**Supplementary Information.**

**Synthesis of Calamitic Fluorinated Mesogens with Complex Crystallization Behaviour**

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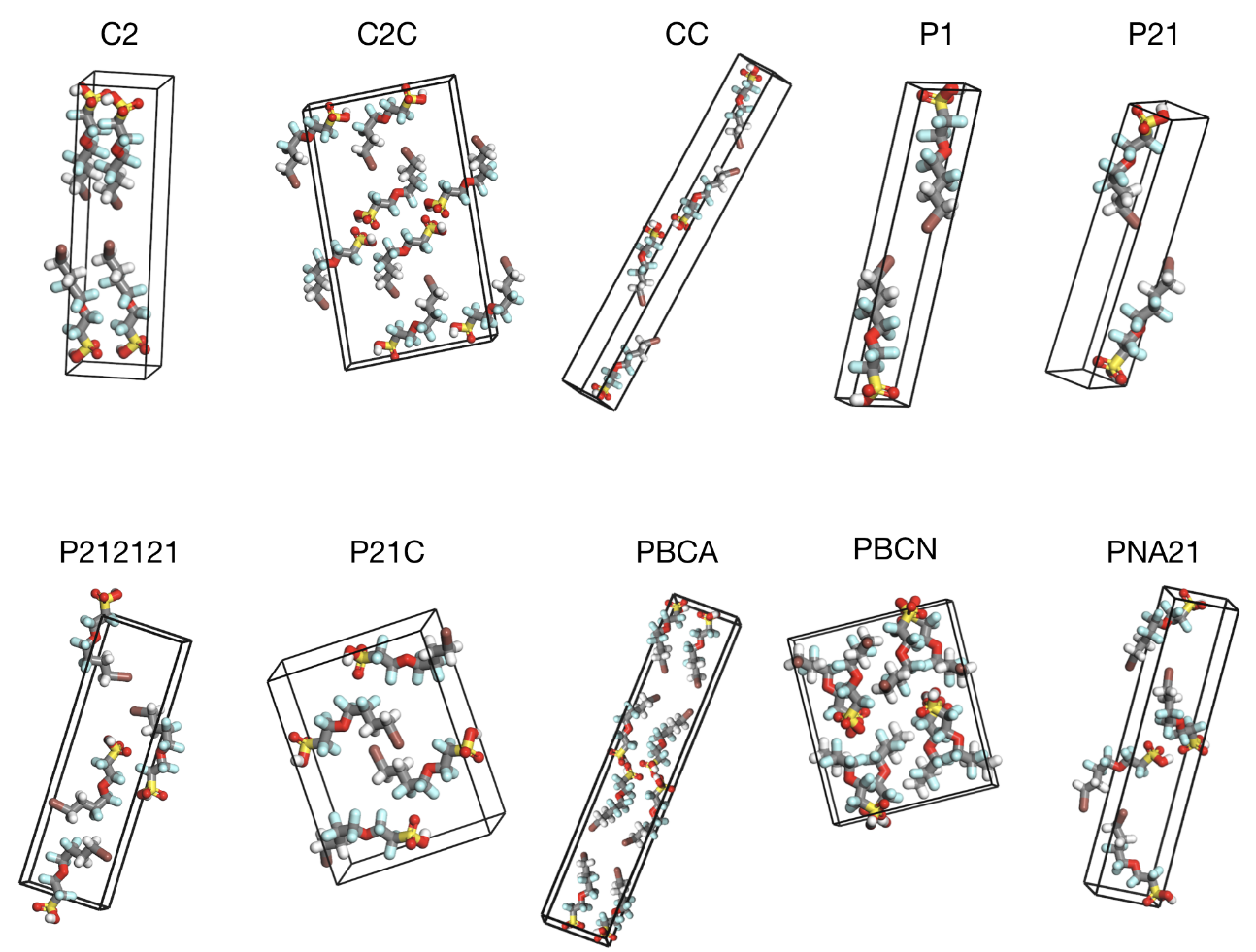
