Supporting Information

Guest-Induced Topological Polymorphism of Pseudo-Cubic Hydrogen Bond Networks - Robust and Adaptable Supramolecular Synthon -

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General Methods

IR spectroscopic analysis. FT-IR spectra of **1** in a KBr pellet were recorded using a Horiba FT-720 spectrometer.

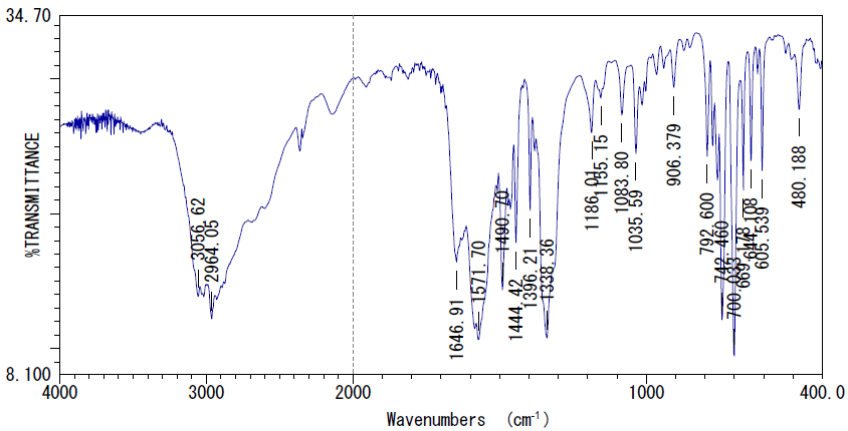

Fig. S1 FT-IR spectra of 1 with C1 topology.

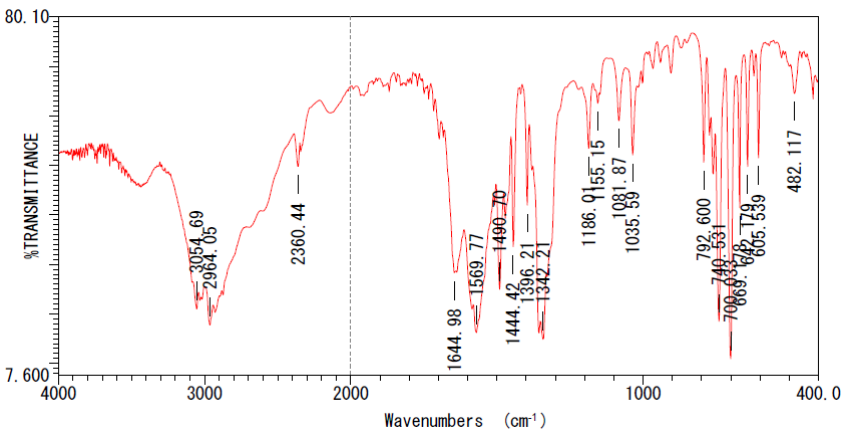

Fig. S2 FT-IR spectra of **1** with Cs topology.

Table S1 Crystallographic data of primary ammonium triphenylacetates

	1	**1**·toluene	**2**	**2**·benzene
fomula	4(C24H27O2N1)	8(C24H27O2N1) C7H8	C24H27O2N1	C24H27O2N1 C3H3
Mw	1445.93	2984.00	361.48	400.53
crystal system	monoclinic	trigonal	monoclinic	tetragonal
space group	P21/n (#14)	R-3c (#167)	C2/c (#15)	I-4 (#82)
Z	4	6	16	8
a[Å]	13.9624(4)	20.7677(6)	24.3976(4)	17.623
b[Å]	24.9353(7)		14.4444(3)	17.623
c[Å]	23.7426(7)	70.979(2)	24.3798(4)	15.181
α[°]	90	90	90	90
β[°]	92.140(2)	90	94.7956(8)	90
γ[°]	90	120	90	90
V[Å^3]	8269.4(4)	26511.5(14)	8561.6(3)	4714.4
T[K]	213	213	213	213
ρ_{calcd}[Mg m^{-3}]	1.163	1.121	1.122	1.129
$2\theta_{max}$	136.4	136.4	136.4	-
μ (Cu-kα) [cm^{-1}]	5.73	5.504	5.532	-
GOF	1.89	1.900	1.224	-
total / unique reflections	57903 / 14728	83491 / 5399	32425 / 7704	-
reflections included in refinement	5121	2207	3492	-
residual electron density Max / Min [e$^-$/Å^3]	0.70 / -0.56	0.67 / -0.38	0.33 / -0.42	-
reflections / parameters	9.00	15.29	15.79	-
R1[a] / wR2[b]	0.148 / 0.294	0.1395 / 0.3228	0.0758 / 0.2294	-
reference	CCDC-632005 (ref. 14)	CCDC-XXXXXX	CCDC- 659622	IRUOUH (ref. 10d)