Electronic Supplementary Information

Stereodifferentiation in the Intramolecular Singlet Excited State Quenching of Hydroxybiphenyl/Tryptophan Dyads

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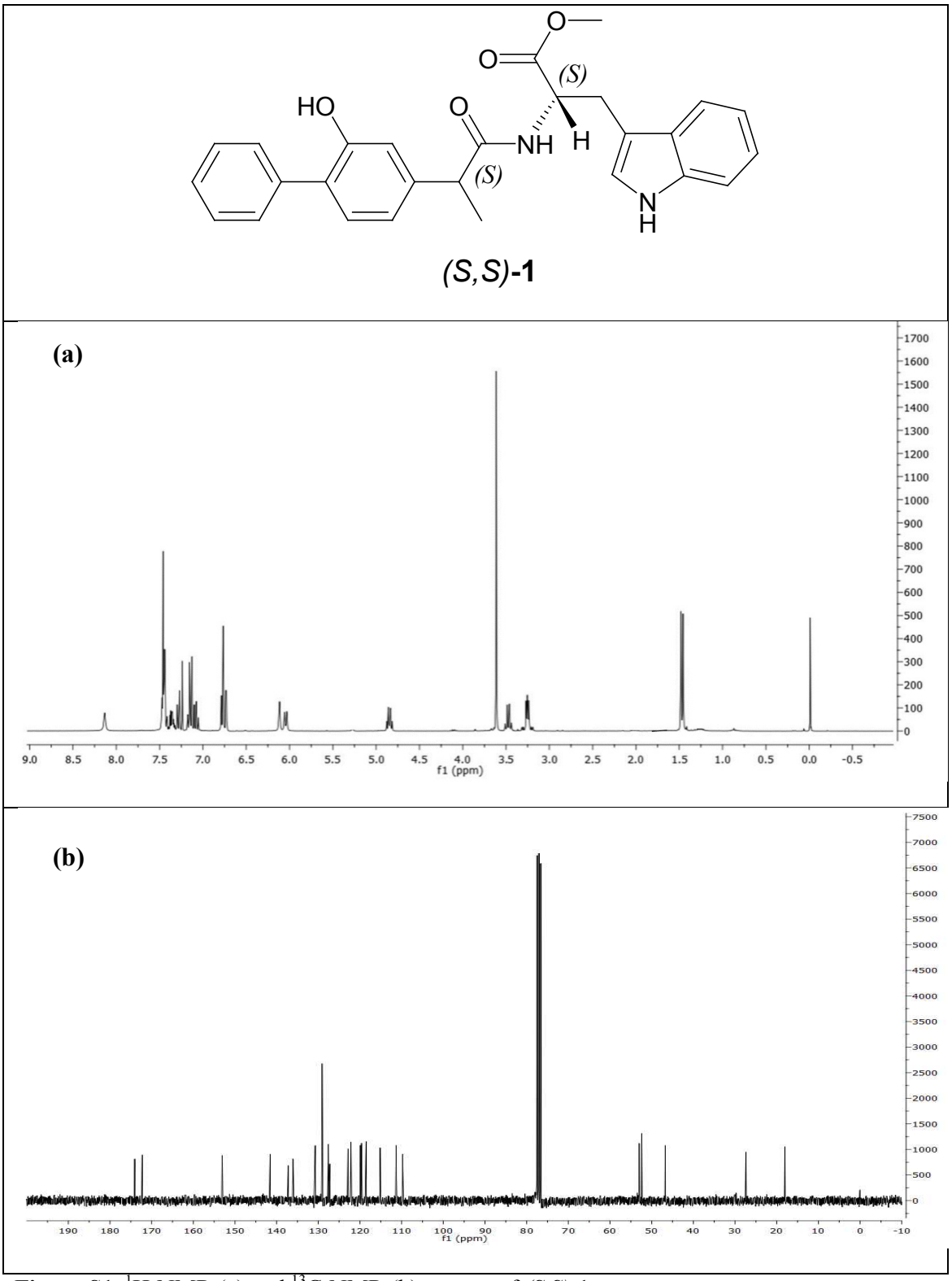

Figure S1. ^{1}H-NMR (a) and ^{13}C-NMR (b) spectra of *(S,S)*-**1**.

