

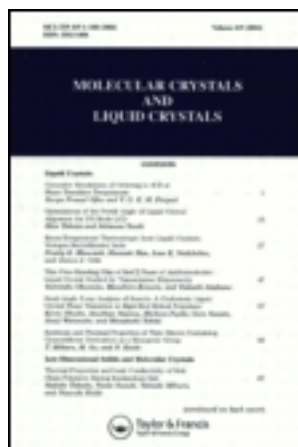
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Benzylidene anilines

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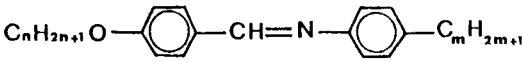
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BENZYLIDENE ANILINES

4-n-Alkyl-N-[4-n-alkoxybenzylidene]-anilines



	n	m	K	N	I	Ref	
						Ph	Tr
1221	1	2	. 57	. [28]	.		133-134
			3.4				133-134
			38	25.8			114★
			11.33				
1222	1	3	. 45.5	. 60.5	.		133-134
			3.6				133-134
			38	25.2			114★
			12.43				

	n	m	K ₁	K ₂	N	I	Ref			
							Ph	Tr		
1223	1	4	.	20.3	—	.	45.9	.		46
			.	.	22	.	.	.		46
			16.5	22.7	.	0.534	.	.		46
			K		N		I			
			.	21	.	48.5	.	.		135
			3.6		α9.6	0.1	α8.8	26	135	
			40			31.75	α8.37	167	227	
					α9	25.6	α8	93*	91	
			39.1		α9 ³⁷	27.8	α8 ⁴⁹	241*	102-80	
					α6.73 ²²	25.3		92	46	
			32			26.6	χ ₅₀ ⁴	103*	24*	
						26.4	χ ₆₀ ⁵ 5.45	28	241.	
					χ ₃₇ ⁶ 6.75	27.5	χ ₄₇ ⁶ 6.85	241*	144	
			37.5			30.7	χ _{45.4} ⁶ 6.83	163	231*232	
						25.6	χ ₄₇ ⁵ 5.63	91	235	
			χ ₂₅ ^{2a}		χ ₂₅ ^{2b}	28.4	χ ₈₅ ^{5c}	227	28	
			39.26						156	
			13.62			0.47				
					ρ1.0278 ₄₅	0.532	ρ1.023 _{48.5}	26	28	
						0.29	ρ1.0228 ⁵⁰	28	235	
					ρ1.0263	0.27	ρ1.0252	91	241	
					ρ1.05	0.4		227	227	
					ρ1.023 ₄₂	0.181			206	
						0.720			206	
						RD.11			235-241	
						RD.2			28	
						RD.13			243	
			RS.1			RD.16			227-206	

- a Under 1.5 kbars pressure
b Under 0.65 kbars pressure
c Under 1 kbar pressure

	n	m	K ₁	K ₂	N	I	Ref	Tr
1224	1	5	.	39.2	.	62.4	.	136-137
				5.43		0.160		136-137
				38		26		114*
				19.13		0.767		
1225	1	6	.	35.2		53.7		133-134
				6.58		0.16		136-137
				38		26.5		114*
				23.5		0.772		
1231	2	4	.	33.4	—	79.7	.	46
				.	35.6	.		46
				19.67		0.65		46
				17.1	14.9	0.71		71
			K		N	I		
			.	34.5	.	79.3	.	135
						0.15		71
				5.8				133
						25.5		114*
				35.9	α9.57	33.8		66 24*
						25.3	ρ0.9803 ₉₀	28 46
				21.95		0.63		
			ρ1.06		ρ1.01 ₅₀	0.6	ρ0.9815	66 225
					ρ0.99 ₇₉	0.74		206 28
						RD.27		206
						RD.26		28
						RD.21		225

	n	m	K	N	I	Ref	
						Ph	Tr
1230	3	4	40		58.4		135
					0.17		135
			5.5				133-134
			37.8		20.5		114*
1239	3	5	19.84		0.487		
			32.7		69.1		217
				p1.1014			217
					p1.929		
1245	4	4	K	S ^b	N	I	
				45.6		74	136-137
						0.17	136-137
				0.93			
				41		27.5	
				2.975		0.745	114*
			K	S _B ^d	S _C ^c	S _A	N _B ^e
				12	40.5	44.2	45.1
				p1.0166	p1.0086	p1.0067	p1.0005
				38	42	40.6	52
				a10	a10	a10	a12.7
				37	42	40.5	52

