Supporting Information

Key of Suppressed Triplet Nonradiative Transition-Dependent Chemical Backbone for Spatial Self-Tunable Afterglow

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S1. Synthesis of chromophores and characterization

Chromophore **1** is available commercially and **4** was prepared according to a previous report.[12] Syntheses of **2** and **3** were performed by using the following conventional organic chemistry reactions. The synthesized **2** and **3** were characterized by proton nuclear magnetic resonance (^{1}H NMR), carbon nuclear magnetic resonance (^{13}C NMR) (ECA-500, JEOL, Japan) spectroscopy, electrospray ionization high-resolution mass spectroscopy (HRMS-ESI) (JMS-T100 AccuTOF, Jeol) (Figure S1–S6) and elemental analysis (Series II CHNS/O 2400 analyzer, PerkinElmer, USA). Chromophores **2D** and **3D** were synthesized after deuteration of 1-aminocoronene (Figure S4) followed by C–N coupling. **2D** and **3D**. Detailed information regarding the synthesis, purification and characterizations is as follows.

1-Aminocoronene:

Coronene (500 mg, 1.67 mmol, 1 equiv.) was placed in a 50-mL round-bottom flask that was charged with acetic anhydride (10 mL) and allowed to stir at 0 °C for 15 min. Fuming nitric acid (126 µL, 2.00 mmol, 1.2 equiv.) was added dropwise to the solution at 0 °C. After 3 h of the reaction, conc. sulfuric acid (196 µL, 2.00 mmol, 1.2 equiv.) was added to the reaction mixture with extreme care. The reaction temperature was maintained at 0 °C during the addition, and allowed to stir at room temperature (RT) for overnight. After completion of the reaction, water was added to the reaction mixture, which formed a yellow precipitate that was filtered out. The precipitate was washed with water, isopropanol and diethyl ether. The next reaction was performed by using the 1-nitrocoronene yellow ppt. without further purification.

1-Nitrocoronene (300 mg, 0.87 mmol, 1 equiv.), tin (II) chloride dihydrate (784 mg,

3.47 mmol, 4 equiv.) and concentrated hydrochloric acid (3 mL) were placed in a 250-mL round-bottom flask and ethanol (10 mL) was added as a solvent. The reaction mixture was stirred at 80 °C for 6 h. After completion of the reaction, the pH of the reaction mixture was kept at 7 by sodium-hydroxide solution addition. Ethyl acetate (25 mL × 3) was added to the reaction mixture and a final wash was undertaken with brine solution. The organic layer was dried with anhydrous sodium sulfate (Na_2SO_4) and evaporated to dryness to yield the crude product, which was purified via column-chromatography using silica gel and ethyl acetate:hexane (20:80 v/v) as eluent to give 1-aminocoronene as an orange powder (170 mg, 0.54 mmol, 62 %). ^{1}H NMR (DMSO-D_6, 500 MHz): δ 9.20 (d, 1H, J = 10 Hz), 8.99–8.80 (m, 8H), 8.71 (d, 1H, J = 10 Hz), 8.11 (s, 1H), 6.70 (s, 2H) ppm. ^{13}C NMR (CDCl$_3$, 125 MHz): δ 151.21, 148.32, 132.87, 131.96, 131.12, 130.58, 129.75, 128.37, 126.46, 124.27, 122.34, 121.14, 120.84 ppm. HRMS-ESI (m/z): $[M+H]^+$ calcd. for $C_{24}H_{14}N$, 316.1126; found 316.1149 (Figure S1).

General synthetic procedure for 2, 3, 2D and 3D:

1-Aminocoronene (1 equiv.), bromoaromatic hydrocarbon (2 equiv.), tris(dibenzylideneacetone)dipalladium (0.01 equiv.), sodium *t*-butoxide (1 equiv.) and tri-*t*-butylphosphine (0.04 equiv.) were stirred under nitrogen and heated under reflux at 110 °C overnight. After completion of the reaction, ethyl acetate was added to the mixture and washed with brine solution. The organic layer was dried with anhydrous Na_2SO_4 and evaporated to yield the crude product.

***N,N*-diphenylcoronen-1-amine (2):**

After aforementioned procedure 1, by using 1-aminocoronene (80 mg, 0.25 mmol, 1.0

equiv.) and 1-bromobenzene (83 mg, 0.53 mmol, 2.1 equiv.) as bromoaromatic hydrocarbon in toluene (3 mL), the resulting crude product was purified via column chromatography (silica gel, dichloromethane (DCM)/hexane; 5:95 v/v as eluent) to give **2** as a yellowish powder (82 mg, 0.17 mmol, 69%). The resulting **2** was purified through vacuum sublimation. ^{1}H NMR (CDCl$_3$, 500 MHz): δ 9.01 (d, 1H, J = 10 Hz), 8.87–8.82 (m, 7H), 8.78–8.71 (m, 3H), 7.27–7.25 (m, 6H), 7.02–6.99 (m, 4H) ppm; ^{13}C NMR (CDCl$_3$, 125 MHz): δ 149.20, 142.37, 129.67, 129.41, 128.96, 128.74, 127.07, 127.06, 126.70, 126.63, 126.41, 126.37, 126.34, 126.27, 126.01, 122.87, 122.49, 122.05 ppm; HRMS-ESI (m/z): [M]$^+$ calcd. for C$_{36}$H$_{21}$N, 467.16740; found 467.16875 (Figure S2); analysis (calcd., found for C$_{36}$H$_{21}$N): C (92.48, 92.52); H (4.53, 4.52); N (3.00, 3.12).

N,N-di(9*H*-fluoren-2-yl)coronen-1-amine (3):

After aforementioned procedure 1, by using 1-aminocoronene (80 mg, 0.25 mmol, 1.0 equiv.) and 2-bromo-9*H*-fluorene (130 mg, 0.53 mmol, 2.1 equiv.) as bromoaromatic hydrocarbon in toluene (3 mL), the resulting crude product was purified via column chromatography (silica gel, DCM/hexane; 5:95 v/v as eluent) to give **3** as a yellowish powder (108 mg, 0.17 mmol, 66%). The resulting **3** was purified through vacuum sublimation. ^{1}H NMR (CDCl$_3$, 500 MHz): δ 9.08 (d, J = 10 Hz, 1H), 8.93–8.85 (m, 7H), 8.81–8.76 (m, 3H), 7.70 (t, J = 10 Hz, 4H), 7.46 (d, J = 10 Hz, 2H), 7.41 (s, 2H), 7.36–7.32 (m, 4H), 7.24 (t, J = 10 Hz, 2H), 3.75 (s, 4H) ppm; ^{13}C NMR (CDCl$_3$, 125 MHz): 148.80, 144.95, 143.13, 142.84, 141.74, 136.19, 129.70, 128.93, 128.68, 126.98, 126.89, 126.82, 126.70, 126.65, 126.39, 126.33, 126.20, 125.93, 124.99, 124.78, 123.00, 121.90, 120.73, 119.60, 119.36, 37.08 ppm; HRMS (m/z): [M]$^+$ calcd. for C$_{50}$H$_{29}$N, 643.23000; found 643.23420 (Figure S3); analysis (calcd., found for C$_{50}$H$_{29}$N): C (93.28, 93.35), H

(4.54, 4.60), N (2.18, 2.37).

Deuteration of 1-aminocoronene:

1-Aminocoronene (200 mg, 0.63 mmol, 1 equiv.) was charged with 10% Pd-C (150 mg) and D_2O (30 mL) in a 50-mL teflon-lined autoclave at 250 °C for 12 h. The internal pressure using the container and the solution reached 4–5 MPa. After gradual cooling to room temperature, the D_2O phase was extracted using ethyl acetate (30 mL × 3) and dried over Na_2SO_4. Solvent evaporation gave the crude deuterated 1-aminocoronene. Crude product was purified using column-chromatography (silica gel, ethyl acetate:hexane; 20:80 v/v) to afford deuterated 1-aminocoronene (182 mg, 0.55 mmol, 87 %). ^1H NMR analysis indicates that the deuteration yield was 98% (Figure S4). HRMS-ESI (m/z): $[M]^+$ calcd. for $C_{24}D_{13}N$, 328.18; found, 327.13 (Figure S4c) (overall deuteration yield 93%).

***N,N*-diphenylcoronen-1-amine-*d*$_{11}$ (2D):**

After aforementioned procedure 1, by using deuterated 1-aminocoronene (30 mg, 0.091 mmol, 1.0 equiv.) and 1-bromobenzene (30 mg, 0.19 mmol, 2.0 equiv.) as bromoaromatic hydrocarbon in toluene (1 mL), the resulting crude product was purified via column chromatography (silica gel, DCM/hexane; 5:95 v/v as eluent) to give **2D** as a yellowish powder (35 mg, 0.073 mmol, 80%). The resulting **2D** was purified through vacuum sublimation. ^1H NMR ($CDCl_3$, 500 MHz): δ 9.03 (d, 0.02H, J = 10 Hz), 8.89–8.84 (m, 0.14H), 8.78–8.73 (m, 0.06H), 7.27–7.25 (m, 6H), 7.02–6.99 (m, 4H) ppm; ^{13}C NMR ($CDCl_3$, 125 MHz): δ 148.82, 141.77, 129.67, 129.41, 128.96, 128.74, 127.07, 127.06, 126.70, 126.63, 126.41, 126.37, 126.34, 126.27, 125.41, 122.29, 121.99, 121.95 ppm; ^1H

NMR analysis showed that the deuteration yield was 98% (Figure S5). HRMS-ESI (m/z): $[M]^+$ calcd. for $C_{36}H_{10}D_{11}N$, 478.23; found 477.35 (Figure S5c) (deuteration yield in coronene was 93%).

_N,N_-di(9_H_-fluoren-2-yl)coronen-1-amine-_d_11 (3D):

After aforementioned procedure 1, by using deuterated 1-aminocoronene (90 mg, 0.27 mmol, 1.0 equiv.) and 2-bromo-9_H_-fluorene (132 mg, 0.54 mmol, 2.0 equiv.) as bromoaromatic hydrocarbon in toluene (1 mL), the resulting crude product was purified via column chromatography (silica gel, DCM/hexane; 5:95 v/v as eluent) to give **3D** as a yellowish powder (119 mg, 0.18 mmol, 66%). The resulting **3D** was purified through vacuum sublimation. ^1H NMR (CDCl$_3$, 500 MHz): δ 9.08 (d, 0.02H, J = 10 Hz), 8.93–8.85 (m, 0.14H), 8.81–8.76 (m, 0.05H), 7.70 (t, 4H, J = 10 Hz), 7.46 (d, 2H, J = 10 Hz), 7.41 (s, 2H), 7.36–7.32 (m, 4H), 7.24 (t, 2H, J = 10 Hz), 3.75 (s, 4H) PPM. ^{13}C NMR (CDCl$_3$, 125 MHz): 148.34, 144.42, 142.73, 142.28, 141.18, 136.19, 129.70, 128.93, 127.99, 126.54, 126.13, 126.24, 126.70, 126.65, 126.39, 126.33, 126.20, 125.93, 124.99, 124.78, 123.00, 121.90, 120.73, 119.60, 119.36, 37.08 ppm; ^1H NMR analysis showed that the deuteration yield was 98% (Figure S6). HRMS-ESI (m/z): $[M]^+$ calcd. for $C_{50}H_{18}D_{11}N$, 654.30; found, 653.29 (Figure S6c) (deuteration yield in coronene was 92%).

S2. Measurement procedure of Φ_{isc}(RT)

The measurement of the intersystem crossing yield from the lowest singlet excited state (S$_1$) to the triplet states at RT [Φ_{isc}(RT)] by using the triplet–triplet (T–T) energy transfer from a triplet sensitizer as a donor to β-carotene as an acceptor has been reported in reference 32 in the main text. Φ_{isc}(RT) of **2**, **3**, **2D** and **3D** in benzene was determined by a method of T–T energy transfer using a sample and a reference solution. The sample solution contained one of the synthesized chromophores (**2**, **3**, **2D** and **3D**) as a triplet sensitizer and β-carotene (5×10^{-4} M) as an acceptor in benzene. In the reference solution, benzophenone was used as a triplet sensitizer and β-carotene (5×10^{-4} M) was used as an acceptor in benzene. In all cases, the absorbance at 355 nm, which was caused by the triplet sensitizer of the sample and reference solutions, was set to 1.0 in a 1-mm-thick quartz cell. The solutions were degassed using the freeze–dry pump method three times and sealed immediately before the measurements.

