Molecular Crystals and Liquid Crystals

Publication details, including instructions for authors and subscription information:
http://www.tandfonline.com/loi/gmcl16

Alkanes Derivatives

Version of record first published: 03 Jan 2007.

To cite this article: (1984): Alkanes Derivatives, Molecular Crystals and Liquid Crystals, 115:1-4, 11-22

To link to this article: http://dx.doi.org/10.1080/00268948408073736

ALKANES DERIVATIVES

• **Potassium alkanoates**

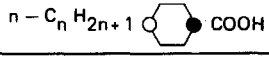
$C_n H_{2n+1} COOK$

n	1	2	3	4	5	6	7	I	Ref.
7	• 52 *2.1*	• 282 *3.6*	• 437	–	–	–	–	•	200
9	• 72 *2.1*	• 109 *0.17*	• 255 *0.93*	• 263 *0.60*	• 269 *3.0*	• 420 *0,79*	–	•	200
	• 75.6 (1) *2.0*	•							
11	• 53 *3.0*	• 132 *0.38*	• 225 *1.3*	• 262 *0.14*	• 268 *2.3*	• 402 *0.31*	–	•	200
13	• 58 *3.2*	• 102 *0.096*	• 127 *0.29*	• 146 *0.096*	• 195 *1.2*	• 258 *2.4*	• 387 *0.36*	•	200
17	• 65 *4.2*	• 127 *0.12*	• 170 *0.57*	• 238 *0.048*	• 264 *3.0*	• 356 *0.41*	–	•	200

(1) Adiabatic calorimetry.

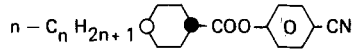
CYCLOHEXANE DERIVATIVES

• **«trans» p-alkyl cyclohexylcarboxylic acids**



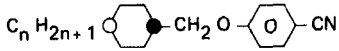
n	K_1	K_2	S_B	N	I	Ref.
5	–	• 53 *5.00*	• [45]	• 105 *0.26*	•	96
6	–	• 28 *3.75*	• 39 *0.23*	• 96 *0.13*	•	96
7	• 31 *3.20*	• 54 *1.25*	• 77 *0.56*	• 104 *0.26*	•	96
10	–	• 49	• 99	–	•	96

• **4 [trans para n alkyl cyclohexyl carbonyloxy] 4′ cyano phenyl**

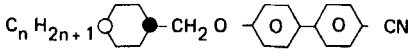


n	K		S_A		N		I	Ref.
2	•	46 *3.78*	–		•	[32] *0.091*	•	231
3	•	54 *5.41*	–		•	69 *0.15*	•	231
4	•	56 *6.34*	–		•	68 *0.14*	•	231
5	•	47 *6.39*	–		•	79 *0.2*	•	231
6	•	50 *7.66*	–		•	73 *0.2*	•	231
7	•	53 *7.75*	–		•	81 *0.29*	•	231
8	•	62 *7.89*	–		•	78 *0.31*	•	231
12	•	56 *11.7*	•	78 *0.86*	–		•	231

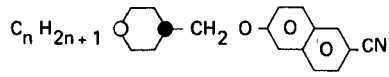
• **trans 4 n alkyl cyclohexyl methoxy derivatives**



n	K		N		I	Ref.
3	•	61.6 *8.0*	•	[36.3]	•	201
4	•	70.0 *6.7*	•	[36.0]	•	201
5	•	74.3 *5.6*	•	[48.6]	•	201
7	•	48.0 *9.6*	•	53.5	•	201

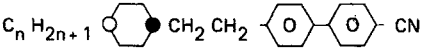


n	K		S_A		N		I	Ref.
3	•	124.0 *4.8*	–		•	198.8	•	201
4	•	93.0 *7.5*	–		•	193.0	•	201
5	•	107.0 *4.8*	•	136.3	•	193.2	•	201
6	•	107.3 *5.2*	•	161.8	•	185.7	•	201
7	•	107.4 *7.0*	•	171.5	•	183.6	•	201
8	•	*96.0* *4.9*	•	173.7	•	177.2	•	201