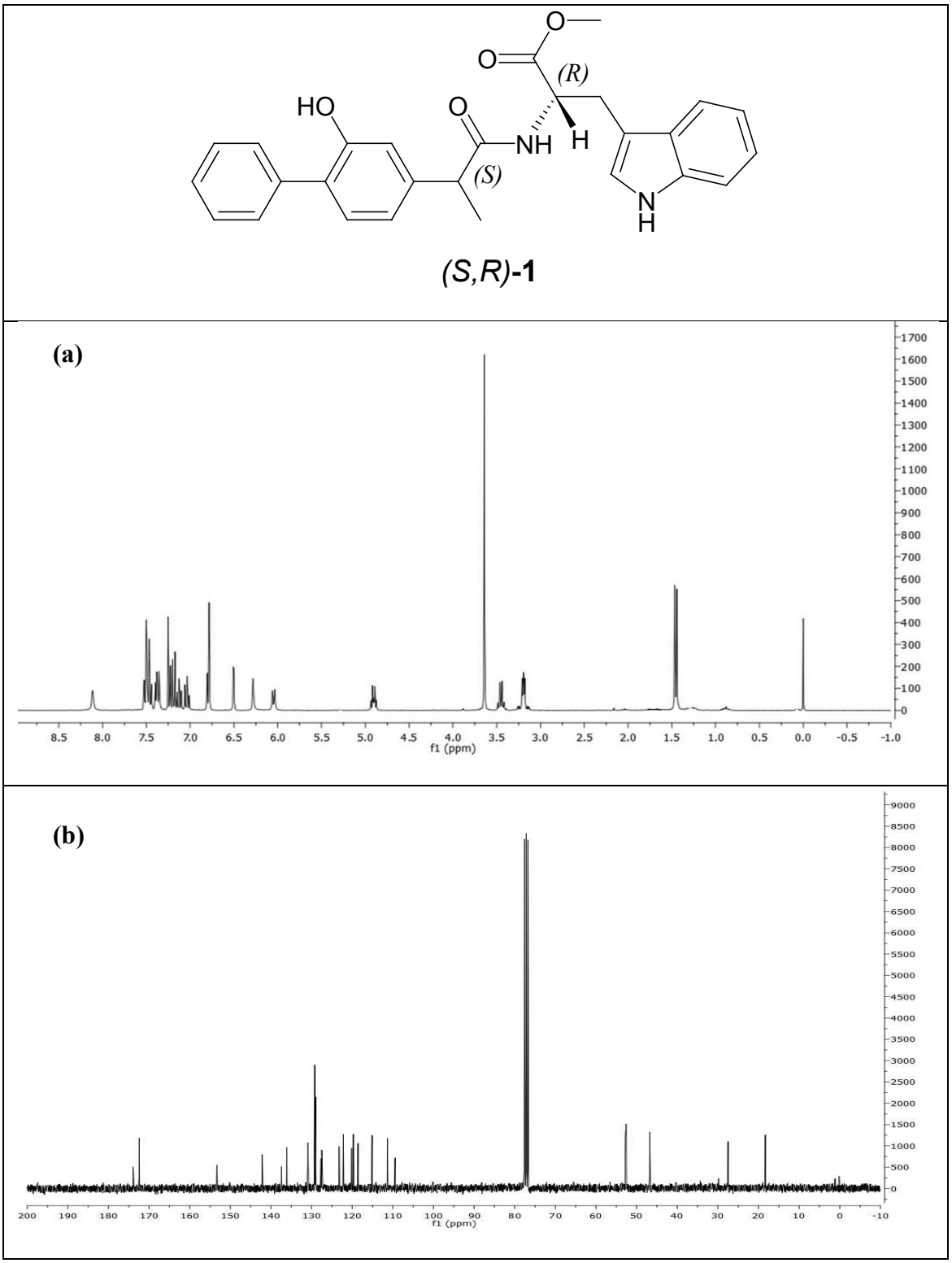

Figure S2. ^{1}H-NMR (a) and ^{13}C-NMR (b) spectra of *(S,R)*-**1**.