The transient absorption of the sample and reference solution was measured by using a sub-nanosecond transient absorption spectrophotometer (picoTAS, Unisoku, Osaka, Japan) with a 355-nm Q–switched microchip laser (PNV–M02510–1×0, Teem Photonics, Meylan, France). For the sample solutions, values of A, B, τ_1 and τ_2 were determined from the fitting data of Figure S9 using $A(1-\exp(-t/\tau_1))\exp(-t/\tau_2) + B\exp(-t/\tau_1)$ equation, where t is the time after irradiation of an excitation pulse at 355 nm.

The efficiency of the energy transfer from the lowest triplet excited state (T$_1$) of the triplet sensitizer to T$_1$ of β-carotene (Φ_{TT}) in the benzene solution was calculated by using $\Phi_{TT} = (\tau_0-\tau_1)/\tau_0$, where τ_0 and τ_1 are the triplet lifetimes of the sensitizer in the absence and presence of β-carotene, respectively. For all chromophores, τ_0 was obtained as the average lifetime of the decay data in Figure S10. Figure S11 shows that the changes in

transient absorption decay were caused by T–T energy transfer from a triplet sensitizer to β-carotene. $\Phi_{isc}(RT)$ in benzene of all the chromophores was determined based on $\Phi_{isc}(RT) = \alpha A/\Phi_{TT}$, where α is a constant when the optics and excitation power at 355 nm were unchanged between the sample and the reference solution. Because $\Phi_{isc}(RT)$ of benzophenone as a triplet sensitizer in the reference solution tends to be 1, the value of α is determined by using $\Phi_{isc}(RT) = 1$, A and Φ_{TT} of the reference solution. Because the optics and excitation conditions used in the reference solution were unaltered before the measurement of the sample solutions, $\Phi_{isc}(RT)$ of all chromophores in benzene was determined by substituting A and Φ_{TT} of the sample solution and the determined α into $\Phi_{isc}(RT) = \alpha A/\Phi_{TT}$. The values of A, B, τ_0 and τ_1 to determine $\Phi_{isc}(RT)$ are provided in Table S1.

S3. Theoretical analyses of optically measured Φ_{isc}(RT)

To explain the tendency, we performed quantum chemical calculations regarding the rate constant of the internal conversion from S_1 to S_0 at RT [k_{ic}(RT)], and the intersystem crossing from the S_1 to triplet states at RT [k_{isc}(RT)] for **1-4**. k_{ic}(RT) is expressed by using a multiplication of the vibronic coupling constant between S_1 and S_0 (V_k) and the energy difference between S_1 and S_0 (E_{10}).[S1,S2]

$$k_{ic}(RT) \approx 2\pi\Sigma(P(RT)V_k^2/E_{10}^2)=2\pi\Sigma P(RT)R_k, \quad (S1)$$

where P(RT) is the vibrational factor. We calculated values of V_k^2 for **1-4** (Figure S13) and $\Sigma V_k^2/E_{10}^2$ (=ΣR_k) is calculated by integrating the signals. The same magnitude of ΣR_k reasonably explains that k_{ic}(RT) is comparable for **1-4** when the radiationless process is based on the Franck–Condon process.

Next we analyzed k_{isc}(RT) of **1-4**. k_{isc}(RT) is generally expressed as,[S3]

$$k_{isc}(T) = \frac{2\pi}{\hbar}\sum_n|\langle S_1|\hat{H}_{SO}|T_n\rangle|^2\, exp\left[\frac{-(\lambda+\Delta E_{S1-Tn})^2}{4\lambda k_B T}\right]/\sqrt{4\lambda k_B T}, \quad (S2)$$

where $\hbar$ is the Planck constant, $\langle S_1|\hat{H}_{SO}|T_n\rangle^2$ is the spin-orbit coupling between S_1 and T_n, λ is the reorganization energy between S_1 and T_n, and ΔE_{S1-Tn} is the energy difference between S_1 and T_n. Figure S14 represents the relationship between $\langle S_1|\hat{H}_{SO}|T_n\rangle^2$ and ΔE_{S1-Tn} for **1-4**. In Eq. S2, when $(\lambda + \Delta E_{S1-Tn})$ approaches 0, k_{isc}(RT) becomes large. Typical λ changes associated with geometrical relaxations when switching from the equilibrium geometry of S_1 to the transient geometries of T_n are of the order of < 0.3 eV depending on the singlet-triplet pathway.[S4] When λ approaches 0 eV,

the ISC with ΔE_{S1-Tn} approaching 0 is dominant. When λ approaches 0.3 eV, the ISC with ΔE_{S1-Tn} approaching 0.3 is dominant for the ISC. Thus, $\langle S_1|\hat{H}_{SO}|T_n\rangle^2$ in the range of $\Delta E_{S1-Tn} = -0.4 - +0.1$ eV (yellow background in Figure S14) is potentially large enough to affect the increase in k_{isc}(RT), whereas $\langle S_1|\hat{H}_{SO}|T_n\rangle^2$ is negligibly small when ΔE_{S1-Tn} lies outside this range. When we focus on **1**, no large $\langle S_1|\hat{H}_{SO}|T_n\rangle^2$ appears in the range. However, $\langle S_1|\hat{H}_{SO}|T_2\rangle^2$ for **2** is in the range and $\langle S_1|\hat{H}_{SO}|T_2\rangle^2$ is large. For **3** and **4**, $\langle S_1|\hat{H}_{SO}|T_1\rangle^2$ and $\langle S_1|\hat{H}_{SO}|T_2\rangle^2$ are in the range and $\langle S_1|\hat{H}_{SO}|T_1\rangle^2$ and $\langle S_1|\hat{H}_{SO}|T_2\rangle^2$ are also large. Therefore, this reasonably explains the larger difference of k_{isc}(RT) between **1** and **2-4**.

The much larger $\langle S_1|\hat{H}_{SO}|T_1\rangle^2$ and $\langle S_1|\hat{H}_{SO}|T_2\rangle^2$ of **2-4** compared with **1** is reasonable. The large $\langle S_1|\hat{H}_{SO}|T_2\rangle^2$ of **2-4** could be explained by the general El-Sayed rule.[S5] The S_1–S_0 transition has CT transition characteristics, whereas the T_2–S_0 transition contains a local excited (LE) transition nature (Figure S15), which increases $\langle S_1|\hat{H}_{SO}|T_2\rangle^2$. In **3** and **4**, the T_1–S_0 transition has an LE nature. Because this is different from the moderate CT nature of the T_1–S_0 transition, $\langle S_1|\hat{H}_{SO}|T_1\rangle^2$ is not small.

From these investigations, the twisted conjugated substituents to coronene increased k_f and k_{isc}(RT), but hardly increased k_{ic}(RT) (A in Figure S16). For **2-4**, $k_f \ggg k_{ic}$(RT) and k_{isc}(RT)$\ggg k_{ic}$(RT) resulted in Φ_f(RT) + Φ_{isc}(RT) ≈ 1 and a large Φ_{isc}(RT) could be obtained because k_{isc}(RT)$> k_f \ggg k_{ic}$(RT) (Figure S16b–d). Although deuteration theoretically decreases k_{ic}(RT), in **2** and **3**, the small k_{ic}(RT) compared with k_{isc}(RT) and k_f results in no distinct change in yield of internal conversion from S_1 to S_0 because we can estimate it is small. Therefore, Φ_{isc}(RT) of **2** and **3** is hardly affected by deuteration. For **1**, however, k_f, k_{ic}(RT) and k_{isc}(RT) become comparable because k_f is small as caused by a symmetrically forbidden fluorescence, and k_{isc}(RT) is also small because of the

planar structure (Figure S16a). Therefore, we consider that our directly measured values

that are independent of the $1-\Phi_f(RT)$ internal conversion of coronene are reasonable.

S4. Measurement procedure of Φ_p(RT)

The following is an example of procedure to determine Φ_p(RT) of 0.3 wt% **3** or **3D**-doped amorphous β-estradiol film. The total yield of emission under excitation was measured by using a conventional integration sphere system in air (Hamamatsu, C9920-02G) (blue line in Figure S17a). Next, persistent RT emission (persistent TADF (pTADF) + pRTP) spectra for 20 ms soon after ceasing the excitation (green line in Figure S17a) was compared with the steady state emission spectra for 20 ms under excitation (blue line in Figure S17a) to determine the total yield of pTADF and pRTP. This is because pTADF and pRTP hardly decrease because of their long lifetime in the short time (20 ms). Then, the temperature dependence of persistent emission characteristics was measured using a cryostat to separate pTADF and pRTP. Because pTADF appears in the temperature more than 200K for **3** and **3D**, phosphorescence spectra at 180K was measured. The phosphorescence spectrum at 180K (orange in Figure S17b) was set along pRTP + pTADF spectrum in 600-750 nm (green in Figure S17b). The difference of log value between the phosphorescence intensity at 180K and pRTP + pTADF intensity was calculated from 600 nm to 750 nm. Minimized mean square values of the difference results in Figure S17c. pTADF spectrum (red in Figure S17c) could be obtained by subtracting the pRTP area (orange in Figure S17c) from pRTP + pTADF area (green in Figure S17c). By comparing each spectral area, the yield of prompt fluorescence, pTADF, and pRTP was determined.

For samples without pTADF, the separation pTADF from pTADF + pRTP was not necessary. pRTP spectral intensity for 20 ms soon after ceasing excitation was compared with steady state emission spectral intensity under the excitation to determine Φ_p(RT).

S5. Effect of RTP antenna to enhance k_p

In our previous report we showed the excellent correlation between the calculated and experimental k_p (Ref. 12 in the main text). The formula of k_p,[S6-S8] was expressed approximately as (Refs. 12, 24 and 39 in the main text):

$$k_p \approx \sum_n (\lambda_n \times \mu_{S_n \to S_0})^2, \qquad\qquad (S3)$$

$$\lambda_n = \langle S_n | \hat{H}_{SO} | T_1 \rangle / E_{S_n - T_1}, \qquad\qquad (S4)$$

where $\mu_{S_n \to S_0}$ is the transition dipole moment between the higher lying singlet excited state (S_n) and S_0, $\langle S_n | \hat{H}_{SO} | T_1 \rangle$ is the SOC between S_n and T_1 and $E_{S_n - T_1}$ is the energy difference between S_n and T_1. In our previous report, we showed a strong correlation between experimental k_p and the calculated $\sum_n (\lambda_n \times \mu_{S_n \to S_0})^2$ ((Refs. 12 and 24 in the main text)). Therefore, according to Eqs. S3 and S4, contributions of $\mu_{S_n \to S_0}{}^2$ and $\lambda_n{}^2$ were discussed for the change in k_p in **2** and **3**. For **2**, there was no significant contribution of $(\lambda_n \times \mu_{S_n \to S_0})^2$ with n $\geq$ 2 to k_p ((i) in Figure S22a). However, a significant enhancement of $(\lambda_n \times \mu_{S_n \to S_0})^2$ at S_3 for **3** anchored the enhancement of k_p ((i) in Figure S22b). A question arises as to the focused S_3 that is a dominant factor to enhance k_p, $\langle S_3 | \hat{H}_{SO} | T_1 \rangle^2$ in λ_n or $\mu_{S_3 \to S_0}{}^2$. There was almost negligible $\langle S_3 | \hat{H}_{SO} | T_1 \rangle^2$ for **2** ((ii) in Figure S22a) whereas a large $\langle S_3 | \hat{H}_{SO} | T_1 \rangle^2$ was visible in **3** ((ii) in Figure S22b). A comparison of the $\mu_{S_3 \to S_0}{}^2$ for **2** and **3** indicated an enhancement of $\mu_{S_3 \to S_0}{}^2$ in **3** compared with that of **2** ((iii) of Figure S22a,b). This result indicates that $\langle S_3 | \hat{H}_{SO} | T_1 \rangle^2$

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and $\mu_{S_3 \to S_0}{}^2$ enhance k_p in **3** compared with **2**.

