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Azo benzene derivatives

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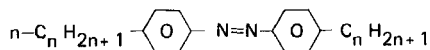
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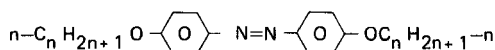
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AZO BENZENE DERIVATIVES

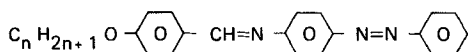
• Azobenzenes



n	K	S _B	S _A	N	I	Ref.
3	• 81.1–81.5 5.3	—	—	• 30.0–30.7	•	62
4	• 28.3–29.1 7.89	—	—	• [–5]	•	62
5	• 48.5–49.1 8.13	—	—	• [41.8–42.2] 0.21	•	62
6	• 36.7–37.2 6.10	—	—	• [23.9–24.3] 0.13	•	62
7	• 39.6–40.0 5.84	—	• [21.0–21.4]	• 47.0–47.3 0.26	•	62
8	• 47.5–47.9 9.33	—	• [35.2–36.4] 0.28	• [41.5–41.8] 0.32	•	62
9	• 36.8–37.0 8.37	• 40.3–40.5 0.31	• 51.5–53.2 1.20	—	•	62
10	• 41.5–42.3 11.7	• 44.3–44.6 0.45	• 52.3–53.7 1.58	—	•	62

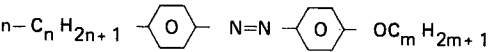


n	K	S _C	N	I	Ref.
6	• 101.5–102.2 9.33	—	• 114.1–114.7 0.36	•	62
7	• 101.1–101.3 10.05	—	• 108.8–109.1 0.36	•	62
8	• 98.8–99.2 9.57	• [95.2–95.6] 0.44	• 112.0–112.3 0.52	•	62
9	• 104.1–104.5 13.2	• [101.5–101.7] 0.56	• 108.6–108.8 0.64	•	62

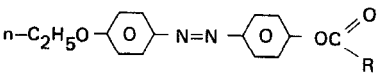


n	S_A	N	I	Ref. (1)
3	• [115.0] 0.077	• 179	•	2, 224
4	• 135.0 0.20	• 184.5	•	2, 224
5	• 138.0 0.36	• 173.0	•	2, 224
6	• 148.0 0.45	• 174.0	•	2, 224
7	• 150.5 0.60	• 167.5	•	2, 224
8	• 157.5 0.73	• 169.0	•	2, 224
9	• 159.5 0.84	• 165.0	•	2, 224
10	• 161.5 0.97	• 164.0	•	2, 224

- (1) Temperatures of transition are from ref. 2 ; the S_A -N enthalpies of transition are from ref. 224 and graphical results.

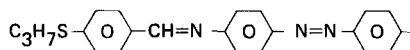


n	m	K	S _B	S _C	S _A	N	I	Ref.
4	1	• 32 3.194					•	187
4	7	• 53.4–53.7 6.10	–	• 39.7–40.3 0.33	–	• 69.0–70.2 0.17	•	62
4	8	• 55.0–55.2 8.13	• [35] 0.05	• [54.0–54.4] 0.01	• 57.5–57.6 0.27	• 74.9–75.2 0.27	•	62
4	9	• 62.0–62.1 8.37	–	• [58.6–58.9] < 0.01	• 63.6–63.8 0.39	• 73.0–73.2 0.25	•	62
4	10	• 53.9–54.4 5.81	• [49.8–50.3] 0.31	• 60.0–61.5 0.007	• 69.0–69.4 0.54	• 75.5–75.8 0.35	•	62
6	5	• 39.4–39.9 2.51	–	–	–	• 68.8–69.2 0.16	•	62
7	6	K ₁ 37 K ₂ 49.9–50.1– 1.94 4.93	–	–	–	• 82.8–83.1 0.32	•	62
8	7	• 53.0–53.2 10.3	–	• 56.1–56.6 0.01	• 59.9–60.2 0.09	• 77.2–77.5 0.31	•	62
9	8	• 46.5–46.7 0.86	• [44] 0.04	• 65.5–65.8 0.01	• 77.2–77.4 0.22	• 84.0–84.2 0.52	•	62



