Electronic Supplementary Material (ESI) for Soft Matter.

Molecular Assembly of Highly Symmetric Molecules under Hydrogen Bond Framework Controlled by Alkyl Building Blocks: A Simple Approach to Fine-tune Nano-scale Structures

*Pimsai Tanphibal[a], Kohji Tashiro**[,b] and Suwabun Chirachanchai*[,a, c]*

[a]*The Petroleum and Petrochemical College, Chulalongkorn University, Bangkok 10330, Thailand*

[b]*Department of Future Industry-oriented Basic Science and Materials, Toyota Technological Institute, Tempaku, Nagoya 468-8511, Japan*

[c]*Center for Petroleum, Petrochemical, and Advance Materials, Chulalongkorn University, Bangkok 10330, Thailand*

Corresponding author E-mail address: *csuwabun@chula.ac.th, **ktashiro@toyota-ti.ac.jp

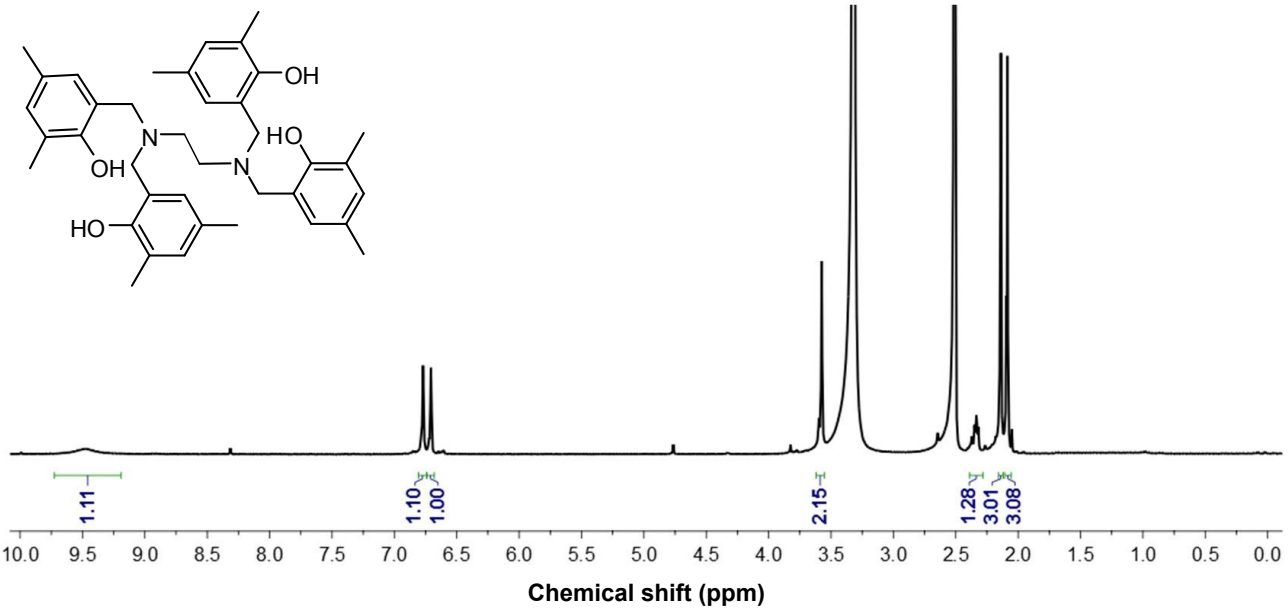


Figure S1. ^{1}H-NMR spectrum of **C2** in DMSO-d_6 (500 MHz) at 25 °C.