To establish the reason for the large difference in $\langle S_3 | \hat{H}_{SO} | T_1 \rangle^2$ and $\mu_{S_3 \to S_0}{}^2$ between **2** and **3**, we analyzed the associated molecular orbital (MO) of these two chromophores. For **2**, MOs that relate to the S_3–S_0 transition are delocalized mostly over the coronene part (A in Figure S22c) and those that relate to the T_1–S_0 transition are located at the coronene part (B in Figure S22c). Therefore, similar local excited (LE) characteristics between the S_3–S_0 and T_1–S_0 transitions makes $\langle S_3 | \hat{H}_{SO} | T_1 \rangle^2$ forbidden (5.5×10^{-3} cm^{-2}), which is the negligible contribution to the enhancement of k_p. For **3**, in contrast, a large overlap of MOs in fluorene substituents relates to the S_3–S_0 transition, which indicates the LE transition nature (C in Figure S22d) whereas the T_1–S_0 transition has a charge transfer character (D in Figure S22d). The different nature allows for efficient $\langle S_3 | \hat{H}_{SO} | T_1 \rangle^2$ (3.6×10^{-1} cm^{-2}) according to the El-Sayed rule[S5] and enhances the k_p. $\mu_{S_3 \to S_0}{}^2$ is small in **2** because of the small conjugation length of the RTP antenna, which led to the suppression of k_p (E in Figure S22c). However, a different scenario was observed for **3** because of the extension of the RTP antenna and increased conjugation length and a larger $\mu_{S_3 \to S_0}{}^2$ resulted for the accelerating k_p (F in Figure S22d). The combination of $\mu_{S_3 \to S_0}{}^2$ and $\langle S_3 | \hat{H}_{SO} | T_1 \rangle^2$ is the driving factor in the enhancement of k_p in **3** compared with that of **2**.

S6. Supporting display items
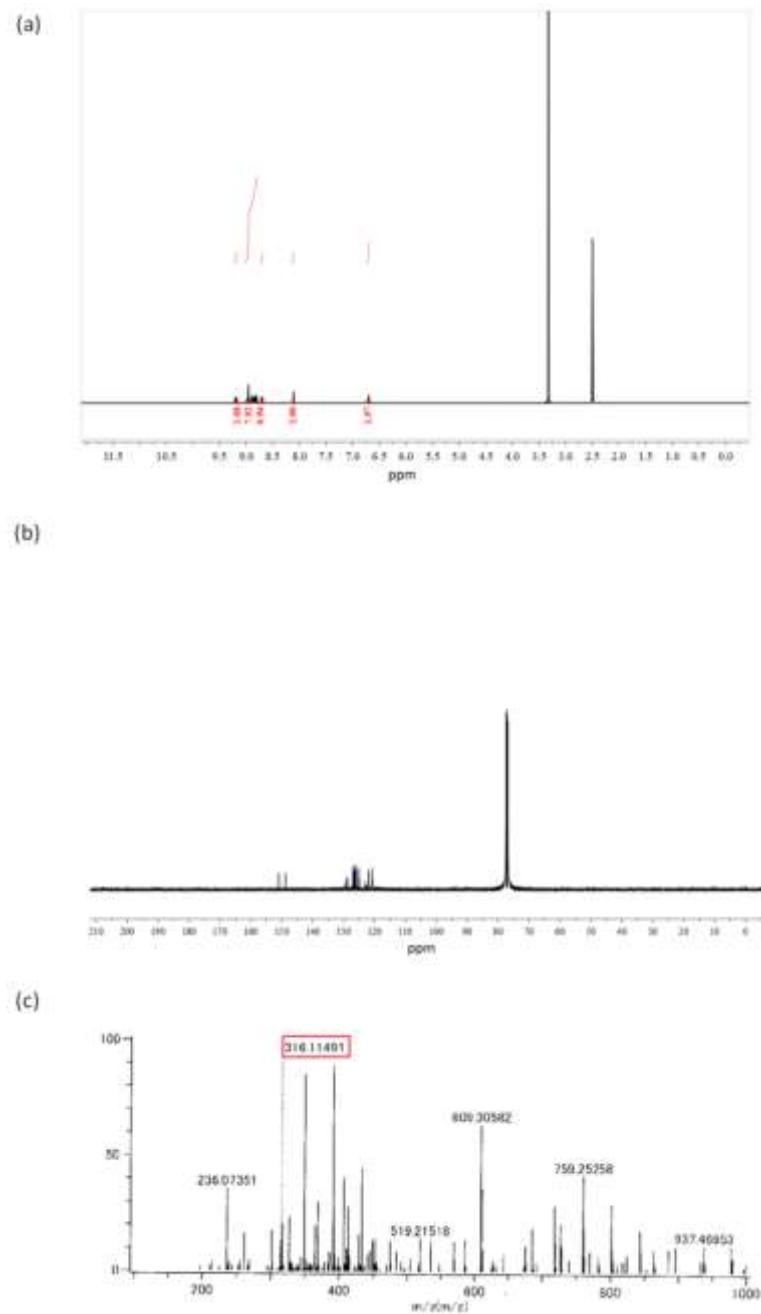
Figure S1. (a) ^{1}H NMR (500 MHz in DMSO-d_6 at RT), (b) ^{13}C NMR (125 MHz in CDCl$_3$ at RT) and (c) HRMS-ESI spectra of 1-aminocoronene.

(a)
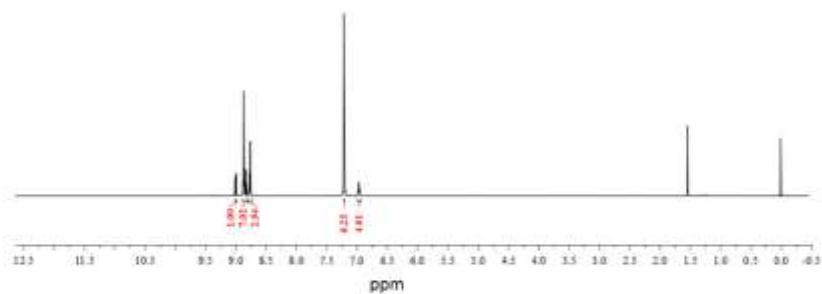
(b)
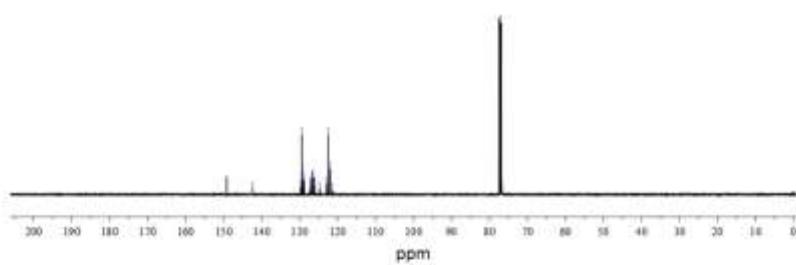
(c)
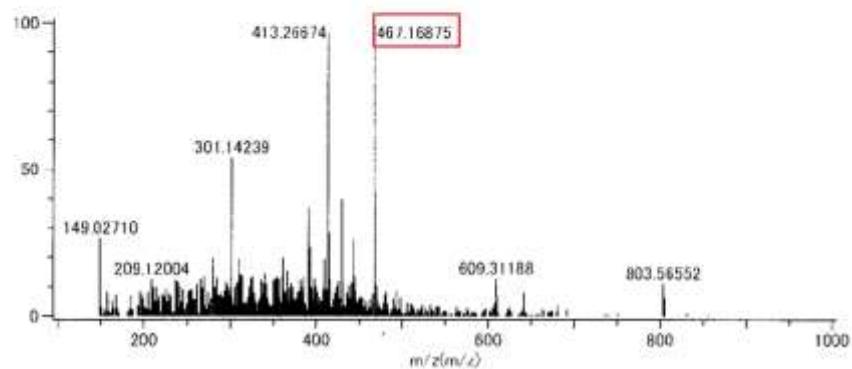
Figure S2. (a) ^{1}H NMR (500 MHz in CDCl$_3$ at RT), (b) ^{13}C NMR (125 MHz in CDCl$_3$ at RT) and (c) HRMS-ESI spectra of **2**.

(a)
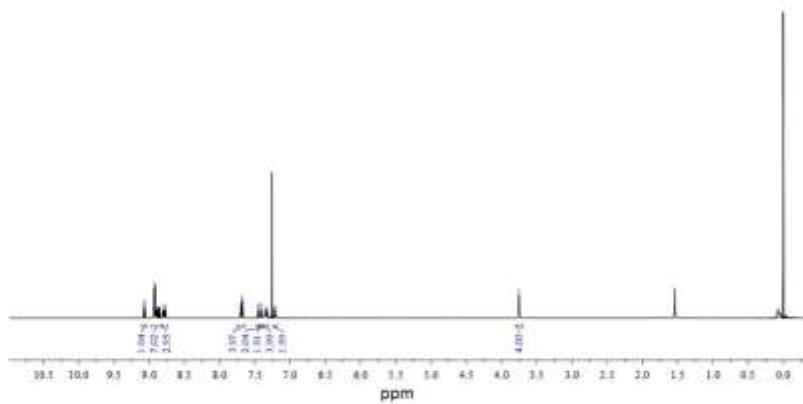
(b)
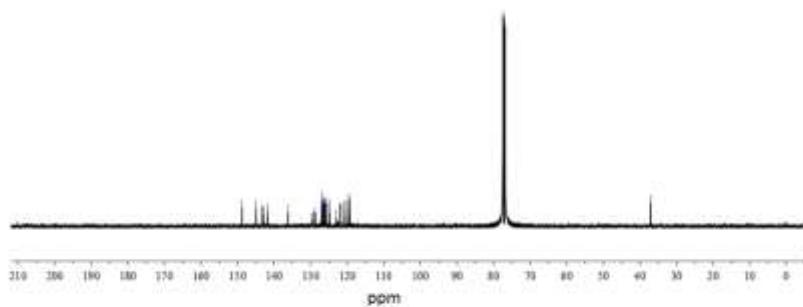
(c)
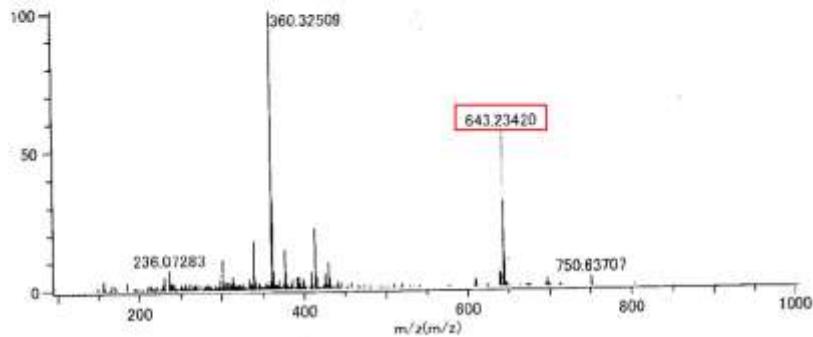
Figure S3. (a) ^{1}H NMR (500 MHz in CDCl$_3$ at RT), (b) ^{13}C NMR (125 MHz in CDCl$_3$ at RT) and (c) HRMS-ESI spectra of **3**.
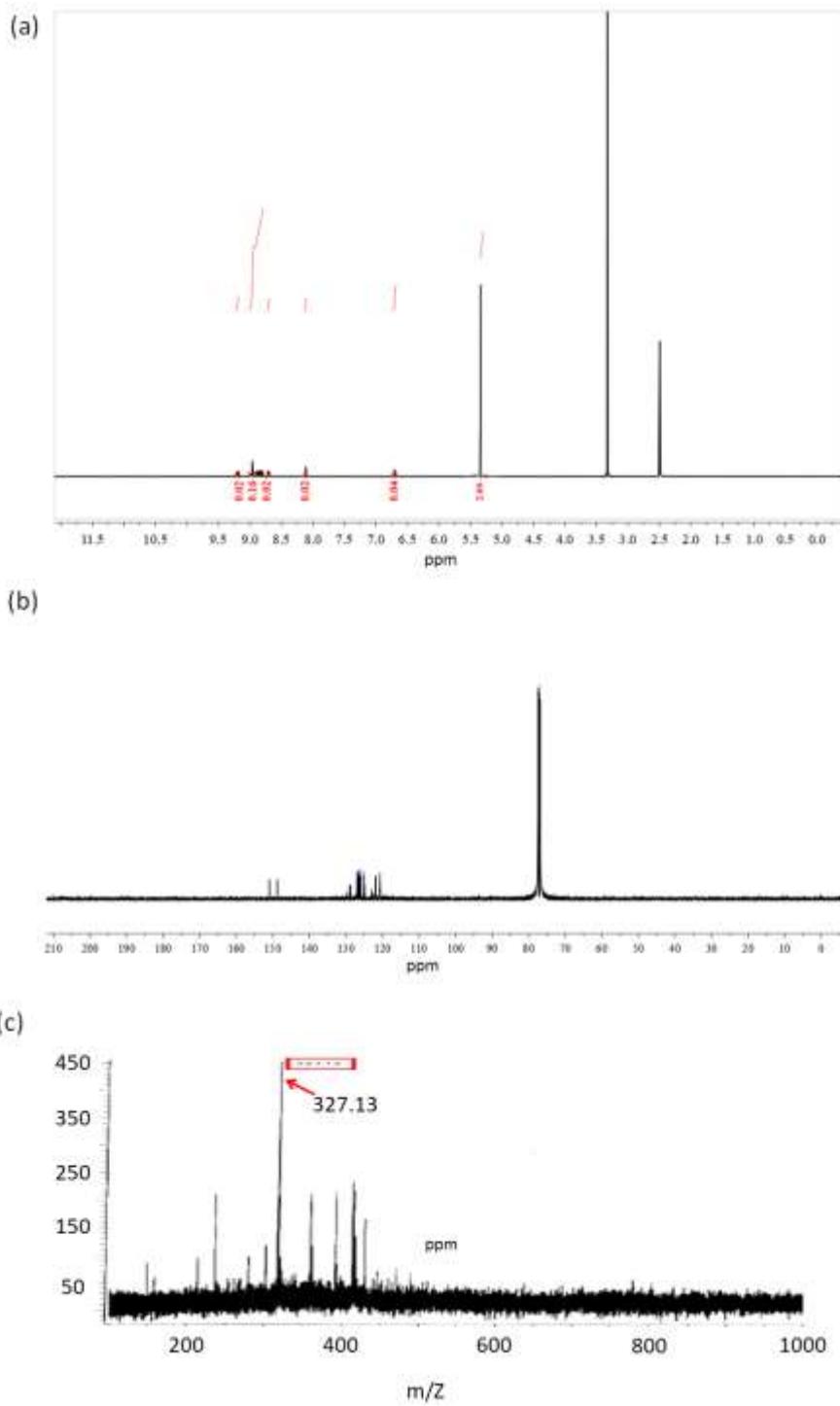
Figure S4. (a) ^{1}H NMR (500 MHz in DMSO-d_6 at RT), (b) ^{13}C NMR (125 MHz in CDCl$_3$ at RT) and (c) HRMS-ESI spectra of deuterated 1-aminocoronene.