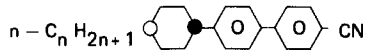
n	K		N		I	Ref.
3	•	91.0 *6.1*	•	112.0	•	201
4	•	82.4 *7.6*	•	109.0	•	201
5	•	87.3 *6.0*	•	114.5	•	201
6	•	81.0 *9.4*	•	110.0	•	201
7	•	88.0 *8.4*	•	108.5	•	201

• **1 [trans 4'n alkyl cyclohexyl] 2 [4'' cyano biphenyl] ethane**



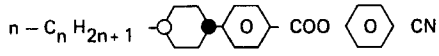
n	K		S_A		N		I	Ref.
3	•	77.2 *5.5*	–		•	193.8	•	201
4	•	71.8 *6.1*	•	74.5	•	182.2	•	201

• 4-[n-alkyl cyclohexyl] 4′-cyanobiphenyl



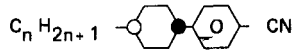
n	K		S_2		S_1		N		I	Ref.
1	•	152 *4.9*	–		–		•	186	•	172
3	•	133 *5.3*	–		–		•	230	•	172
5	•	94 *4.7*	–		–		•	219	•	172
6	•	86 *5.6*	–		–		•	210	•	172
7	•	77 *6.3*	–		•	125	•	206	•	172
8	•	6.1	–		•	147	•	188	•	172
9	•	63	•	70	•	170	•	192	•	172

• 4-n-alkylcyclohexylbenzyloxy 4′-cyano phenyl



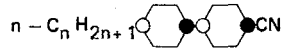
n	K		N		I	Ref.
1	•	153 *5.8*	•	202	•	172
2	•	113 *5.6*	•	215	•	172
3	•	123 *4.7*	•	236	•	172
4	•	107 *6.2*	•	226	•	172
5	•	111 *5.5*	•	225	•	172
6	•	101 *6.8*	•	213	•	172

• 4 [trans 4'n alkyl cyclohexyl] 4'' cyano phenyl



n	K		N		I	Ref.
1	•	382 *4.7*	•	[– 25]	•	172
2	•	40 *5.2*	•	[4]	•	172
3	•	42 *4.3*	•	46	•	172
4	•	41 *5.3*	•	41	•	172
5	•	30 *4.4*	•	55	•	172
6	•	42 *6.7*	•	47	•	172
7	•	30 *6.4*	•	57	•	172
8	•	37	•	55	•	172
9	•	43.3	•	60.2	•	172

• **4-n-alkyl 4'-cyanocyclohexylcyclohexane**



n	K		S_1		S_2		S_3		S_4		N		I	Ref.
2	•	29	–		–		–		•	46	•	49	•	172
3	•	58 *6.4*	•	[18]	•	[44]	•	[48]	•	[57]	•	80	•	161 172
4	•	28	–		–		–		•	54	•	79	•	172
5	•	62 *6.7* *6.4*	–		–		•	[43]	•	[52]	•	85	•	161 172
7	•	71 *8.1*	–		–		–		–		•	83	•	161 172

• **«trans» bis (heptyl-4'-cyclohexyl)-1,4-cyclohexane**

K 74 S_B 249 I Ref. 96
10.15 *4.20*

• **Bis-phenyl 1, 4 cyclohexane dicarboxylates**

n	K	S_3	S_2	S_1	N	I	Ref.
2	• 109.6 *7.264*	–	–	–	• 158.9 *0.150*	•	177
3	• 115.1 *7.300*	–	–	–	• 168.8 *0.134*	•	177
4	• 92.1 *5.620*	–	–	• 106.3 *0.156*	• 149.4 *0.175*	•	177
5	• 93.3 *8.145*	• [91.6]	• [92.9]	• 128.5 *0.182*	• 153.0 *0.252*	•	177