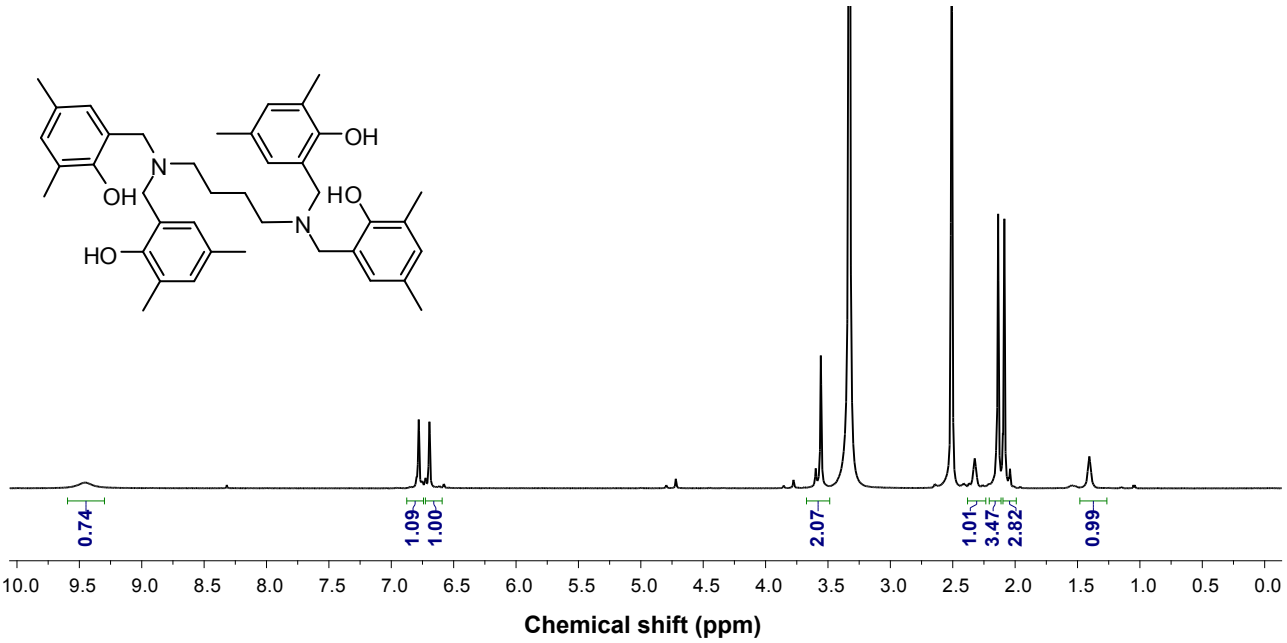


Figure S2. ^{1}H-NMR spectrum of **C4** in DMSO-d_6 (500 MHz) at 25 °C.