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(a)

(b)

(c)
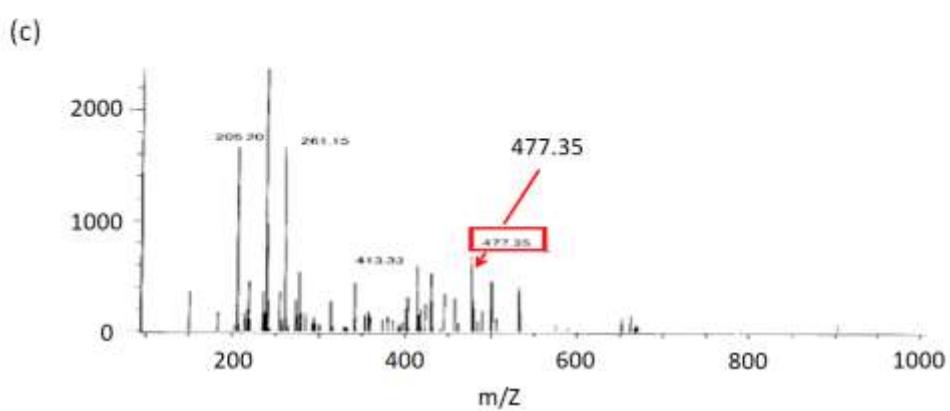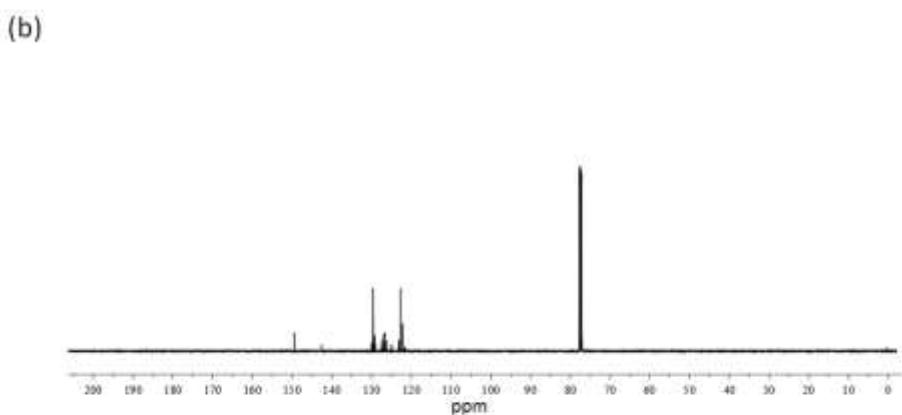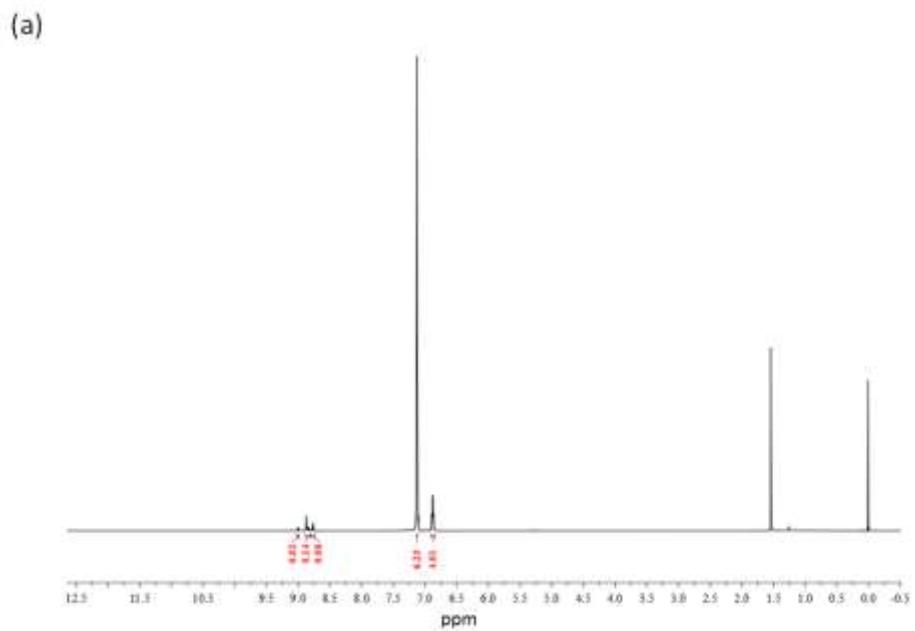
Figure S5. (a) ^{1}H NMR (500 MHz in CDCl₃ at RT), (b) ^{13}C NMR (125 MHz in CDCl₃ at RT and (c) HRMS-ESI spectra of **2D**.

(a)

(b)