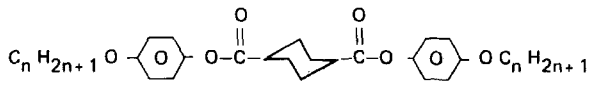


table a

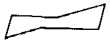
n	K_1	K_2	K_3	K_4	S_1	S_2	S_3	N	I	Ref.
1	–	–	–	• 139.0 *7.560*	–	–	–	• 232.0 *0.231*	•	177
2	–	–	–	• 138.6 *8.630*	–	–	–	• 215.6 *0.2116*	•	177
3	–	–	–	• 136.0 *6.190*	–	–	• [106.7]	• 209.9 *0.083*	•	177
4	–	–	–	• 106.0 *6.180*	–	–	• 154.0 *0.074*	• 206.7 *0.227*	•	177
5	• 800 *3.020*	• 85.8 *0.131*	• 95.7 *1.390*	• 99.1 *0.283*	–	–	• 169.4 *0.255*	• 189.0 *0.250*	•	177
6	–	• 74.0 *0.246*	• 79.0 *3.010*	• 89.5 *2.100*	• 173.0 *0.307*	• 176.0 *0.200*	• 185.0	• 188.0	•	177

Table b

n	K_2	K_1	S_4	S_B	S_C	S_A	N	I	Ref.
1	–	• 143 *8.759*	–	–	–	–	• 243 *0.685*	•	202
2	–	• 141 *12.570*	–	–	–	–	• 244 *0.343*	•	202
3	–	• 137 *12.669*	–	–	–	–	• 214 *0.105*	•	202
4	–	• 107 *6.856*	–	–	–	• 156 *0.230*	• 209 *0.212*	•	202
5	•	85 • 101 *6.950*	–	• 105 *0.277*	–	• 173 *0.173*	• 193 *0.248*	•	202
6	•	86 • 97 *8.850*	• 98	• 108 *0.290*	–	• 181 *0.457*	• 188 *0.283*	•	202
7	•	77 • 95 *11.040*	• 96	• 107 *0.261*	• 111	• 180 *1.363*	–	•	202
8	•	73 • 91 *7.457*	• 93	• 111 *0.305*	• 119	• 178 *1.614*	–	•	202
10	–	• 87 *9.956*	• [83.8]	• 111 *0.647*	• 146	• 170 *1.970*	–	•	202
12	–	• 90 *9.251*	–	• 112 *0.943*	• 156	• 163 *2.029*	–	•	202
14	–	• 94 *12.640*	–	• 114 *1.531*	• 155	• 156 *2.331*	–	•	202
16	–	• 96 *12.319*	–	• 115 *2.148*	• 150 *2.705*	–	–	•	202

• **Other rings**

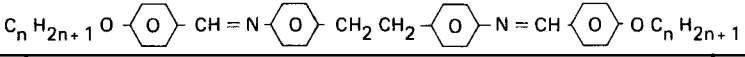
X	K	N	I	Ref.
	• 191.9	• 279.7 *0.443*	•	199 a

X	K	N	I	Ref.
	• 140.2	• 243.3 *0.292* *9.223*	•	21,199e 89
	• 205.6	• 271.8 *0.313* *0.233*	•	21 89
	• 152	• 268.8 *0.288* *0.211*	•	21,199a 89
	• 143.7	• 249.9 *0.257* *0.186*	•	21 89

X	K	N	I	Ref.
	• 203.1	• 236.8 *0.400*	•	199 e
	• 168.2	• 329.1 *0.263*	•	199 a

DIPHENYL ETHANE DERIVATIVES

[Bis-benzylidene aniline] ethane



n	K		S_1		S_2		N		I	Ref.
1	•	181 *10.4*	–		–		•	337 *1.7*	•	210
2	•	173 *9.23*	–		–		•	341 *2.25*	•	210
3	•	169 *3.24*	–		•	176 *2.80*	•	311 *1.5*	•	210
4	•	159 *5.91*	–		•	188 *2.92*	•	303 *2.0*	•	210
5	•	134 *5.31*	•	201 *1.5*	•	208 *0.45*	•	283 *1.3*	•	210
6	•	127 *6.34*	•	203 *1.2*	•	299 ? *0.43*	•	274 *1.7*	•	210
7	•	119 *7.92*	•	203 *1.0*	•	238 *0.65*	•	262 *0.65*	•	210
8	•	118 *8.04*	•	202 *1.0*	•	244 *0.86*	•	255 *1.6*	•	210
10	•	119 *10.5*	•	197 *0.72*	•	241 *4.09*	–		•	210