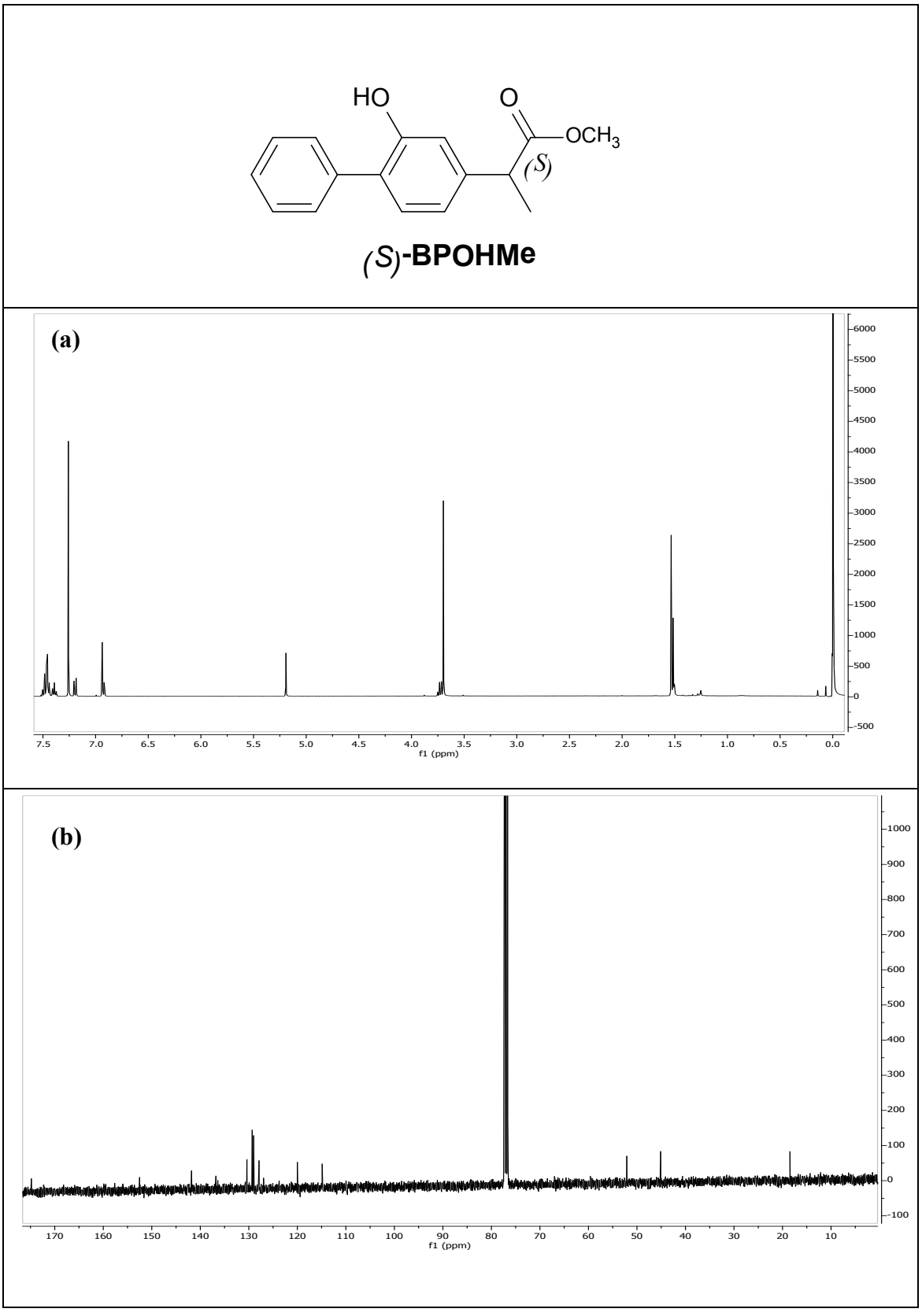

Figure S3. ^{1}H-NMR (a) and ^{13}C-NMR (b) spectra of *(S)*-**BPOHMe**.