(c)
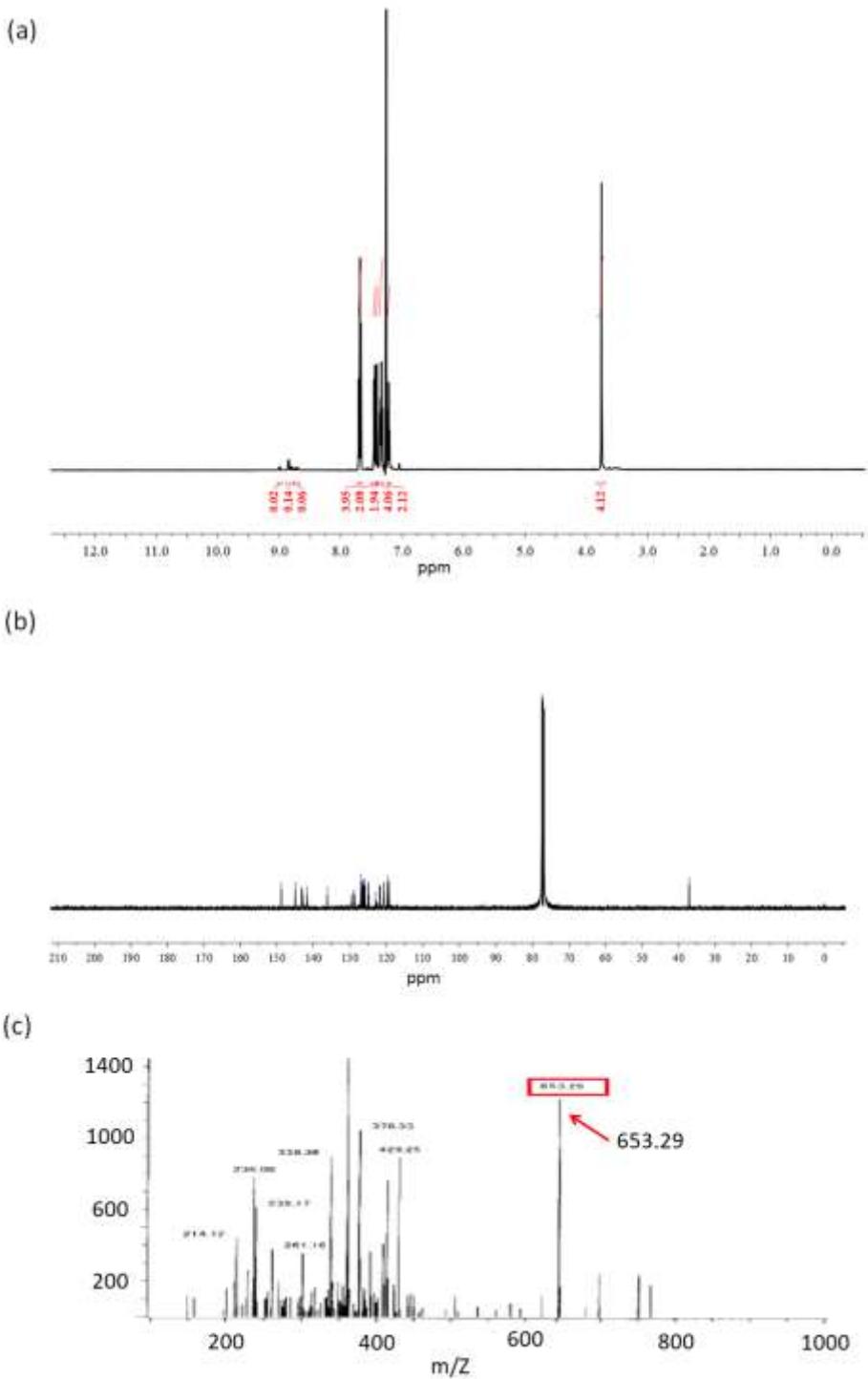
Figure S6. (a) ^{1}H NMR (500 MHz in CDCl$_3$ at RT), (b) ^{13}C NMR (125 MHz in CDCl$_3$ at RT and (c) HRMS-ESI spectra of **3D**.
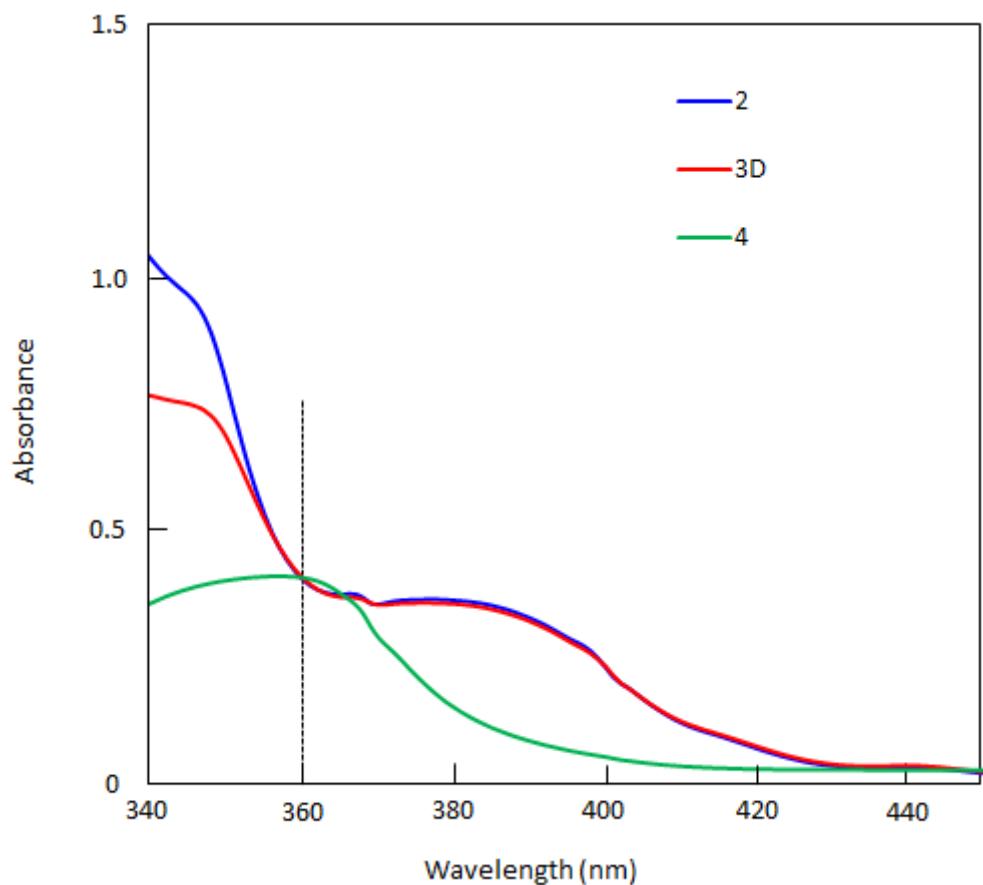
Figure S7. Absorbance spectra of **2**, **3D** and **4** used in demonstration in Figure 1c.
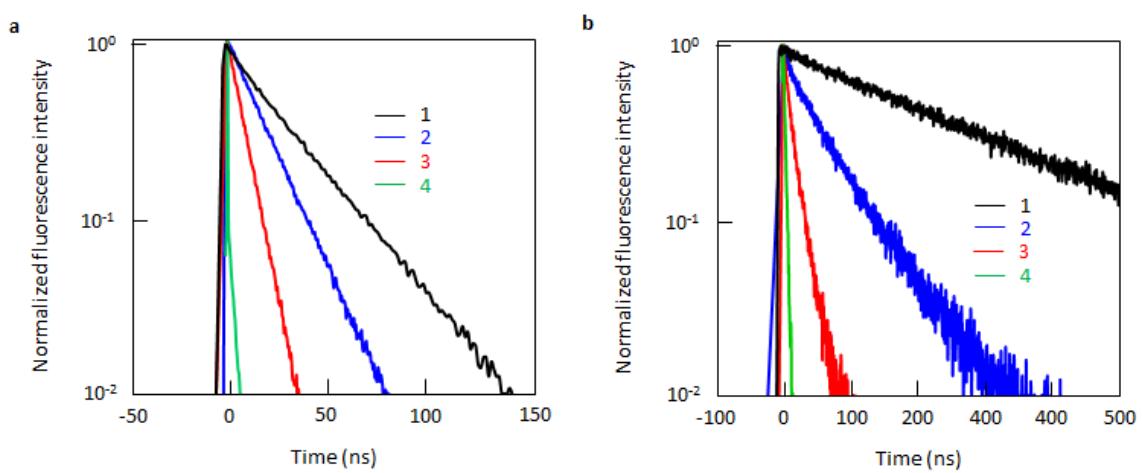
Figure S8. Fluorescence lifetime at RT of **1−4** in (a) toluene and (b) β-estradiol. Concentration of **1−4** in toluene is 1×10^{-5} M. Concentration of **1−4** in β-estradiol is 0.3 wt%.
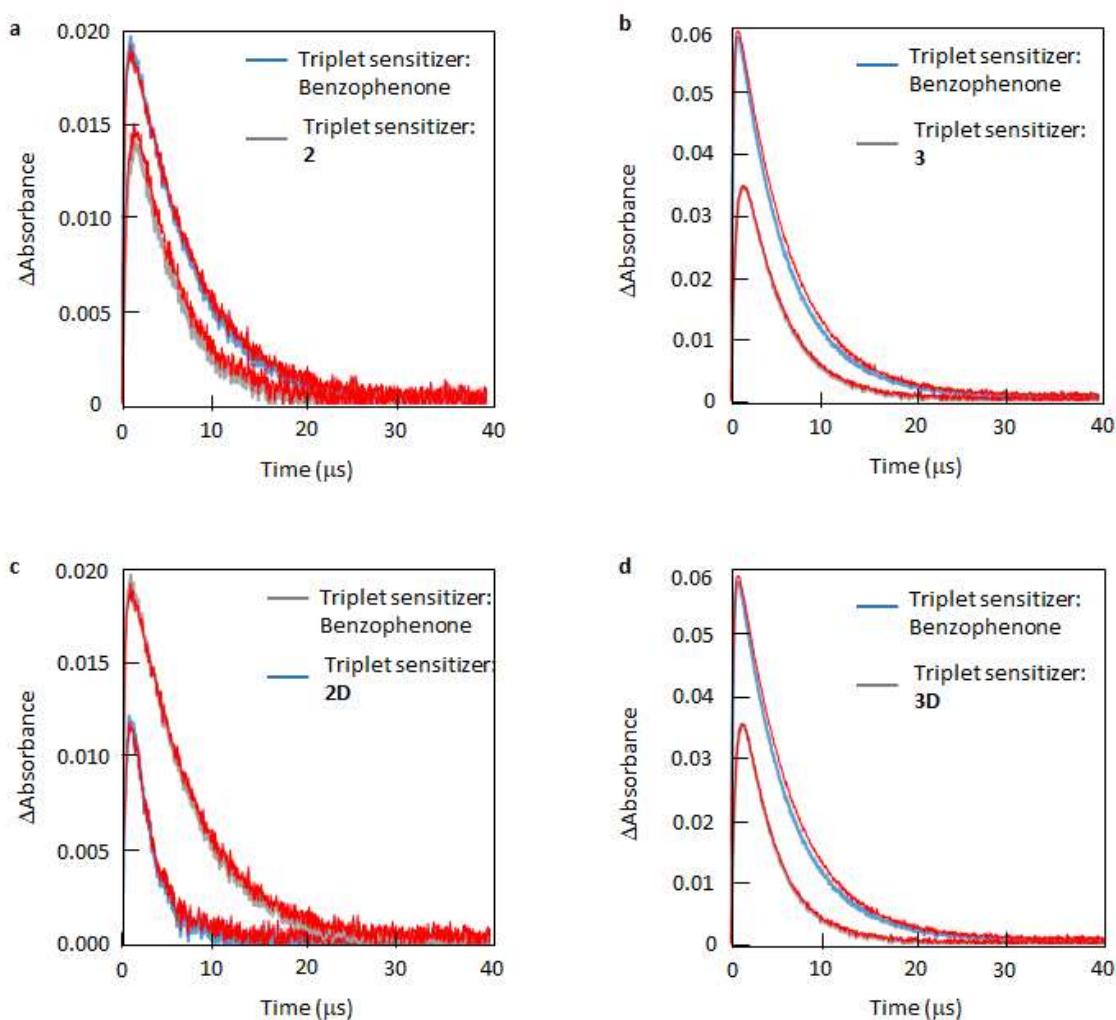
Figure S9. T–T absorption intensity changes at 530 nm of sample and reference solution. Sample solution contained one of the synthesized chromophores as triplet sensitizer and β-carotene as an acceptor in benzene. Reference solution contained benzophenone as triplet sensitizer and β-carotene as an acceptor in benzene. (a) Triplet sensitizer of sample solution **2**. (b) Triplet sensitizer of sample solution **3**. (c) Triplet sensitizer of sample solution **2D**. (d) Triplet sensitizer of sample solution **3D**.
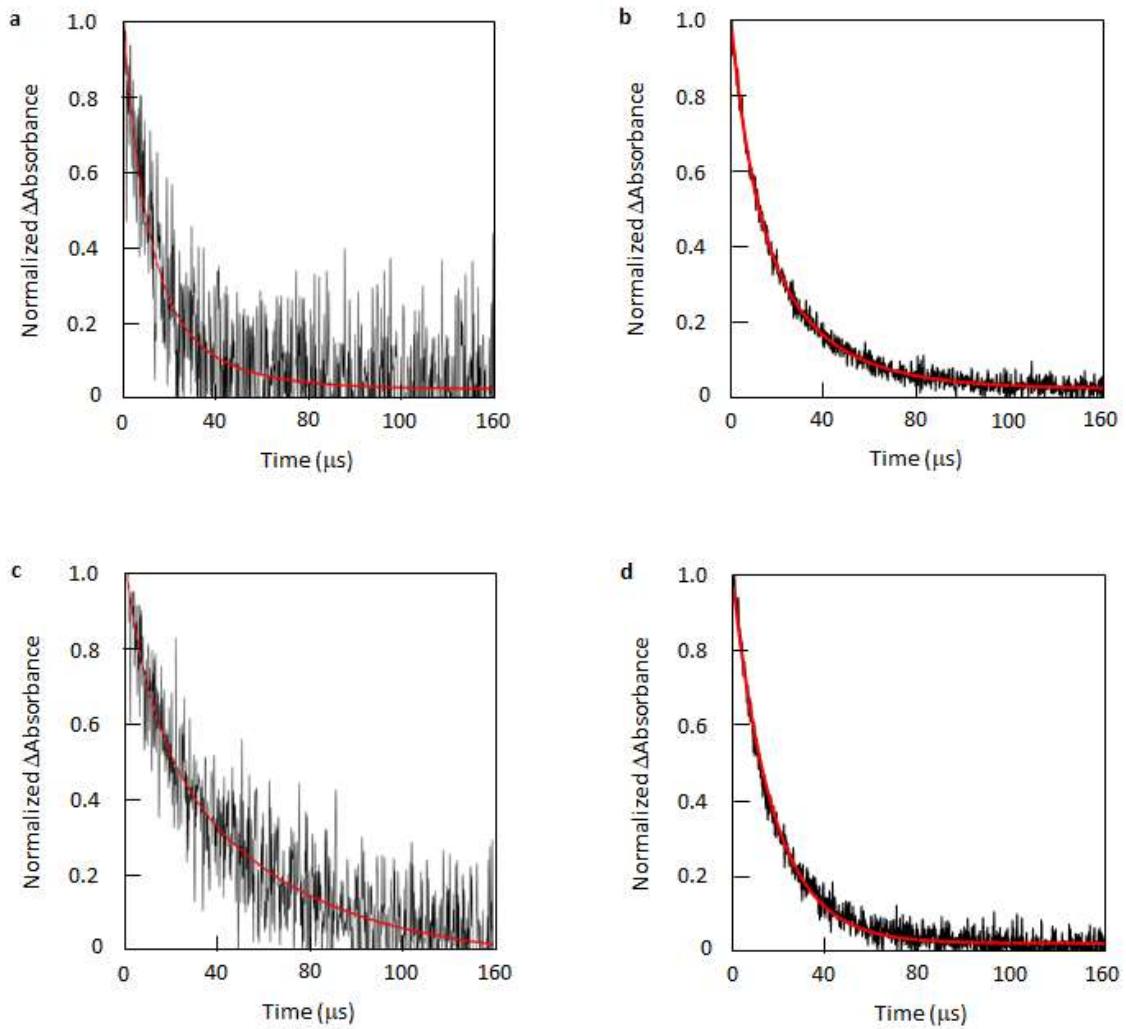
Figure S10. T–T absorption decay characteristics of chromophores in benzene solution.

