Supporting Materials for

Macrocyclic Bisbinaphthyl Fluorophores and Their Acyclic Analogs:

Signal Amplification and Chiral Recognition

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General Data. All the reactions were conducted under nitrogen protection unless otherwise specified. Chemical shifts of NMR spectra were given in ppm relative to internal reference $CDCl_3$ (^{1}H, 7.24 ppm, ^{13}C, 77.23 ppm) or acetone-d_6 (^{1}H, 2.17 ppm, ^{13}C, 29.80 ppm). UV-vis spectra were recorded at 1.0 x 10^{-5} M if not specified. The excitation and emission slits of fluorescence spectra were respectively set at 3.5 and 6.5 nm if not specified. The scan speed was set at 100 nm/min.

Table 1. UV Absorption Maxima and Extinguish Coefficients of 2-Naphthol, (*S*)-BINOL, (*S*)-**1**, (*R*)-**14**, (*S*)-**8**, (*S*)-**16**, and (*S*)-**11**.

Compound	λ_{max} nm (ε) in benzene	λ_{max} nm (ε) in CH_2Cl_2
2-naphthol	278 (4460) 286 (2860) 306 (190) 314 (620) 320 (940) 330 (1480)	230 (43500) 256 (6790) 262 (6820) 274 (5340) 286 (3820) 314 (1840) 328 (2300)
BINOL	278 (9520) 288 (7580) 320 (4510) 326 (sh, 4750) 334 (6460) 338 (sh, 3870)	232 (71850) 278 (9540) 290 (9170) 318 (5670) 332 (7230)
(*S*)-**1**	270 (7760) 282 (17400) 292 (sh, 14200) 330 (sh, 10900) 340 (13800)	240 (165700) 280 (22680) 292 (18280) 328 (sh, 12700) 340 (15440)
(*R*)-**14**	272 (10800) 282 (25700) 290 (sh, 23500) 324 (sh, 15700) 336 (20000)	236 (149500) 270 (16290) 278 (17020) 292 (14600) 322 (9080) 334 (12360)
(*S*)-**8**	272 (sh, 35200)	232 (sh, 92000)

	280 (123300) 298 (sh, 86200) 342 (sh, 16200) 352 (sh, 15740)	262 (163500) 266 (160700) 272 (155200) 292 (sh, 94900) 340 (sh, 15100) 348 (sh, 14400)
(*S*)-**16**	282 (109200) 294 (sh, 87900) 338 (sh, 14900) 346 (sh, 14200)	234 (90360) 244 (sh, 98800) 262 (150200) 268 (148700) 272 (145600) 278 (133100) 290 (sh, 91800) 338 (sh, 12400) 348 (sh, 11500)
(*S*)-**11**	274 (sh, 45100) 292 (110400) 338 (131200) 356 (sh, 100600) 372 (sh, 40960)	236 (112300) 240 (113800) 268 (sh, 79720) 290 (113600) 330 (sh, 131700) 334 (136800) 340 (sh, 127500) 370 (sh, 33160)

Figure 1. Excitation Spectra of (S)-1 in Methylene Chloride at Various Concentrations Observed at 380 nm.

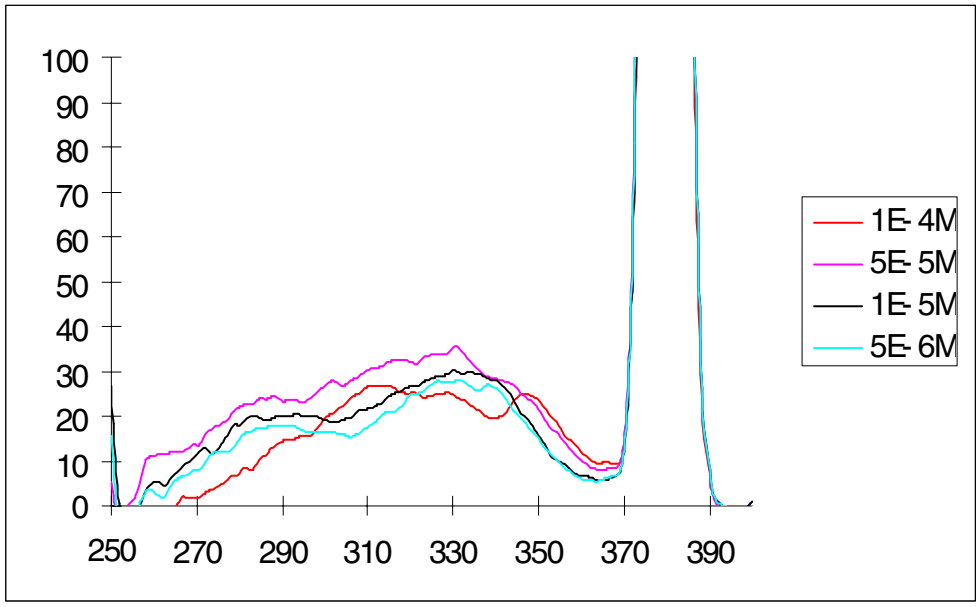

Figure 2. UV Spectra of (*S*)-1 in Methylene Chloride at Various Concentrations.

