

Supplementary Information of the paper on Ordered and disordered solvates of C₆₀ and CBrCl₂H

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Table 1. Crystal structure parameters and Rietveld refinement data for the monoclinic C₆₀·CCl₂BrH and hexagonal C₆₀·2CCl₂BrH co-crystals

Chemical Formula	C ₆₀ ·CBrCl ₂ H	C ₆₀ ·2CBrCl ₂ H
<i>M</i> / g·mol ⁻¹	884.47	1048.3
2θ-Angular Range	8 – 50°	4 – 100°
Space group	<i>C2/c</i>	<i>P6/mmm</i>
<i>a</i> / Å	10.140 ± 0.003	10.131±0.002
<i>b</i> / Å	31.233 ± 0.009	10.131±0.002
<i>c</i> / Å	10.122 ± 0.003	10.135±0.002
α / °	90	90
β / °	90.214 ± 0.023	90
γ / °	90	120
<i>V</i> / Å ³	3205.6±0.4	900.9±0.3
<i>Z</i>	4	1
Temperature	300 K	300 K
<i>D_x</i> / g·cm ⁻³	1.833 ±0.001	1.932±0.001
Wavelength (Cu Kα1)	λ=1.540562 Å	λ=1.540562 Å
2θ-shift (zero correction)	0.028± 0.006	-0.025± 0.005
Profile Parameters		
Na		
Reliability Parameters		
<i>R_{wp}</i>	4.80%	3.72%
<i>R_p</i>	3.74%	5.07%
Peak width parameters		
<i>U</i>	12.41 ± 0.74	0.153

V	-5.78 ± 0.32	-0.100
W	0.708 ± 0.034	0.047
Overall isotropic temperature factor, $U / \text{\AA}^2$	0.0327 ± 0.0030	2.38 ± 0.38
Preferred Orientation (March-Dollase)		
a^*	0.307 ± 0.007	
b^*	-0.851 ± 0.006	
c^*	-0.425 ± 0.009	
R_0	0.736 ± 0.011	

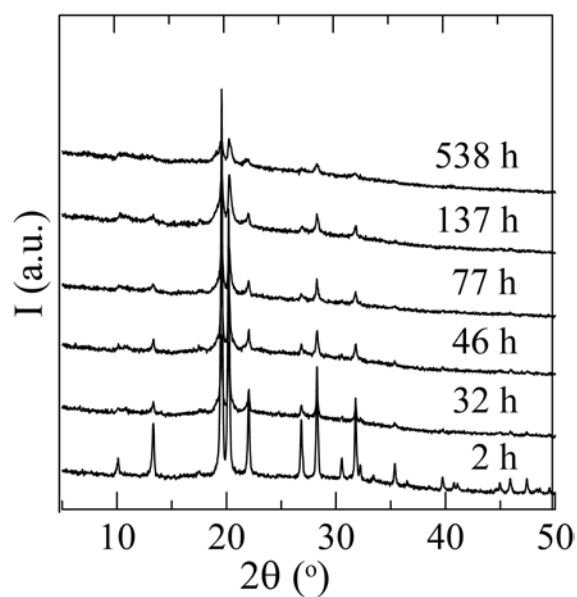


Fig. S1. X-ray powder diffraction profiles as a function of time at 300 K for the hexagonal co-crystals $C_{60} \cdot 2CBrCl_2H$ in an open capillary. It is clear that the present structure becomes amorph and the hexagonal co-crystal is not stable under air