(a) **2**. (b) **3**. (c) **2D** and (d) **3D**.
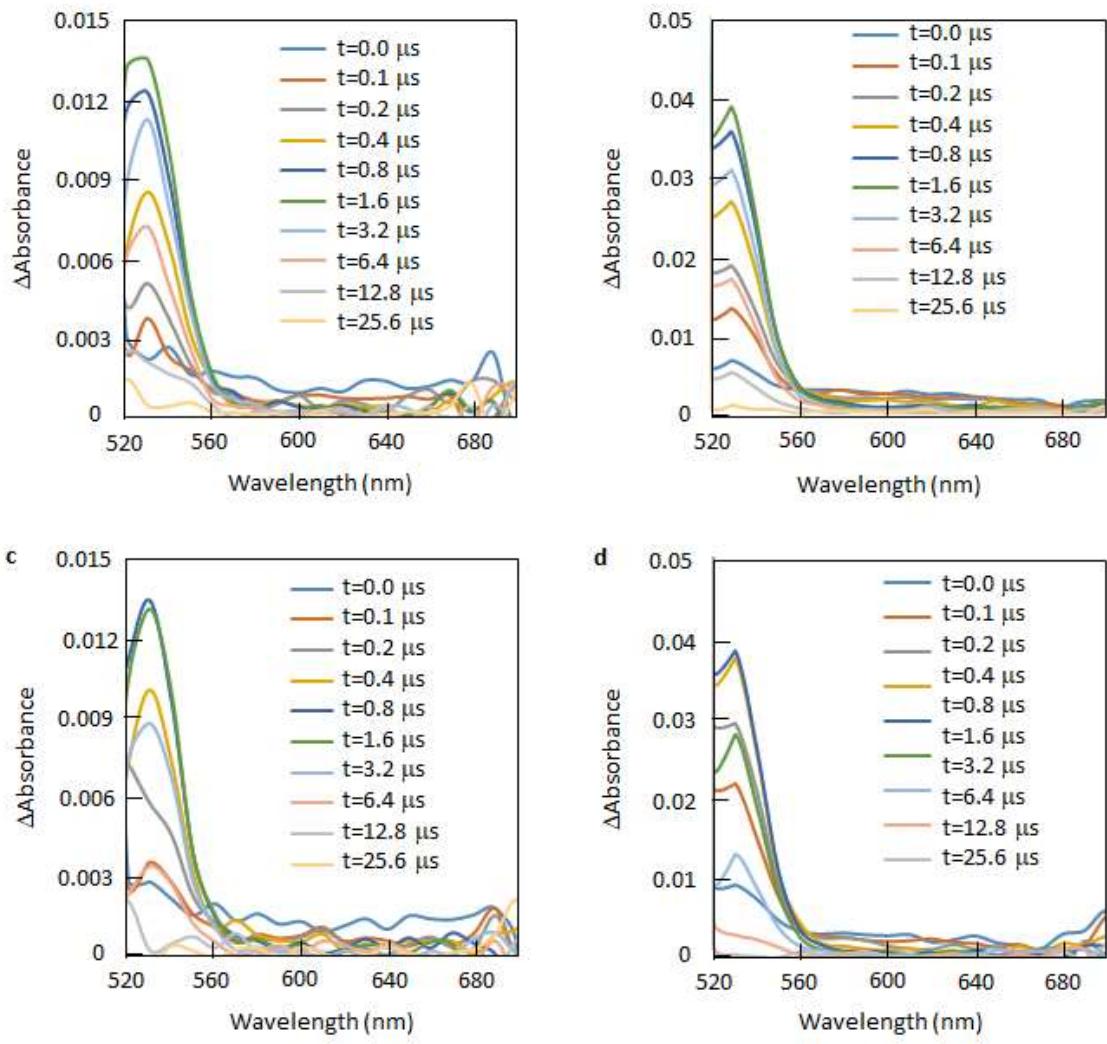
Figure S11. T–T absorption spectra changes of sample solution after excitation at 355 nm. Sample solution contains one synthesized chromophore, a triplet sensitizer and β-carotene, an acceptor in benzene. (a) Triplet sensitizer **2**. (b) Triplet sensitizer **3**. (c) Triplet sensitizer **2D**. (d) Triplet sensitizer **3D**.

Table S1. Parameters used to determine $\Phi_{\mathrm{isc}}(\mathrm{RT})$ of **2**, **3**, **2D** and **3D**.