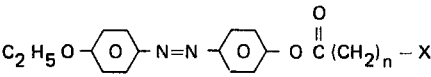
R	K ₃	K ₂	K ₁	N	I	Ref.
n-C ₄ H ₉	—	—	• 79.02 7.94	• 127.2 0.21	•	63
	—	—	• 77.5 7.5	• 126 0.22	•	
n-C ₅ H ₁₁	—	—	• 72.08 7.13	• 128.6 0.27	•	63
	• 66.11 8.92	—	—	• 128.6	•	
	• 66 6.72	—	—	• 129 0.42	•	
	—	—	• 74.6 8.59	• 130.4 0.31	•	168
	• 67.4 8.49	—	—	• 130.4	•	
n-C ₆ H ₁₃	—	—	• 65.74 5.53	• 119.3 0.22	•	63
	• 60.74	—	—	• 119.3	•	
	—	—	• 64.5	• 120 0.41	•	
	—	—	• 65.6 5.19	• 118.6 0.30	•	168
	• 62.0 9.19	—	—	• 118.6	•	
n-C ₇ H ₁₅	• 85.95 11.5	—	—	• 119.8 0.27	•	63
n-C ₈ H ₁₇	• 60.92 3.28	• 69.70	• 72.46 6.62	• 114.7 0.22	•	63
	—	• 70.26 6.89	—	• 114.7	•	
n-C ₉ H ₁₉	• 64	• 70	• 75.6	• 113.1 0.26	•	63
	• 71.56 10.95	—	—	•	•	
	—	• 73.92 7.68	—	•	•	

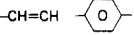
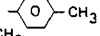
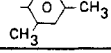
R	K ₃	K ₂	K ₁	N	I	Ref.
n-C ₁₀ H ₂₁	—	• 75	• 79.2 7.63	• 110.1 0.23	•	63
n-C ₁₁ H ₂₃	—	• 77.4	—	• 110.1	•	63
n-C ₁₂ H ₂₅	—	—	• 80.8 9.30	• 109.5 0.28	•	63
n-C ₁₃ H ₂₇	—	• 79.35	—	•	•	63
n-C ₁₄ H ₂₉	—	—	• 83.5 9.98	• 106.7 0.28	•	63
n-C ₁₅ H ₃₁	—	• 82.8	—	•	•	63
n-C ₁₆ H ₃₃	—	—	• 85.3 10.3	• 106.4 0.31	•	63
n-C ₁₇ H ₃₅	—	• 84.8	—	•	•	63
CH ₃ —CH=CH—	—	—	• 109.7 5.65	• 196.7 0.46	•	168
CH ₃ —CH=CH—C ₇ H ₁₄ —	—	—	• 61 0.8	• 109.5 0.74	•	168
CH ₂ =CH—C ₈ H ₁₆ —	—	—	• 60 9.4	• 109 0.45	•	168
CH ₂ =CH—C ₉ H ₁₈ —	—	—	• 63.5 10.7	• 109 0.39	•	168
CH ₂ =CH—C ₁₀ H ₂₀ —	• 61.5 9.86	—	—	• 109	•	168

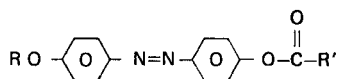


K 111.1 [S_B] 104.6 N 113.8 I
7.470 0.088 2.110

Ref. 49



n	X	K ₃	K ₂	K ₁	N	I	Ref.
0		—	—	• 106.15 6.84	—	•	170
1		—	—	• 102.88 9.69	• 111.47 0.17	•	170
2		—	—	• 110.78 8.11	• 121.09 0.23	•	170
3		—	—	• 105.72 13.4	• [95.87] 0.16	•	170
1		} —	• 103.49 10.4	—	—	•	170
			—	• 106.18 9.7	—	•	170
2			—	• 118.40 9.40	• 128.6 0.23	•	170
3		• 66.48 8.23	—	—	•	•	170
		} —	• 76.83 7.15	—	• [65 ± 5]	•	
			—	• 81.92 9.31	•	•	
0		—	—	• 158.55 8.73	• 242.51 0.45	•	170
0		—	—	• 158.24 7.82	• 284 0.55	•	170
0		—	—	• 160.92 7.68	• 195.55 0.26	•	170



R	R'	K (1)		N		I	Ref.
CH ₃ —	—(CH ₂) ₂ —Cl	•	97 6.8	•	99 0.05	•	223
C ₂ H ₅ —	—(CH ₂) ₂ —Cl	•	94 7.7	•	128 0.11	•	223
C ₄ H ₉ —	—(CH ₂) ₂ —Cl	•	118 8.2	•	[110]	•	223
CH ₃ —	—(CH ₂) ₂ —Br	•	105 7.3	•	[88 or 82]	•	223
C ₂ H ₅ —	—(CH ₂) ₂ —Br	•	107 9.0	•	122 0.1	•	223
C ₄ H ₉ —	—(CH ₂) ₂ —Br	•	117 6.2	—		•	223
CH ₃ —	—CH=CH ₂ (2)	•	74 4.45	•	117 0.11	•	223
C ₂ H ₅ —	—CH=CH ₂ (3)	•	82 4.40	•	138 0.16	•	223
C ₄ H ₉ —	—CH=CH ₂ (3)	•	88 7.2	•	123 0.2	•	223

(1) All the compounds exhibit a very complex cristallin polymotphism. See ref. 223 for more informations.

(2) Stable melting point at 97°C. No enthalpy given.

(3) Stable melting point at 99°C, enthalpy 4,5 kcal/mole.