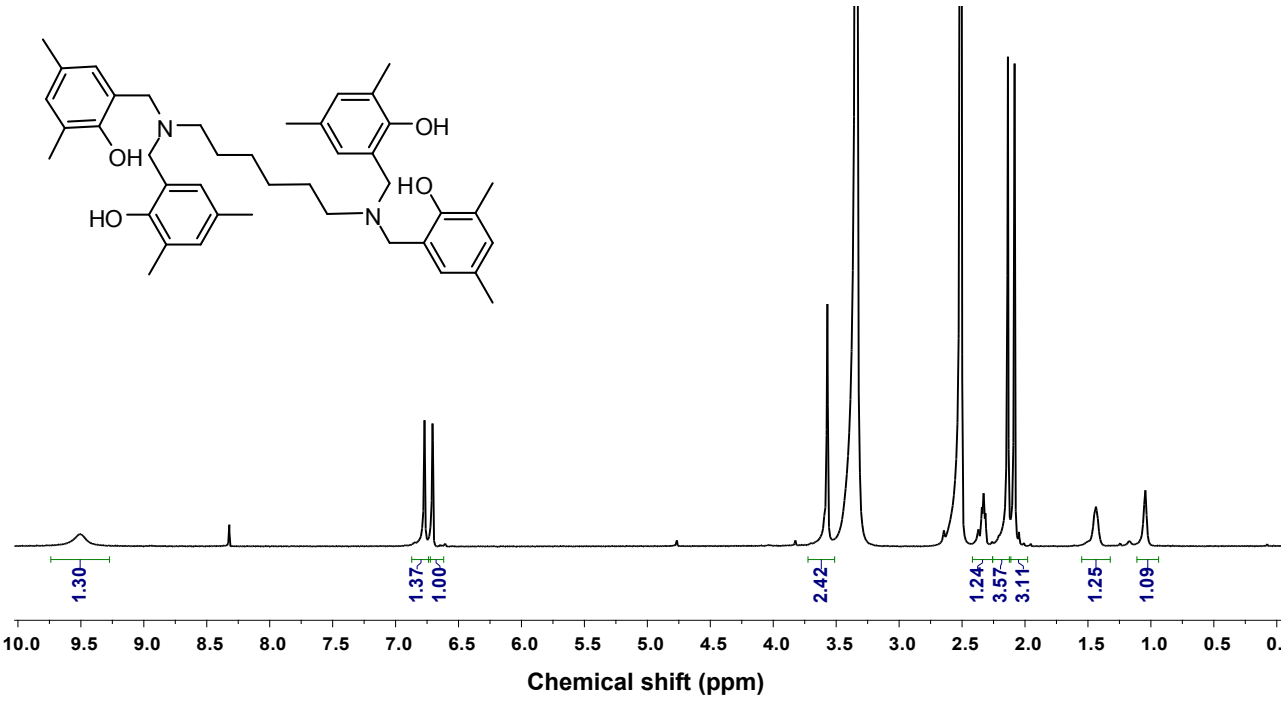


Figure S3. ^{1}H-NMR spectrum of **C6** in DMSO-d_6 (500 MHz) at 25 °C.

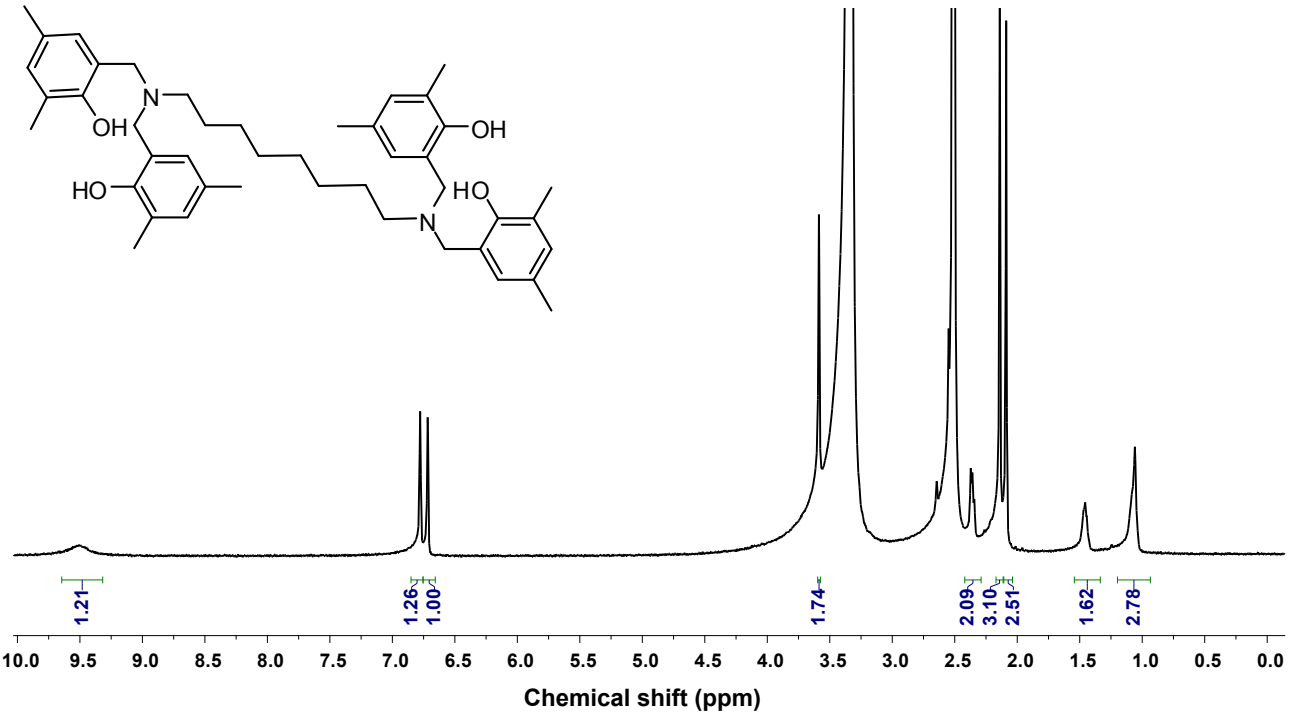
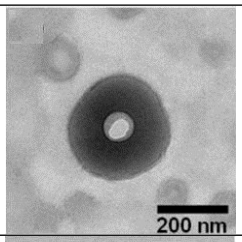
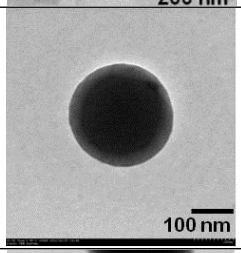
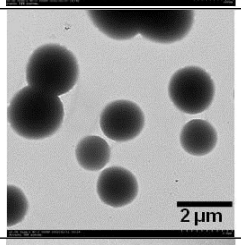
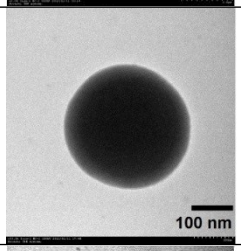
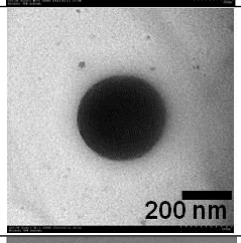
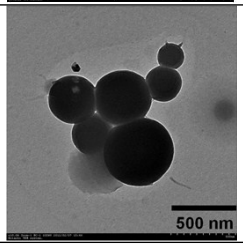