Role of the solution	Triplet sensitizer	Concentration of b-carotene (M)	A	B	τ_1 (µs)	τ_0 (µs)	Φ_{TT}	$\Phi_{\mathrm{isc}}(\mathrm{RT})$
Sample	**2**	5×10^{-4}	0.022	0.0017	0.729	14.8	0.95	0.88
Reference	Benzophenone		0.024	0.0031	0.324	3.92	0.92	
Sample	**3**	5×10^{-4}	0.057	0.0028	0.647	10.2	0.94	0.84
Reference	Benzophenone		0.069	0.0074	0.226	4.33	0.95	
Sample	**2D**	5×10^{-4}	0.21	0.0023	0.571	38.3	0.99	0.81
Reference	Benzophenone		0.24	0.0031	0.324	3.92	0.92	
Sample	**3D**	5×10^{-4}	0.061	0.0087	0.702	17.4	0.96	0.87
Reference	Benzophenone		0.069	0.0074	0.226	4.33	0.95	
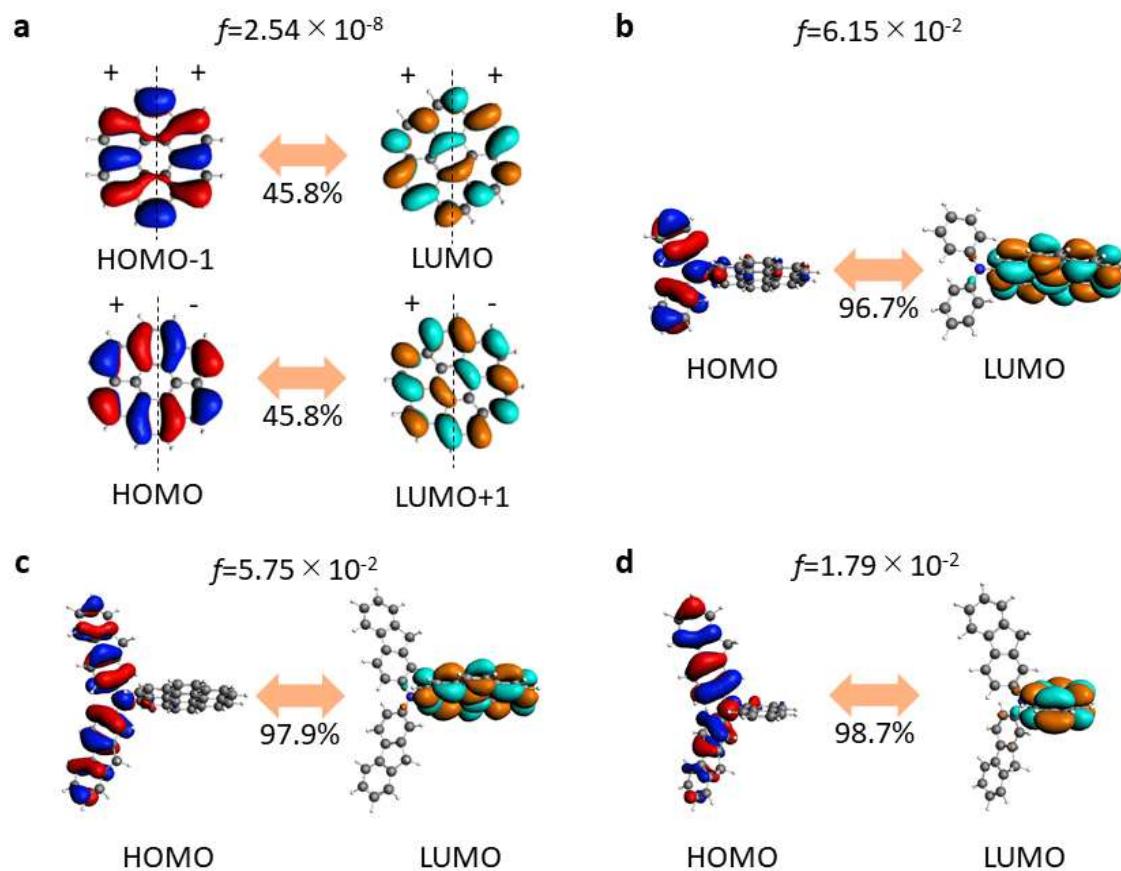
Figure S12. Molecular orbitals relating $S_1–S_0$ transition of **1** (a), **2** (b), **3** (c) and **4** (d). Structures were optimized at S_1 geometry using TD-DFT (Gaussion09/B3LYP/6-31G(d)). Oscillator strength for $S_1−S_0$ transition (*f*) calculated using ADF2017 with PBE0 functional and TZP basis set.
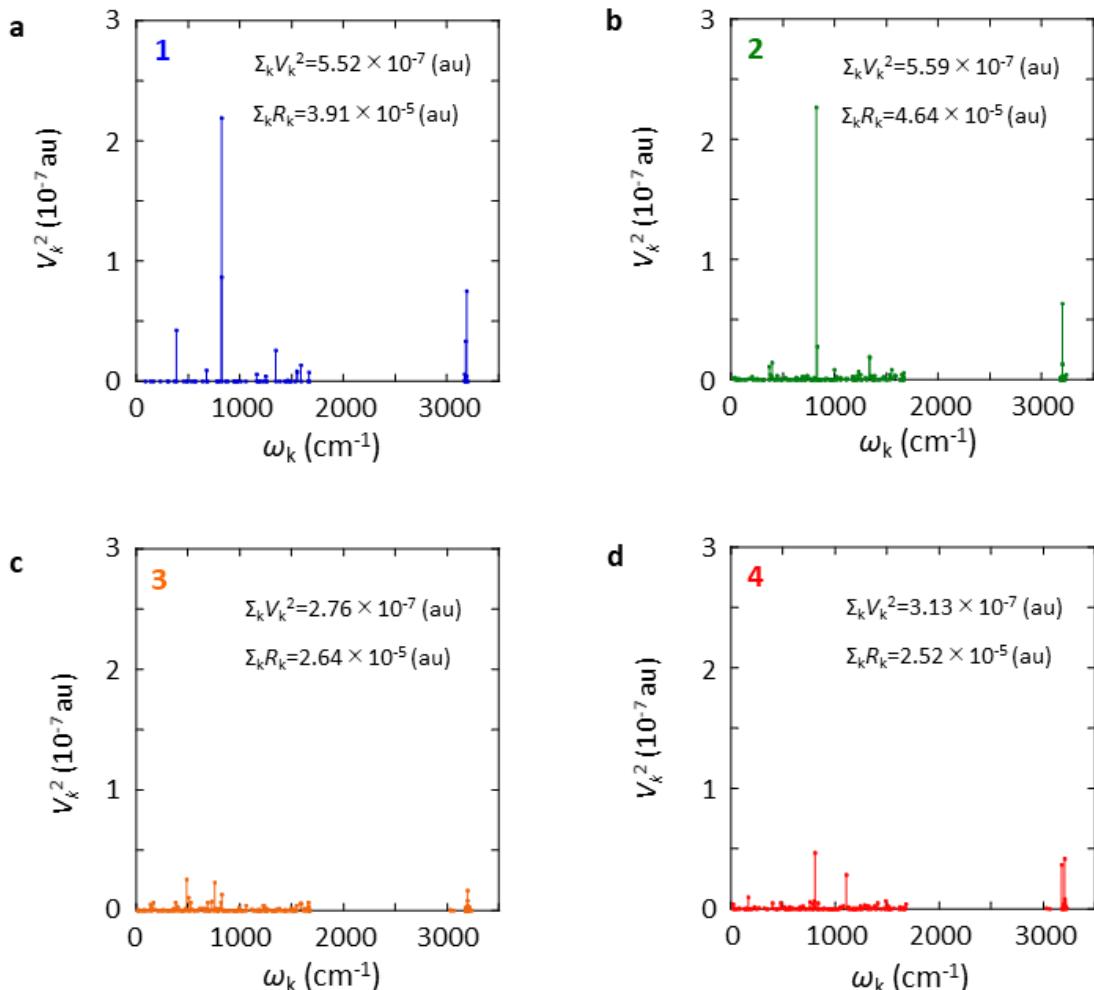
Figure S13. Vibronic coupling spectra regarding S_1-S_0 transition of **1-4**. Calculation performed for S_0 geometry using Gaussian09 with B3LYP functional and 6-31G(d) basis sets.
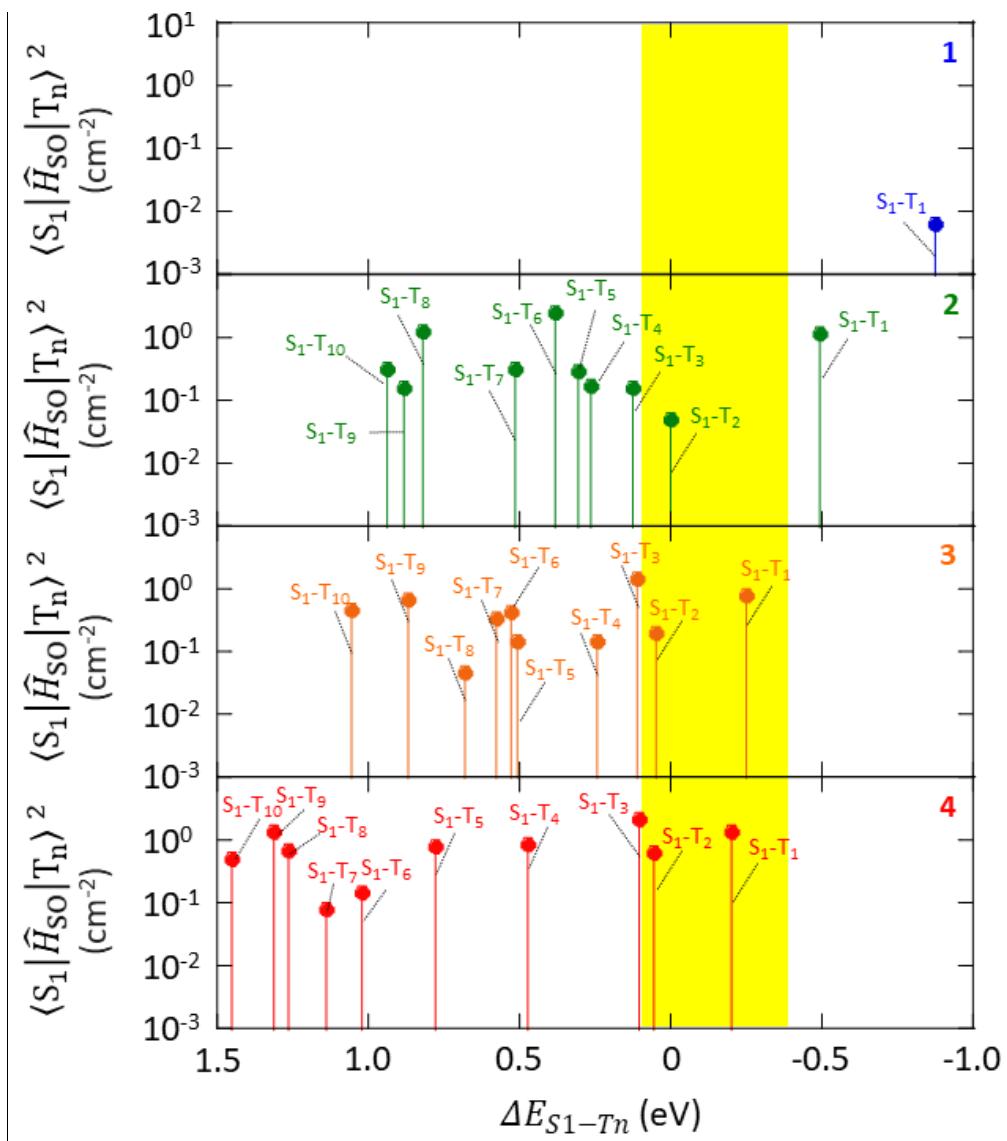
Figure S14. Relationship of $\langle S_1|\hat{H}_{SO}|T_n\rangle^2$ and ΔE_{S1-Tn} for **1-4**. S_1 geometry optimized using Gaussian09 with B3LYP functional and 6-31G(d) basis sets. Geometries used to calculate $\langle S_1|\hat{H}_{SO}|T_n\rangle^2$ and ΔE_{S1-Tn} using ADF2017 with PBE0 functional and TZP basis sets.
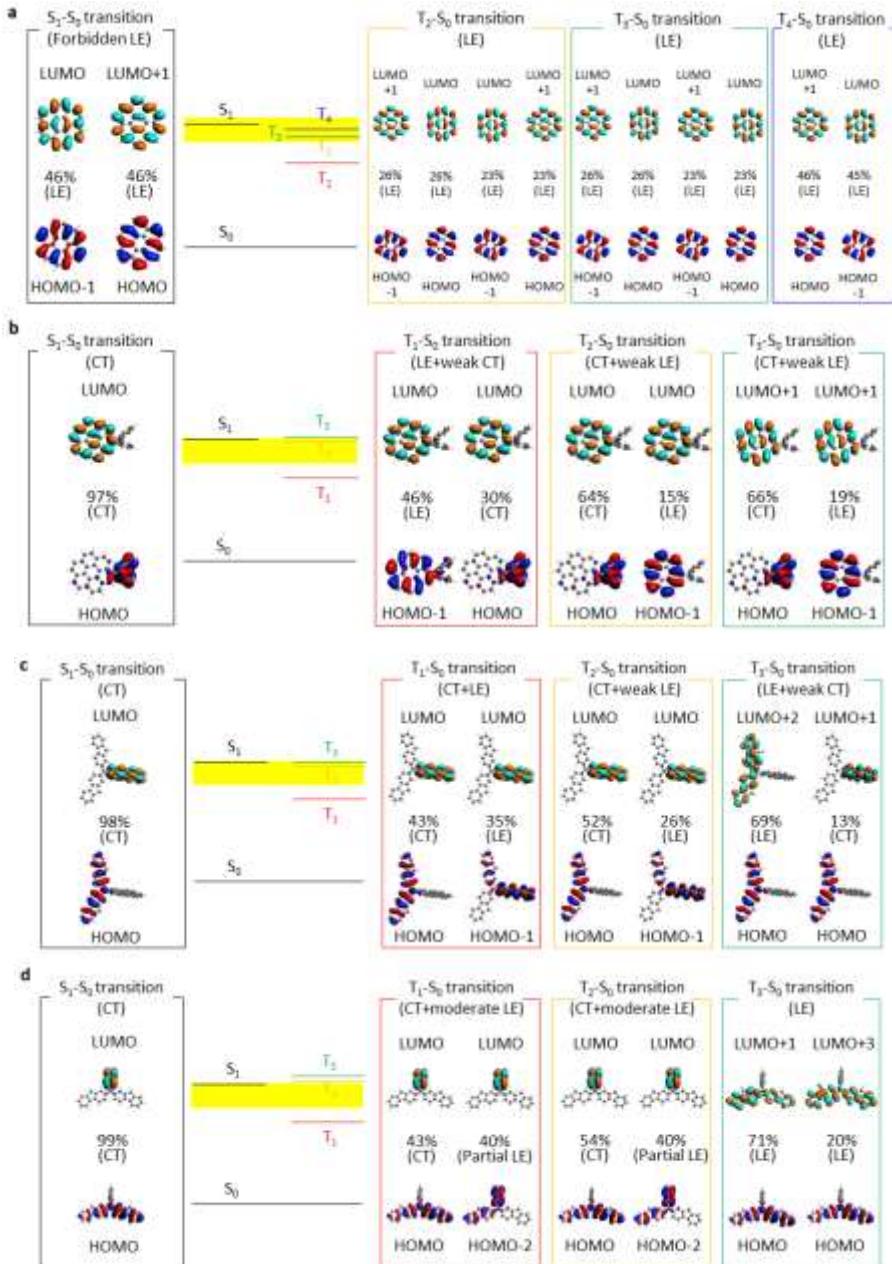
Figure S15. Molecular orbitals relating each transition of **1** (a), **2** (b), **3** (c) and **4** (d). S_1 geometry is optimized using Gaussian09 with B3LYP functional and 6-31G(d) basis sets. The geometries are used to calculate $\langle S_1|\hat{H}_{SO}|T_n\rangle^2$ and ΔE_{S1-Tn} using ADF2017 with PBE0 functional and TZP basis sets.
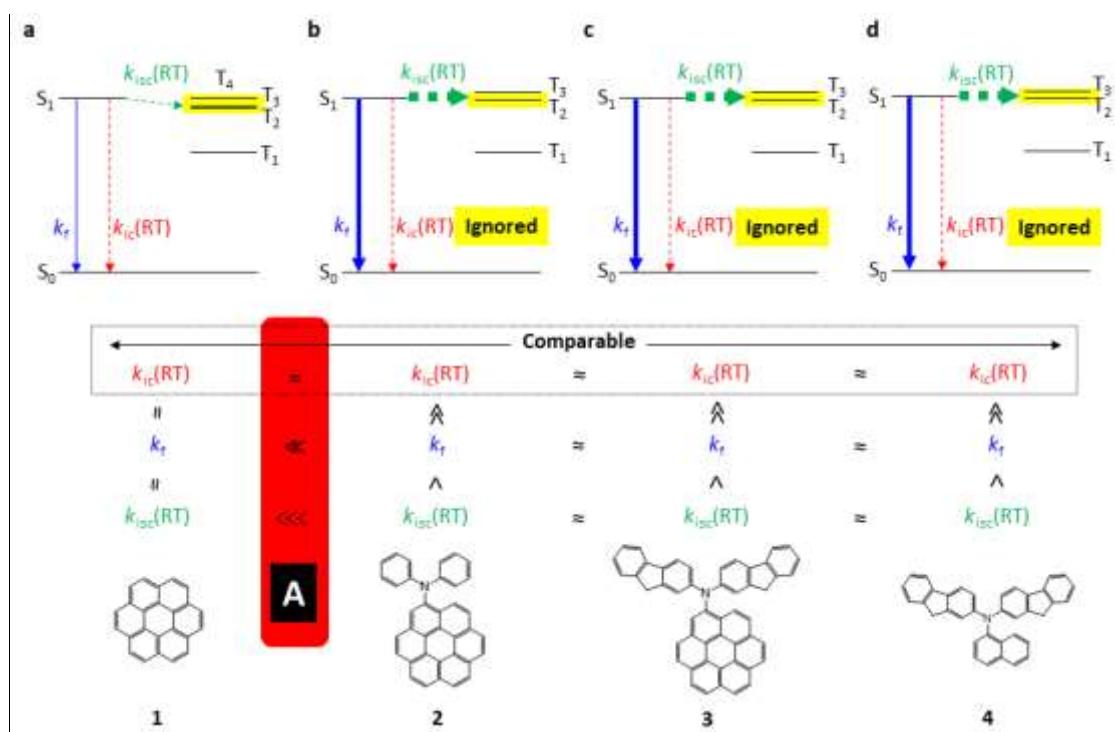
Figure S16. Summary of photophysical process from S_1.
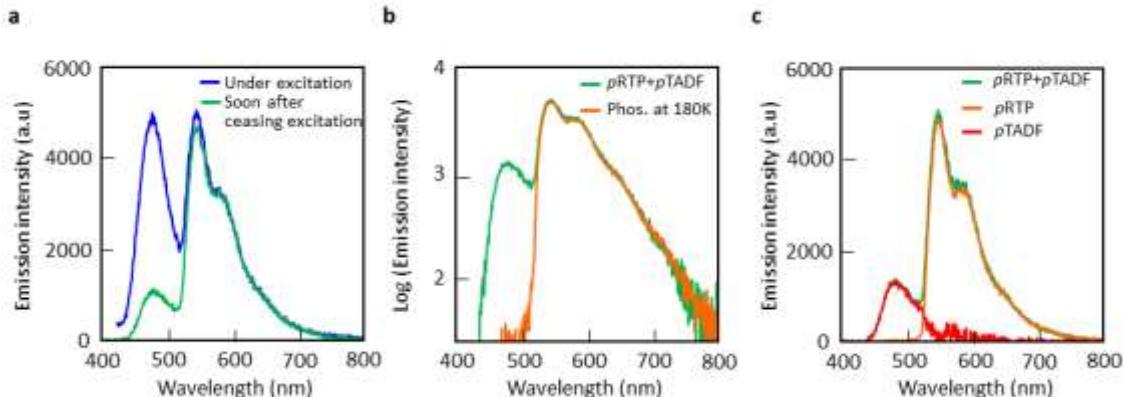
Figure S17. Emission spectra of 0.3 wt% **3**-doped amorphous *β*-estradiol film to explain how to separate prompt fluorescence, *p*RTP and *p*TADF. (a) Steady-state RT emission and afterglow RT emission spectra. Exposure time to detect the spectra is 20 ms. Blue: steady state RT emission under excitation at 360 nm. Green: *p*RTP+*p*TADF spectrum soon after ceasing excitation at 360 nm. (b) Log plot of persistent RT emission spectrum soon after ceasing excitation at 360 nm (green) and log plot of phosphorescence spectrum soon after ceasing excitation at 360 nm at 180K (orange). (c) Details of each component contained in persistent RT emission. Green: *p*RTP+*p*TADF spectrum soon after ceasing excitation at 360 nm. Orange: phosphorescence spectrum soon after ceasing excitation at 360 nm at 180K. Red: *p*TADF spectrum soon after ceasing excitation at 360 nm.
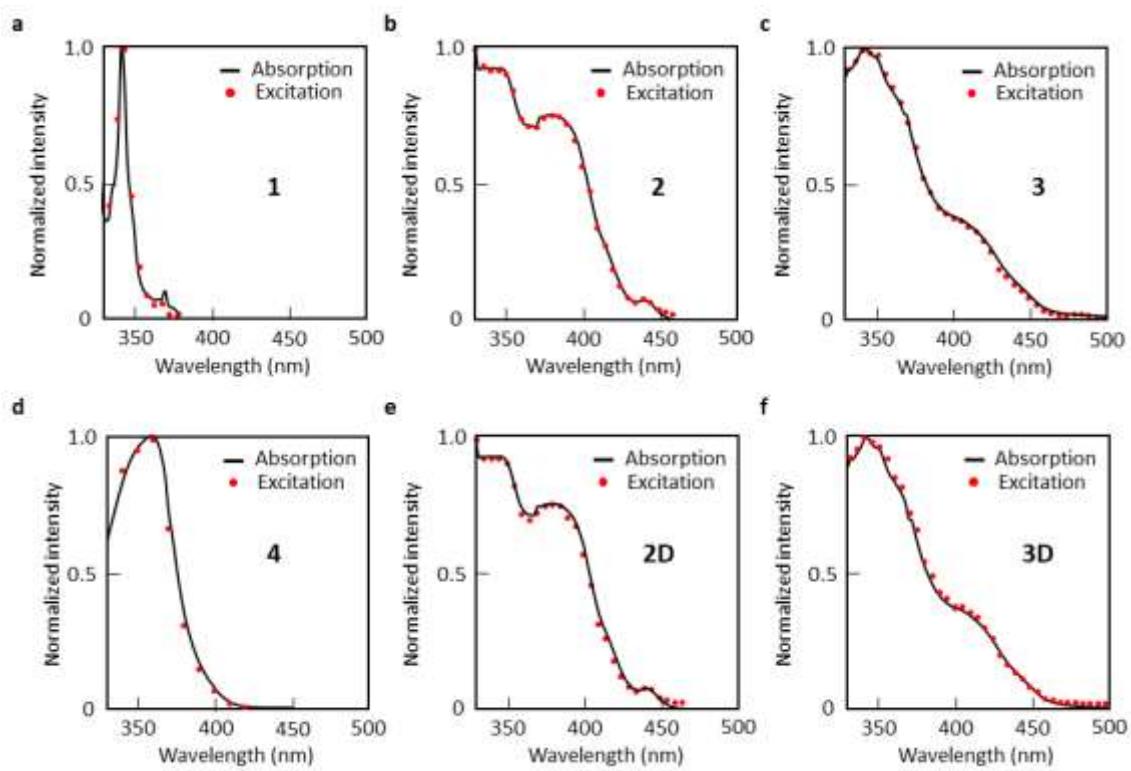
Figure S18. Excitation spectra of 0.3 wt% chromophore-doped amorphous *β*-estradiol.