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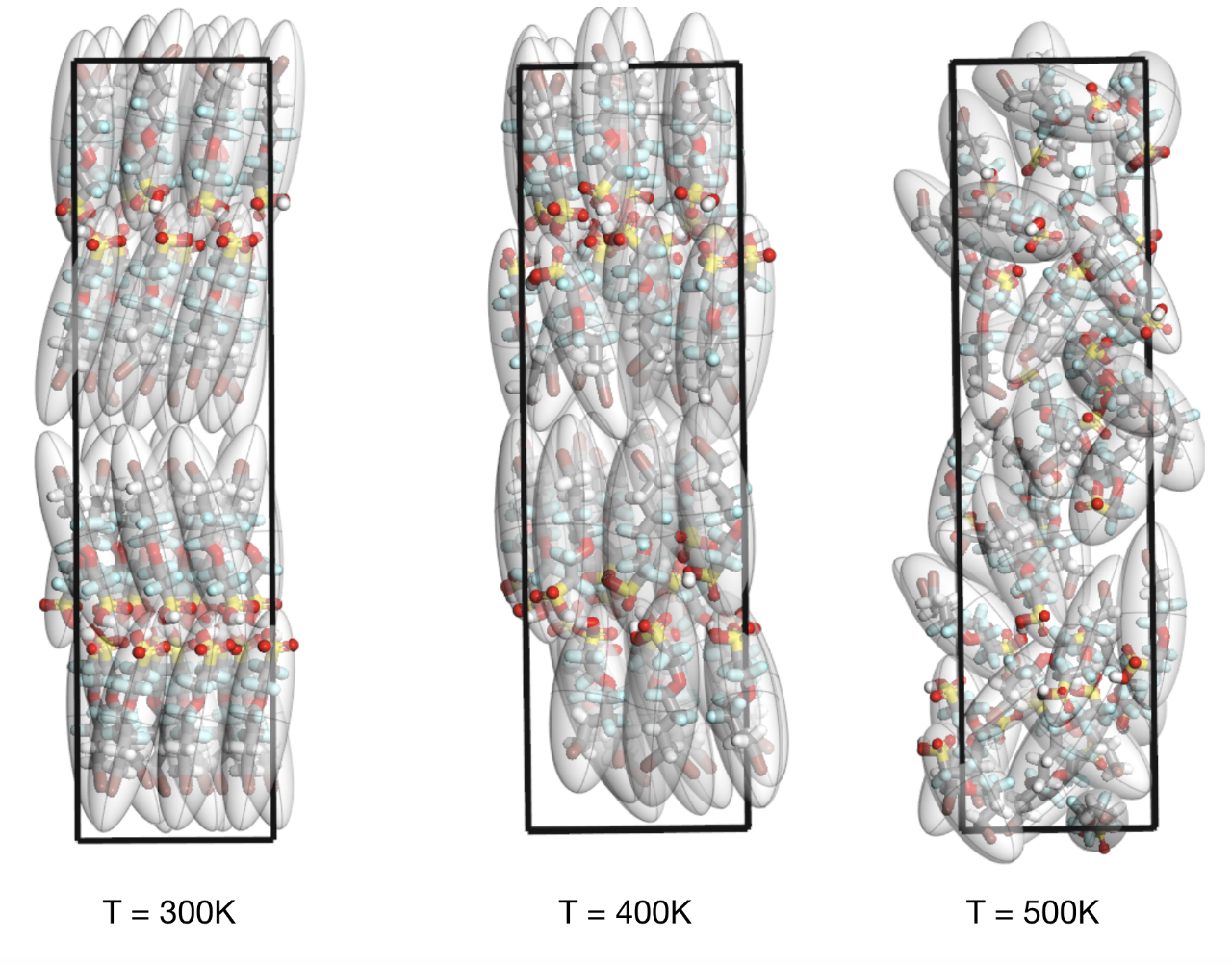
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**Figure S1.** Possible symmetries of unit cell of ICH2CH2CF2CF2OCF2CF2SO3H used in simulation.