- a From ref.114, K-S transition at 40°C
b From ref.133 : smectic A
c S_B is a crystal B phase (ref.254,255)

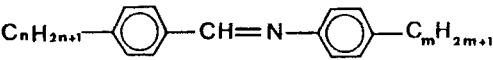
- d See ref.45
e Cibotactic nematic
f Ordinary nematic

	n	m	S	N	I	Ref	
						Ph	Tr
1246	4	5		.	80.5	.	217
				$\rho 0.996$		$\rho 0.981$	217
				67		80.7	
1254	5	4	.	50	. a	69.4	.
				0.36		0.23	
				41		28	
				33.8		27.8	
				1.24		1.006	
				4.36		0.48	
				6.46		0.872	

a From texture ref.136 : smectic A

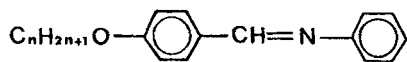
	n	m	K_1	K_2	S	N	I	Ref	
								Ph	Tr
1259	6	1	57.2	[46]	[52.9]	73.7	.		238
1274	8	1	67	—	70.0	77.8	.		238
1278	9	1			74.2	76.8	.		42

4-n-Alkyl-N-[4-n-alkylbenzylidene]-anilines



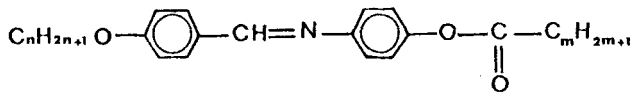
n	m	K	S _B	N	I	Ref	
						Ph	Tr
1	4	7	—	.	[-11]	.	24*
		35.7			38.2		24*
6	5	4	.	38.7	—	.	74
			ρ0.965 ₃₀	7.42		ρ0.93 ₅₀	74
						74*	74

4-n-Phenyl-N-[4-n-alkoxybenzylidene]-anilines



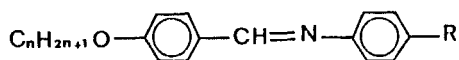
n	N	I	Ref	
			Ph	Tr
1	.	.		193
	RO.38			
6	.	.		193
	RO.41			

4-n-Alkanoyloxy-N-[4-n-alkoxybenzylidene]-anilines



	m	n	K	N	I	Ref	
						Ph	Tr
1502	1	1	. 82	.	111	.	216
				$\rho 1.136_{101}$	>2.33	$\rho 1.122_{110.6}$	73 73
					1.03		216
				$\rho 1.1397_{100}$	RO.35	$\rho 1.0842_{114}$	216 216
1503	2	1	. 72	.	110.6	.	216
					0.70		216
				$\rho 1.1425_{90}$	RO.23	$\rho 1.0639_{113}$	216 216
							216
1504	3	1	. 53	.	112.8	.	216
				$\rho 1.084_{100}$	>2.32	$\rho 1.07_{113.8}$	73 73
					0.88		216
				$\rho 1.1593_{80}$	RO.28	$\rho 1.0434_{115}$	216 216
1505	4	1	. 61	.	100	.	216
				$\rho 1.1183_{80}$	0.72	$\rho 1.0352_{103}$	216 216
					RO.22		216
							216
1506	5	1	. 83	.	103.2	.	216
				$\rho 1.075_{90}$	0.74	$\rho 1.0192_{106}$	216 216
					RO.22		216
							216
1507	6	1	. 64	.	97.1	.	216
				$\rho 1.082_{80}$	0.66	$\rho 1.0138_{100}$	216 216
					RO.19		216
							216
1508	7	1	. 67	.	98.8	.	216
				$\rho 1.0818_{80}$	0.89	$\rho 1.0065_{100}$	216 216
					RO.25		216
							216
1509	8	1	. 72	.	93.7	.	216
				$\rho 1.0557_{80}$	0.85	$\rho 0.997_{96}$	216 216
					RO.23		216
							216
1510	9	1	. 76	.	96.5	.	216
				$\rho 1.0419_{90}$	0.83	$\rho 0.98_{100}$	216 216
					RO.22		216
							216