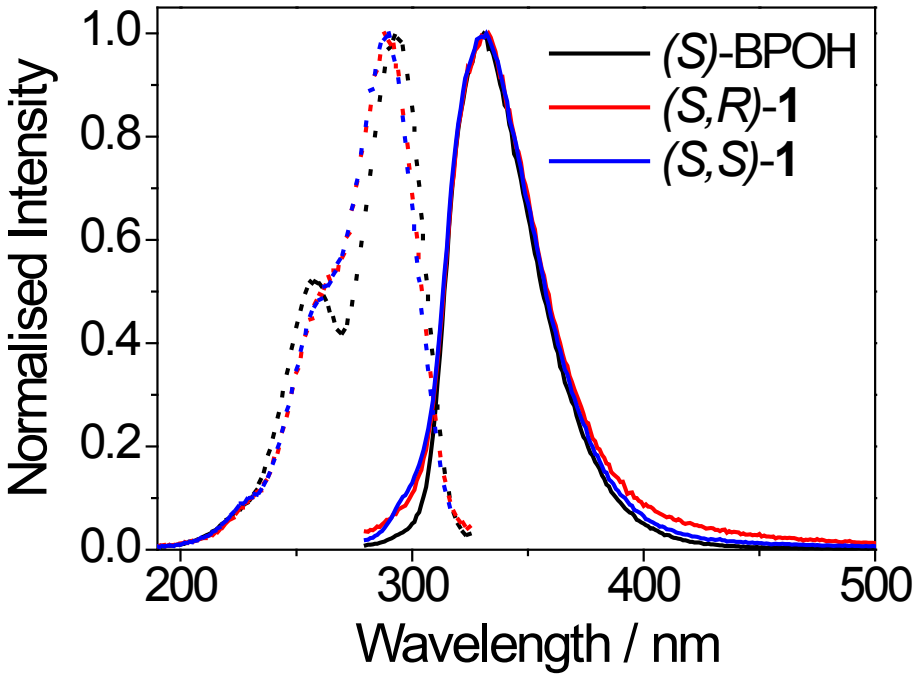

Figure S4. Fluorescence emission (solid line) and excitation (dotted line) spectra of *(S)*-**BPOH** and *(S,S)*- or *(S,R)*-**1** in MeCN (λ_{exc} = 266 nm, λ_{em} = 331 nm).

Rhem-Weller equations to determine the feasibility of formation of radical ion pairs (ΔG_{ET}) and exciplexes (ΔG_{exc}):

$$\Delta G_{ET}(\text{kcal mol}^{-1}) = 23.06\left[E_{OX}^{Donor} - E_{RED}^{Acceptor} + \frac{2.6}{\varepsilon} - 0.13 \right] - E_S *$$

$$\Delta G_{exc}(\text{kcal mol}^{-1}) = 23.06\left[E_{OX}^{Donor} - E_{RED}^{Acceptor} - 0.75\left(\frac{\varepsilon - 1}{2\varepsilon + 1} - 0.19 \right) + 0.38 \right] - E_S *$$

Table 1. ΔG values (in kcal mol^{-1}) for the formation of radical ion pairs and exciplexes from the singlet excited state of *(S)*-**BPOH**.

	Acetonitrile		Acetonitrile/water 1:4	
Donor/Acceptor	ΔG_{ET}	ΔG_{exc}	ΔG_{ET}	ΔG_{exc}
Trp/BPOH	-37.5	-32.4	-37.8	-32.5
BPOH/Trp	-10.2	-5.0	-10.5	-5.1