Supporting information

Polyhedron Supramolecular System of Endocyclic Crystalline Organic Nanostructures: The Case of Triptycenes

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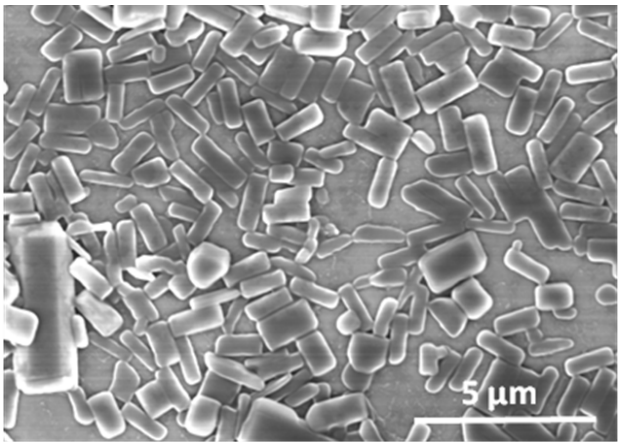


Fig. S1 FESEM image of TPC crystals without any surfactants.

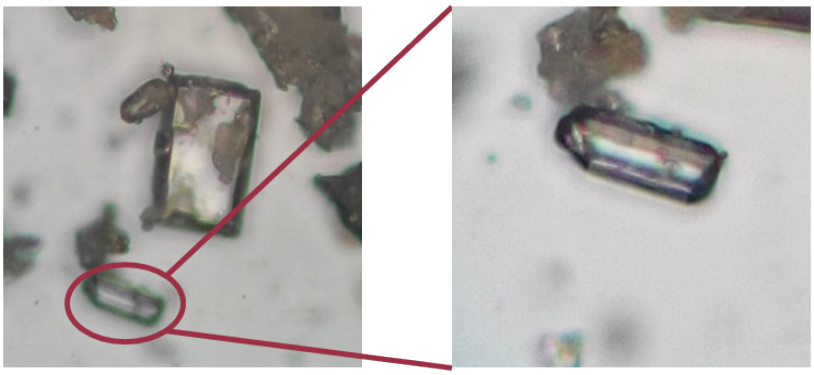


Fig. S2 Optical microscope images for the TPC bulk crystals (×1000).

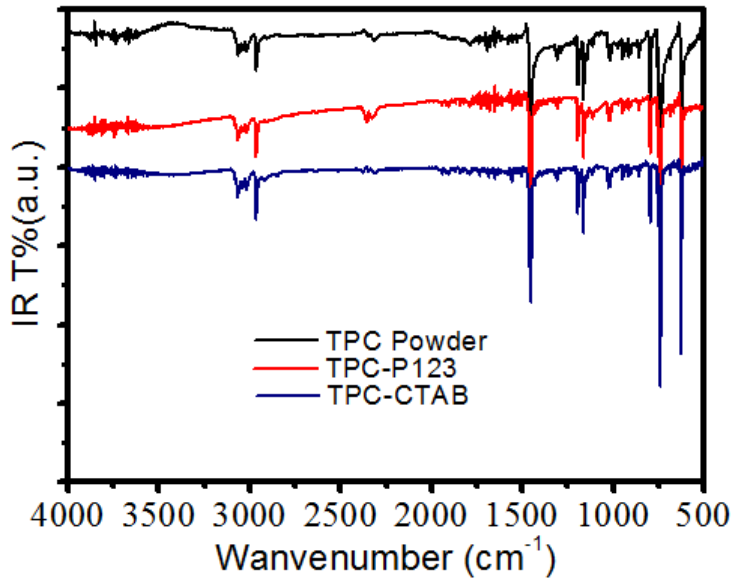


Fig. S3 FT-IR spectra of TPC crystals prepared in the presence of P123 and CTAB.