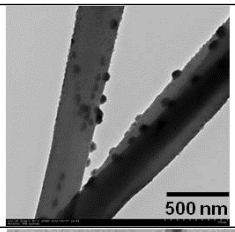
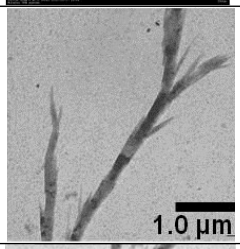
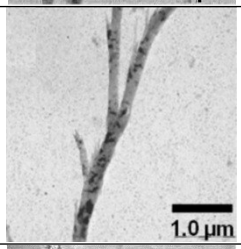
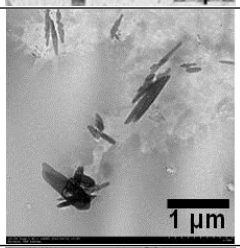
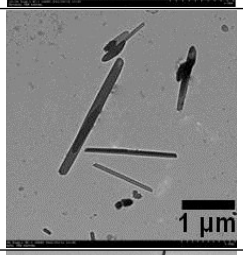
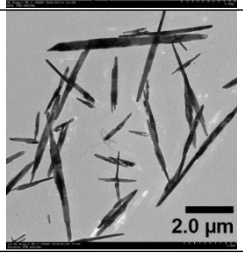
Figure S4. ^{1}H-NMR spectrum of **C8** in DMSO-d_6 (500 MHz) at 25 °C.

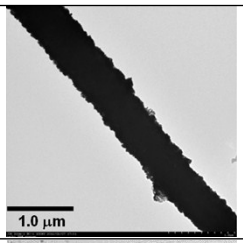
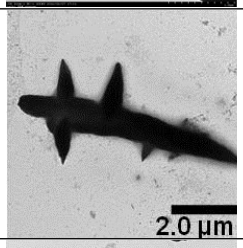
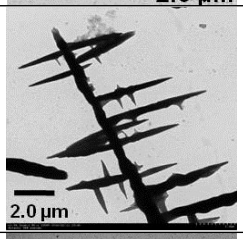
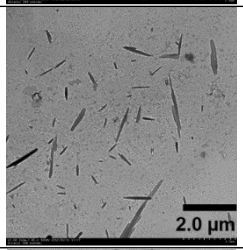
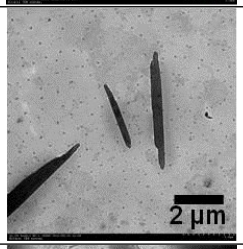
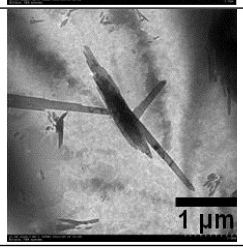
Table S1. Crystal data and structure refinement parameters for **C2**, **C4**, **C6**, and **C8**.

