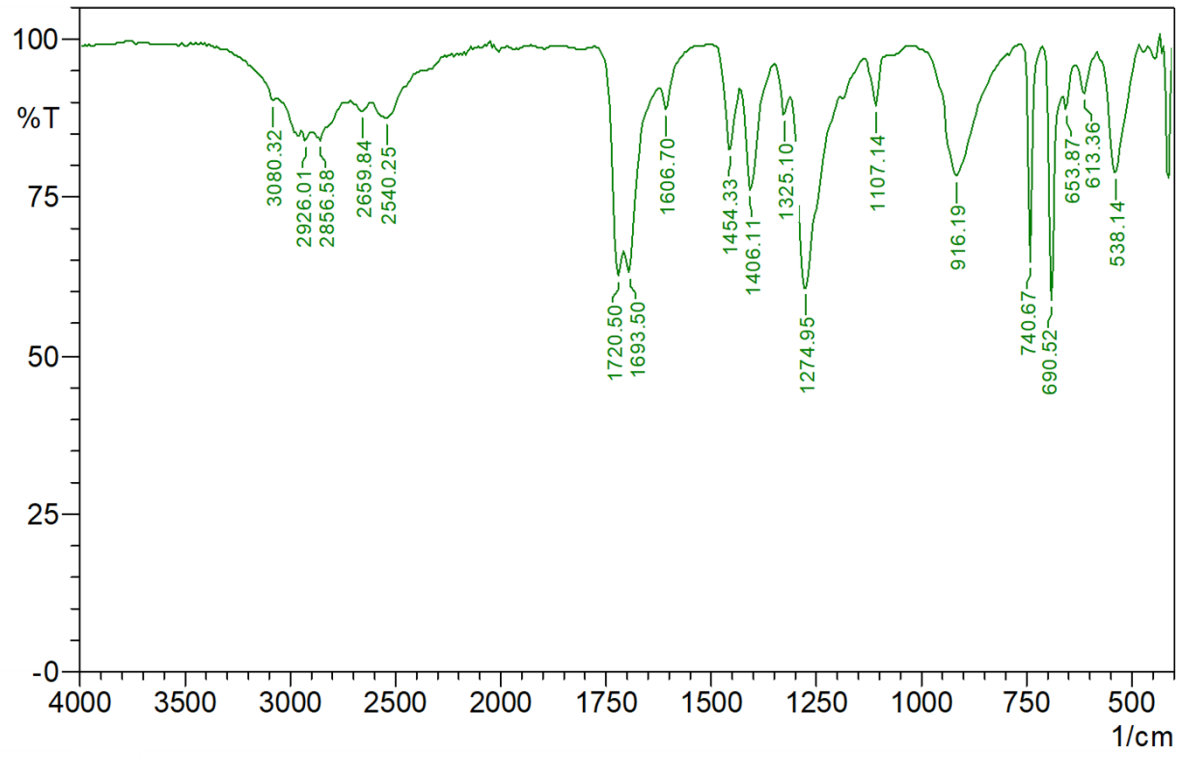

Fig. S12 FT-IR spectrum of HDBTA

Table S1. Exact amount of the modifiers adsorbed onto the monolithic support.

Column Modifier	Initial amount of column modifiers (mmol)	MeOH:H_2O (v/v)	Amount of modifier coated (mmol)
HBBTA	0.10	75:25	0.06
	0.25	76:24	0.08
	0.50	78:22	0.13
	1.50	**73:27**	**0.17**
HHBTA	**0.10**	**78:22**	**0.07**
	0.25	78:22	0.09
	0.50	78:22	0.14
HOBTA	0.10	89:11	0.03
	0.20	93:7	0.05
	0.50	**92:8**	**0.07**
HDBTA	0.01	95:5	0.006
	0.025	93:7	0.012
	0.1	**92:8**	**0.023**

Table S2. Optimized chromatographic conditions

HPLC system	JASCO LC 4000 Plus
Column	C_{18} silica monolithic column (RP18e, 100 × 4.6 mm, Merck-Chromolith high-resolution)
Column temperature	Ambient
Column modifier	N^1,N^1,N^3,N^3,N^5,N^5-hexa(butyl)benzene-1,3,5-tricarboxamide (HBBTA) N^1,N^1,N^3,N^3,N^5,N^5-hexa(hexyl)benzene-1,3,5-tricarboxamide (HHBTA) N^1,N^1,N^3,N^3,N^5,N^5-hexa(octyl)benzene-1,3,5-tricarboxamide (HOBTA) N^1,N^1,N^3,N^3,N^5,N^5-hexa(decyl)benzene-1,3,5-tricarboxamide (HDBTA)
Optimum probe content	0.17 mM HBBTA, 0.07 mM HHBTA & HOBTA, 0.023 mM HDBTA
Mobile phase	0.1 M of 2-hydroxyisobutyric acid (α-HIBA, pH 2.5)
Mobile phase flow rate	1 mL/min
Sample volume	20 µL
PCR	0.015 mM of Arsenazo(III) (pH 7.0)
PCR flow rate	1.5 mL/min
Detector	JASCO UV-4070
Wavelength	665 nm