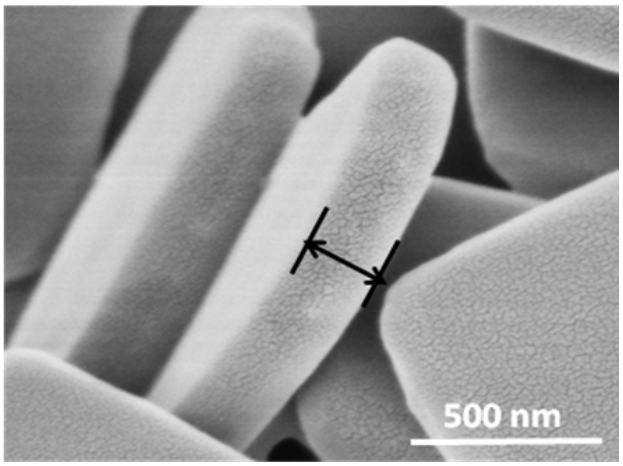


Fig. S4 FESEM image of lateral side of the TPC nanosheets in the presence of CTAB.

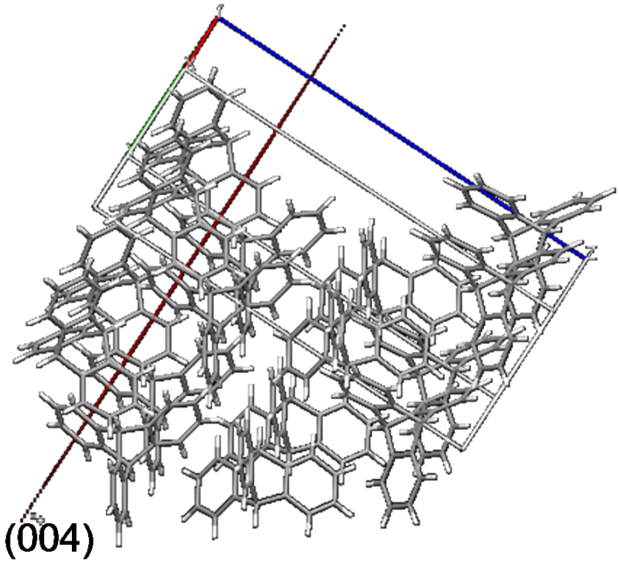
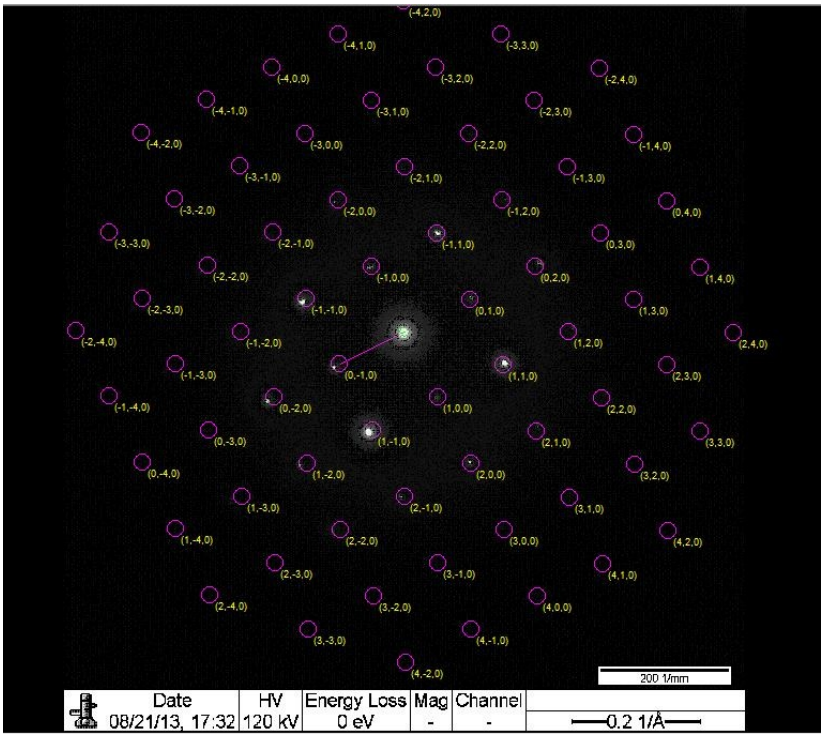


Fig. S5 Molecular packing arrangement of TPC molecules along {004}s facets in the single crystal.

