

Role of the local order on the thermal *cis-to-trans* isomerisation kinetics of azo-dyes in nematic liquid crystals

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Supplementary Information

Table S1. First-order rate constants, k , and half-life times, $t_{1/2}$, for the thermal *cis-to-trans* isomerisation process of **AZO6** in different isotropic solvents and host nematogens at different temperatures. The experimental error associated to temperature and first-order rate constant was of ± 0.1 K and less than 10 %, respectively.

<i>Solvent</i>	<i>Temperature</i> / K	$10^5 \times k$ / s ⁻¹	$t_{1/2}$ / h
<i>acetonitrile</i>	298	1.47	13
	308	4.83	4.0
	313	9.08	2.1
	318	15.9	1.2
	328	47.3	0.41
<i>ethanol</i>	298	2.30	8.4
	308	7.68	2.5
	313	13.3	1.4
	318	25.2	0.76
	328	71.0	0.27
<i>toluene</i>	298	1.95	9.9
	308	6.50	3.0
	313	11.6	1.7
	318	20.5	0.94
	328	60.2	0.32
<i>cyclohexane</i>	298	2.38	8.1
	308	7.45	2.6
	313	13.3	1.4

	318	23.8	0.81
	328	66.2	0.29
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<i>5CB nematic</i>	294	2.93	6.6
	298	4.28	4.5
	301	5.67	3.4
	303	6.88	2.8
	305	8.23	2.3
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<i>5CB isotropic</i>	313	17.8	1.1
	318	30.4	0.63
	323	51.1	0.38
	328	85.2	0.22
	333	143	0.13
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<i>ZLI-1695 nematic</i>	298	6.12	3.1
	303	10.4	1.8
	308	18.2	1.1
	313	30.3	0.63
	318	50.2	0.38
	323	80.1	0.24
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<i>MC4C6 nematic</i>	306	9.01	2.1
	309	12.0	1.6
	311	14.6	1.3
	313	17.5	1.1
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<i>MC4C6 isotropic</i>	323	46.5	0.41
	328	76.4	0.25
	333	127	0.15
	338	210	0.09
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<i>MC5CHX nematic</i>	308	16.3	1.2
	313	27.3	0.70
	318	44.1	0.44
	323	70.4	0.27
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