Table S1. X-ray data of $\{[(C_nO)_2PhO]_8Pc\}_2Eu$ (**2a-2i**).

Compound Mesophase	Lattice constants, Å	Spacing, Å		Miller indices
		Observed	Calculated	(*h k l*)
n = 8: **2a** Col_{r1} ($P2_1/a$) at r.t.	*a* = 50.7 *b* = 38.5 *h* ≈ 12 *Z* = 2.0 for ρ = 1.0	30.7	30.7	(110)
		25.4	25.4	(200)
		21.0	21.2	(210)
		ca. 12	-	*h*
		8.84	8.97	(520)
		ca. 4.4	-	#
Col_{r2} ($P2_1/a$) at 177 °C	*a* = 44.4 *b* = 37.6 *h* ≈ 11 *Z* = 1.7 for ρ = 1.0	28.7	28.7	(110)
		22.2	22.2	(200)
		17.5	17.3	(120)
		ca. 11	-	*h*
		ca. 4.8	-	#
Col_{r3} ($P2_1/a$) at 233 °C	*a* = 45.5 *b* = 36.5 *h* ≈ 11 *Z* = 1.7 for ρ = 1.0	28.5	28.5	(110)
		22.8	22.8	(200)
		19.5	19.3	(020)
		18.0	18.3	(120)
		ca. 11	-	*h*
		8.20	8.15	(520)
		ca. 4.9	-	#
n = 10: **2c** Col_h at r.t.	*a* = 38.0 *h* ≈ 9.0 *Z* = 2.2 for ρ = 1.0	32.9	32.9	(100)
		19.7	19.0	(110)
		13.0	12.5	(210)
		ca.9.0	-	*h*
		ca. 4.4	-	#
Cub ($Pn\bar{3}m$) at 163 °C	*a* = 77.5 *h* ≈ 8.9 *Z* = 34 for ρ = 1.0	31.7	31.6	(211)
		27.2	27.4	(220)
		26.0	25.8	(221)
		ca. 8.9	-	*h*
		ca. 4.7	-	#
Cub ($Pm\bar{3}n$) at 226 °C	*a* = 86.9 *h* ≈ 8.7 *Z* = 52 for ρ = 1.0	39.7	38.9	(210)
		35.4	35.5	(211)
		31.0	30.7	(220)
		27.2	27.5	(310)
		24.7	25.1	(222)
		ca. 8.7	-	*h*
		ca. 4.7	-	#

#: Halo of the molten alkoxy chains. Each of the densities is assumed as 1.0 $g.cm^{-3}$.

Table S1. (Continued).

Compound Mesophase	Lattice constants, Å	Spacing, Å		Miller indices
		Observed	Calculated	(*h k l*)
n = 12: **2e** Col_h at r.t.	*a* = 39.3 *h* ≈ 9.9 *Z* = 0.9 for ρ = 1.0	34.1	34.1	(100)
		19.8	19.7	(110)
		17.0	17.0	(200)
		13.0	12.9	(210)
		ca. 9.9	-	*h*
		ca. 4.4	-	#
Cub ($Pn\bar{3}m$) at 162 °C	*a* = 80.5 *h* ≈ 9.2 *Z* = 37 for ρ = 1.0	32.9	33.0	(211)
		28.1	28.6	(220)
		27.1	26.9	(221)
		23.6	23.3	(222)
		ca. 9.2	-	*h*
		ca. 4.7	-	#
Cub ($Pm\bar{3}n$) at 219 °C	*a* = 87.4 *h* ≈ 8.7 *Z* = 47 for ρ = 1.0	38.4	39.1	(210)
		35.9	35.7	(211)
		31.2	30.9	(220)
		27.8	27.7	(310)
		ca. 8.7	-	*h*
		ca. 4.6	-	#
n = 14: **2g** Col_h at 87 °C	*a* = 38.3 *h* ≈ 9.5 *Z* = 0.8 for ρ = 1.0	33.2	33.2	(100)
		19.3	19.2	(110)
		ca. 9.5	-	*h*
		ca. 4.6	-	#
Cub ($Pn\bar{3}m$) at 152 °C	*a* = 83.9 *h* ≈ 9.3 *Z* = 38 for ρ = 1.0	34.1	34.2	(211)
		29.2	29.6	(220)
		28.1	28.0	(221)
		24.4	24.2	(330)
		19.9	19.8	*h*
		ca. 9.3	-	#
		ca. 4.8	-	
Cub ($Pm\bar{3}n$) at 197 °C	*a* = 89.4 *h* ≈ 9.2 *Z* = 46 for ρ = 1.0	38.8	40.0	(210)
		31.5	31.6	(221)
		28.6	28.3	(310)
		20.4	20.0	(420)
		ca. 9.2	-	*h*
		ca. 4.8	-	#
n = 16: **2i** Col_h at 91 °C	*a* = 39.5 *h* ≈ 10 *Z* = 0.8 for ρ = 1.0	34.2	34.2	(100)
		20.3	19.8	(110)
		ca. 10	-	*h*
		ca. 4.6	-	#
Cub ($Pn\bar{3}m$) at 146 °C	*a* = 88.6 *h* ≈ 9.9 *Z* = 40 for ρ = 1.0	36.2	36.2	(211)
		31.0	31.3	(220)
		29.7	29.5	(221)
		21.0	20.9	(330)
		ca. 9.9	-	*h*
		ca. 4.6	-	#
Cub ($Pm\bar{3}n$) at 187 °C	*a* = 73.6 *h* ≈ 9.0 *Z* = 23 for ρ = 1.0	37.1	36.8	(200)
		32.5	32.9	(210)
		30.4	30.1	(211)
		17.2	17.4	(330)
		ca. 9.0	-	*h*
		ca. 4.6	-	#

#: Halo of the molten alkoxy chains. Each of the densities is assumed as 1.0 $g.cm^{-3}$.