Table S1 Electron Diffraction Analysis Report.



(hkl)$_1$	*(hkl)$_2$*	*Reciprocal Vector Ratio*	*Reciprocal Vector Angle*
(-2 -2 0)	(0,-1,0)	2.844163	45.316123
(-2 -1 0)	(0,-1,0)	2.255939	63.687015
(-2 0 0)	(0,-1,0)	2.022192	90.000003
(-2 1 0)	(0,-1,0)	2.255939	116.312991
(-2 2 0)	(0,-1,0)	2.844163	134.683882
(-1 -2 0)	(0,-1,0)	2.241052	26.818790
(-1 -1 0)	(0,-1,0)	1.422081	45.316123
(-1 0 0)	(0,-1,0)	1.011096	90.000003
(-1 1 0)	(0,-1,0)	1.422081	134.683882
(-1 2 0)	(0,-1,0)	2.241052	153.181214
(0 -3 0)	(0,-1,0)	3.000000	0.000000
(0 -2 0)	(0,-1,0)	2.000000	0.000000
(0 -1 0)	(0,-1,0)	1.000000	0.000000
(0 1 0)	(0,-1,0)	1.000000	-180.000000
(0 2 0)	(0,-1,0)	2.000000	-180.000000
(0 3 0)	(0,-1,0)	3.000000	-180.000000
(1 -2 0)	(0,-1,0)	2.241052	-26.818789
(1 -1 0)	(0,-1,0)	1.422081	-45.316121
(1 0 0)	(0,-1,0)	1.011096	-90.000000
(1 1 0)	(0,-1,0)	1.422081	-134.683880
(1 2 0)	(0,-1,0)	2.241052	-153.181213
(2 -2 0)	(0,-1,0)	2.844163	-45.316121

(2 -1 0)	(0,-1,0)	2.255939	-63.687012
(2 0 0)	(0,-1,0)	2.022192	-90.000000
(2 1 0)	(0,-1,0)	2.255939	-116.312989
(2 2 0)	(0,-1,0)	2.844163	-134.683880

The *d* spacing of the above crystal facets.

(hkl)	***D(hkl)***	***(hkl)***	***D(hkl)***
(−2, −2, 0)	2. 883450	(2, −2, 0)	2. 883450
(−2, −1, 0)	3. 635293	(2, −1, 0)	3. 635293
(−2, 0, 0)	4. 055500	(2, 0, 0)	4. 055500
(−2, 1, 0)	3. 635293	(2, 1, 0)	3. 635293
(−2, 2, 0)	2. 883450	(2, 2, 0)	2. 883450
(−1, −3, 0)	2. 590495	(1, −3, 0)	2. 590495
(−1, −2, 0)	3. 659442	(1, −2, 0)	3. 659442
(−1, −1, 0)	5. 766900	(1, −1, 0)	5. 766899
(−1, 0, 0)	8. 111000	(1, 0, 0)	8. 111000
(−1, 1, 0)	5. 766899	(1, 1, 0)	5. 766900
(−1, 2, 0)	3. 659442	(1, 2, 0)	3. 659442
(−1, 3, 0)	2. 590495	(1, 3, 0)	2. 590495
(0, −3, 0)	2. 733667	(0, 1, 0)	8. 201000
(0, −2, 0)	4. 100500	(0, 2, 0)	4. 100500
(0, −1, 0)	8. 201000	(0, 3, 0)	2. 733667