**Figure S2.** Model of P1 unit cell of ICH2CH2CF2CF2OCF2CF2SO3H at different temperatures.

**Table S1.** Experimental and theoretical peak positions for ICH2CH2CF2CF2OCF2CF2SO3H at room temperature.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***h*** | ***k*** | ***l*** | ***dexp*** | ***dcalc*** |
| 1 | 0 | 0 | 27.54 | 27.50 |
| 2 | 0 | 0 | 13.78 | 13.80 |
| 3 | 0 | 0 | 9.17 | 9.18 |
| 0 | 1 | 0 | 5.21 | 5.16 |
| 1 | 1 | 0 | 5.04 | 5.08 |
| 0 | 0 | 1 | 4.96 | 4.97 |
| 1 | 0 | 1 | 4.87 | 4.89 |
| 2 | 0 | -1 | 4.75 | 4.67 |
| 6 | 0 | 0 | 4.57 | 4.59 |
| 3 | 0 | 1 | 4.39 | 4.37 |
| 4 | -1 | 0 | 4.14 | 4.13 |
| 4 | 0 | 1 | 3.99 | 4.03 |
| 2 | 1 | 1 | 3.72 | 3.74 |
| 5 | 0 | 1 | 3.65 | 3.69 |
| 8 | 0 | 0 | 3.47 | 3.44 |
| 2 | 1 | -1 | 3.21 | 3.24 |
| 4 | 1 | 1 | 3.39 | 3.38 |
| 1 | -1 | 1 | 3.31 | 3.34 |
| 2 | -1 | 1 | 3.21 | 3.24 |
| 3 | -1 | 1 | 3.12 | 3.14 |
| 7 | 0 | 1 | 3.05 | 3.08 |
| 6 | 1 | 1 | 2.93 | 2.97 |
| 6 | 1 | -1 | 2.67 | 2.70 |
| 1 | 2 | 0 | 2.56 | 2.57 |
| 2 | 2 | 0 | 2.51 | 2.54 |
| 1 | 1 | 2 | 2.36 | 2.38 |
| 4 | 0 | 2 | 2.32 | 2.34 |
| 5 | 0 | 2 | 2.27 | 2.26 |
| 6 | 0 | 2 | 2.18 | 2.18 |
| 8 | 2 | 0 | 2.06 | 2.07 |
| 8 | 0 | 2 | 2.02 | 2.01 |
| 3 | 2 | 2 | 1.90 | 1.90 |
| 4 | 2 | 2 | 1.86 | 1.86 |
| 5 | 2 | 2 | 1.82 | 1.83 |
| 6 | 2 | 2 | 1.78 | 1.79 |
| 0 | 3 | 0 | 1.72 | 1.72 |
| 0 | 2 | -2 | 1.68 | 1.67 |
| 3 | 2 | -2 | 1.64 | 1.64 |

metin, çizgi, öykü gelişim çizgisi; kumpas; grafiğini çıkarma, sayı, numara içeren bir resim

Açıklama otomatik olarak oluşturuldu

**Figure S3.** 19F-NMR spectrum of ICF2CF2OCF2CF2SO2Frecorded in d6-acetone.

metin, çizgi, öykü gelişim çizgisi; kumpas; grafiğini çıkarma, diyagram içeren bir resim

Açıklama otomatik olarak oluşturuldu

**Figure S4.** 1H-NMR spectrum of ICH2CH2CF2CF2OCF2CF2SO3Hrecorded in d6-acetone.

metin, çizgi, diyagram, paralel içeren bir resim

Açıklama otomatik olarak oluşturuldu

**Figure S5.** 19F-NMR spectrum of ICH2CH2CF2CF2OCF2CF2SO3Hrecorded in d6-acetone.

metin, diyagram, çizgi, öykü gelişim çizgisi; kumpas; grafiğini çıkarma içeren bir resim

Açıklama otomatik olarak oluşturuldu

**Figure S6.** FT-IR spectrum of ICH2CH2CF2CF2OCF2CF2SO3H.