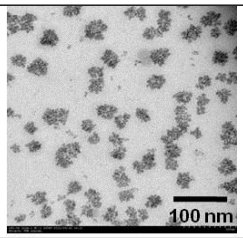
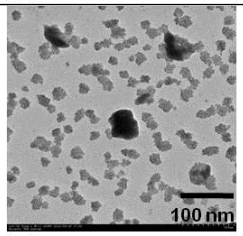
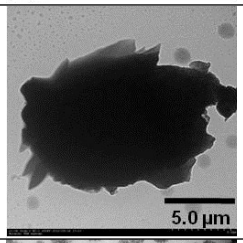
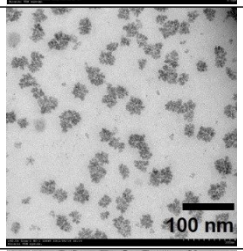
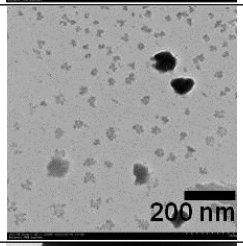
Compound	C2	C4	C6	C8
Empirical Formula	$C_{38}H_{48}N_2O_4$	$C_{42}H_{58}N_2O_5S$	$C_{42}H_{56}N_2O_6$	$C_{44}H_{60}N_2O_4$
Formula weight	596.81	702.99	652.92	680.97
Crystal system	Triclinic	Monoclinic	Monoclinic	Tetragonal
Space group	$P\bar{1}$	$P2_1/c$	$C2/c$	$P4_12_12$
Unit cell dimension				
a / Å	8.324(2)	9.8772(6)	10.426(4)	10.369(6)
b/ Å	9.203(2)	18.7760(11))	26.794(9)	10.369(6)
c/ Å	11.889(3)	12.3743(7)	14.099(5)	37.645(2)
α/ °	84.965(3)	90.000	90.000	90.000
β/ °	88.978(3)	98.3301(17)	107.728(3)	90.000
ɣ/°	69.436(3)	90.000	90.000	90.000
Unit cell volume/ $Å^3$	849.3(3)	2270.6(2)	3752	4047.3(4)
Temperature/ K	296(1)	296(1)	296(1)	296(1)
Z	1	2	4	4
Radiation type	MoKα	MoKα	MoKα	MoKα
Absorption coefficient,μ/ cm^{-1}	0.748	1.103	0.732	0.703
No. of reflection measured	8361	22337	18478	5836
No. of independent reflections	3855	5187	4314	4627
R_{int}	0.0408	0.0652	0.0272	0.0347
Final R_1 values	0.0665 [$I > 2.5\sigma(I)$]	0.1066 [$I > 3\sigma(I)$]	0.0791 [$I > 2\sigma(I)$]	0.0505 [$I > 2\sigma(I)$]
Final wR(F^2) values	0.1295 [$I > 2.5\sigma(I)$]	0.1716 [$I > 3\sigma(I)$]	0.1453 [$I > 2\sigma(I)$]	0.0923 [$I > 2\sigma(I)$]
Goodness of fit on F^2	2.766	9.108	2.541	1.513

Table S2. Morphologies of **C2**, **C4**, **C6**, and **C8** obtained from DMSO and chloroform at different concentrations.

Compound	Solvent	Concentration (mM)	Morphology
C2	DMSO	0.001	
		1.0	
		100	
	$CHCl_3$	0.001	
		1.0	
		100	

Compound	Solvent	Concentration (mM)	Morphology
C4	DMSO	0.001	
		1.0	
		100	
	$CHCl_3$	0.001	
		1.0	
		100	

Compound	Solvent	Concentration (mM)	Morphology
C6	DMSO	0.001	
		1.0	
		100	
	$CHCl_3$	0.001	
		1.0	
		100	

Compound	Solvent	Concentration (mM)	Morphology
C8	DMSO	0.001	
		1.0	
		100	
	$CHCl_3$	0.001	
		1.0	
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