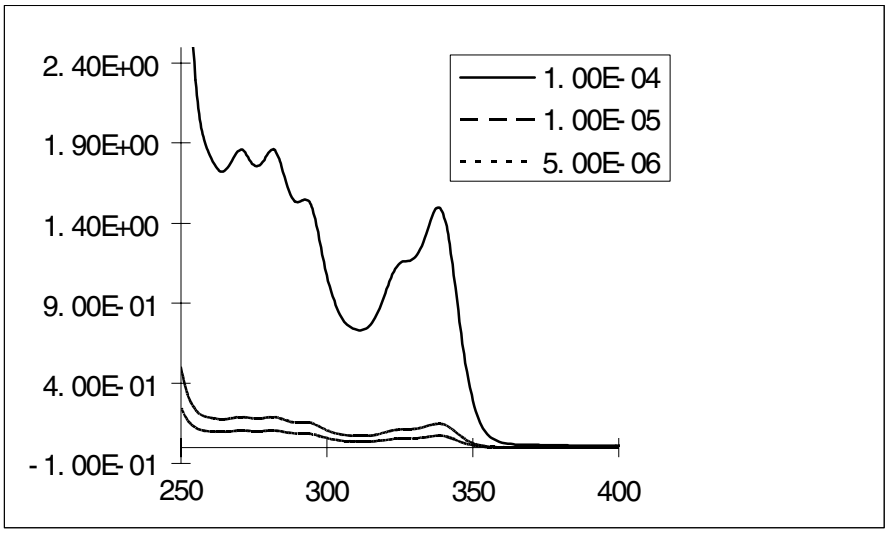

Figure 3. UV Spectra of (S)-1 in Benzene at Various Concentrations.

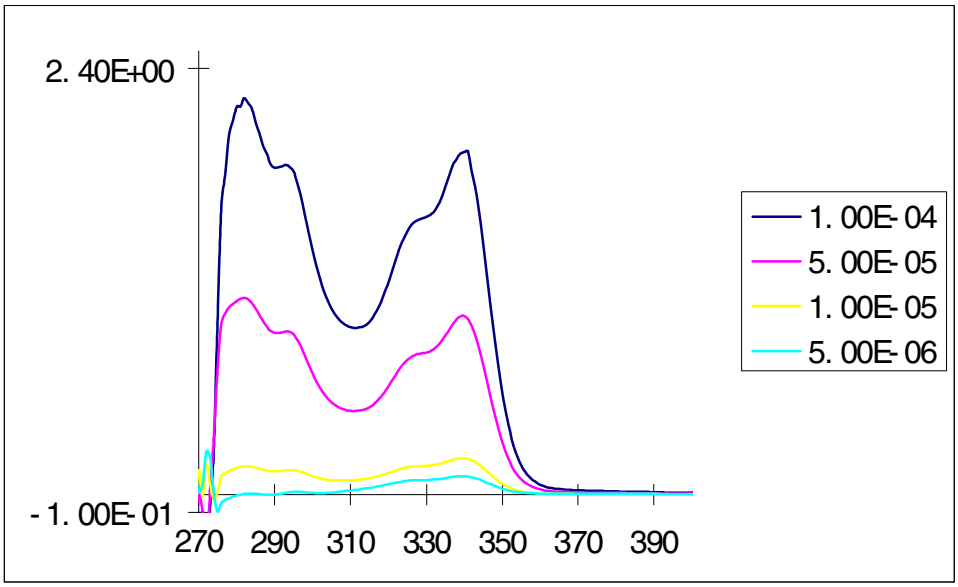

Figure 4. UV Spectra of (S)-1 in Benzene/Isopropanol Solutions (1.0×10^{-4} M).

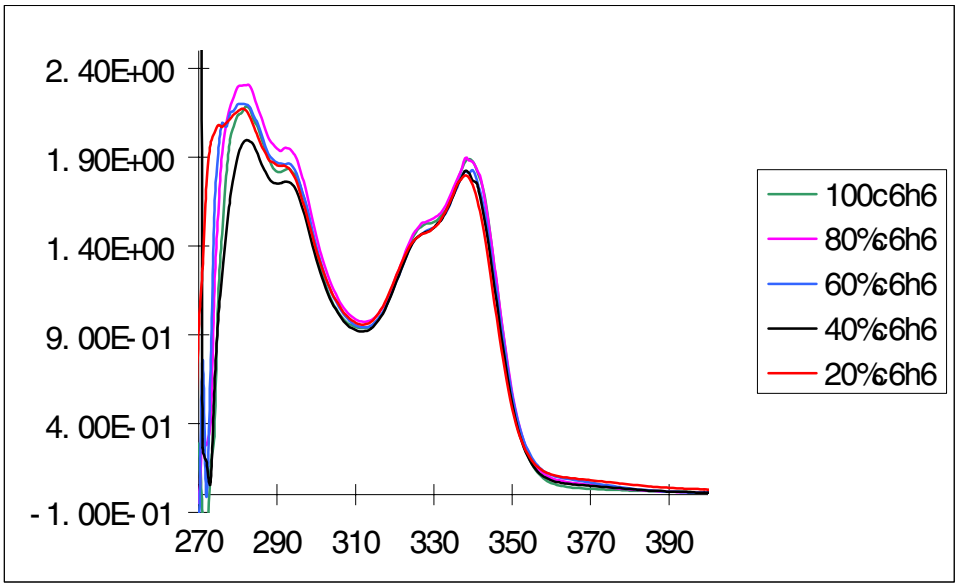

Figure 5. Fluorescence enhancement of the Acyclic Compound (S)-14 (1.0 x 10^{-4} M in Benzene containing 2% DME) versus Concentration of (R)- and (S)-Mandelic acid.