4-Subst.-N-[4-n-alkoxybenzylidene]-anilines



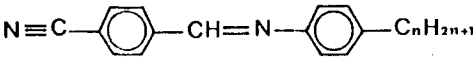
R	n	K	S_B		S_A		I	Ref	
								Ph	Tr
Cl	6	. 57	. 89.5	. 96.5	.			124*	
		α_3 20	α_7 2.7	4	α_{10}	124		124*	
	8	. 67.5	. 87	. 98.5	.			124*	
		α_4 21.7	α_7 2.5	α_{11} 4		124		124*	
	10	. 62	. 83.5	. 97.5	.			124*	
		α_6 24.3	α_7 2.2	α_9 3.7	α_7	124		124*	
	12	. 70	. 78.5	. 94	.			124*	
		α_3 32	α_7 2.2	α_{10} 4.4	α_9	124		124*	
	14	. 78.5	— [78.5]	. 90	.			124*	
		α_4 39 ^a	2.4 ^b	α_9 4.4		124		124*	
	16	. 83.5	—	. 85.5	.			124*	
		α_4 45.5 ^c	47.8	α_9 4.4	α_9	124		124*	
18	. 87	—	. 83.5	.			124*		
	α_2 51.7 ^c			α_9	124		124*		
I	6	89	. 112	.			124*		
		α_7		α_8	124				
	10	85	. 111	.			124*		
α_7			α_8	124					
12	95	. 107	.			124*			
	α_9		α_9	124					

- a Monotropic S_B -K transition
b Monotropic S_A - S_B transition
c Virtual K- S_B transition

R	n	K	S_B	S_A	I	Ref	
						Ph	Tr
Br	6	. 73 $\alpha 4$	. 101 $\alpha 8$	. 104	.	124	124*
	10	. 65 $\alpha 4$	. 98 $\alpha 7$	. 105	.	124	124*
	12	. 76 $\alpha 4$	. 94 $\alpha 7$	. 102 $\alpha 11$	.	124	124*
	14	. 82 $\alpha 4$	. 89 $\alpha 7$	. 98 $\alpha 10$	. $\alpha 9$	124	124*
	16	. 86 $\alpha 2$	. [86] $\alpha 8$	. 94 $\alpha 9$	. $\alpha 9$	124	124*
	18	. 86 $\alpha 4$	—	. 94 $\alpha 10$	. $\alpha 9$	124	124*
	8	. 62	. [54] $\alpha 7$	. 65 $\alpha 12$	.	124	124*
F	10	.	— [65]	— 69	. $\alpha 9$	124	124*

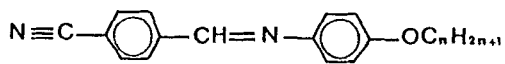
	n	R	K	S _A	N	I	Ref	
							Ph	Tr
1627	1	CN—	106	—	118	0.96		216
						RO.38		216
					p1.097 100	p1.0616 121		216
	10		65	100	101.5			18
			a8					124
	12		61	102	—			124
			a8					124
	14		67	106	—			124
			a8					124
	1	—CH ₂ —CH(CH ₃)—CH ₃	40.2	—	58			114
			40		28			114*
	2		45	—	80.3			114
			33		27.5			114*
	3			47	58.2			114
				33	29.5			114*
	4			48	71.6			114
				43	29			114*
	5			48.5	64.2			114
				35	31			114*
	1	—CH(CH ₃)—C ₂ H ₅	58.3	—				114
			30					114*
	2	NO ₂ —	105.8	—	128.4			46
			26.75		1.125			46

4-Alkyl-N-[4-cyanobenzylidene]-anilines



	n	K	S _A	N	I	Ref	
						Ph	Tr
1645	8	. 66	. [63.8]	. 71.2	.		68
		9.11	0.029	0.22			68
		27.8	50	28.6			247★
		40.4	0.072	0.934			
		. (51)	—	.			247★
		38.5					247★
	9	. 59	. 75.4	. 77.5	.		68
		8.81	0.14	0.35			68
		32.6	40	30			247★
			35.12	26.5			67★
		34.01	0.447	1.48			

4-n-Alkoxy-N-[4-cyanobenzylidene]-aniline



n	K	S _A	N	I	Ref	
					Ph	Tr
8	.	73.8	.	83.4	.	108.5
	α5.19 ₅₀	α6.9 ₈₀	0.012	0.17	248	17
	6.24	α8.1	α4.7		17	20
	37.5	∞	α9.2	α12	123	17
	χ _{ad} 5.02 ₆₉	50.04	217.4	29.2	245	247*
	17.18		0.00647	0.638	103*	16-24
	ρ1.068	ρ0.9891	0.016	ρ0.9671	0.51	17
	ρ1.09 ₅₀	21.5	ρ1.01 ₈₀	0.0032	0.528	248*
						176