(a) **1**, (b) **2**, (c) **3**, (d) **4**, (e) **2D** and (f) **3D**.
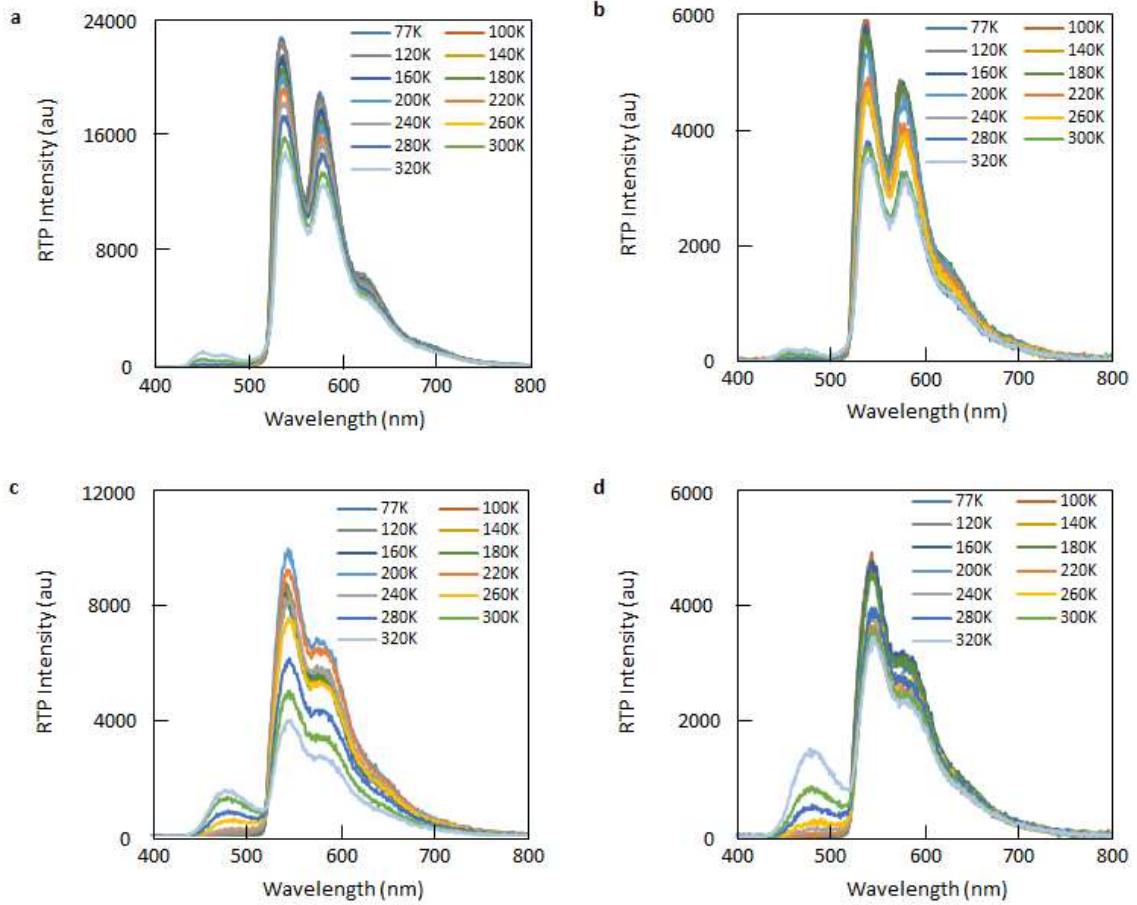
Figure S19. Temperature-dependent RTP intensity in 0.3 wt% chromophore doped in amorphous *β*-estradiol of (a) **2**, (b) **2D**, (c) **3** and (d) **3D**.
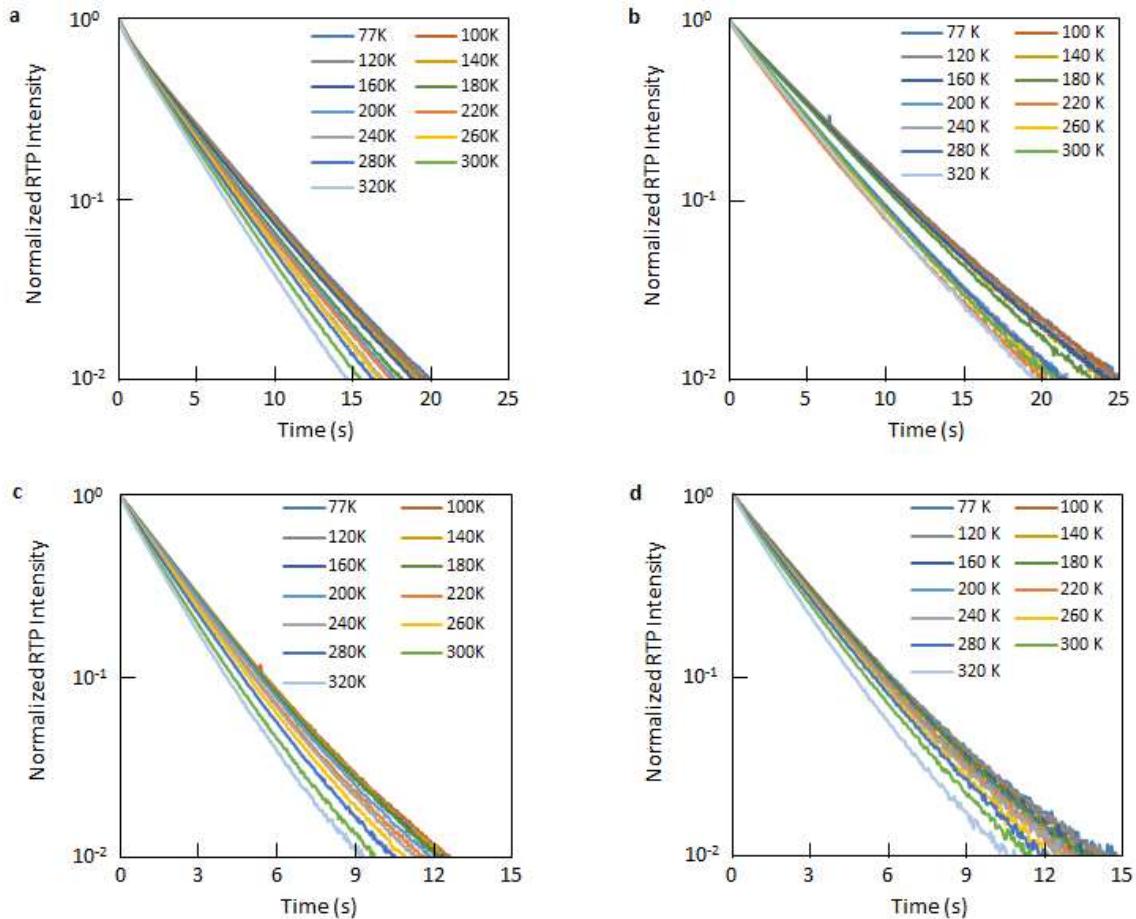
Figure S20. Temperature-dependent RTP decay characteristics in 0.3 wt% chromophore doped in amorphous β-estradiol of (a) **2**, (b) **2D**, (c) **3** and (d) **3D**.
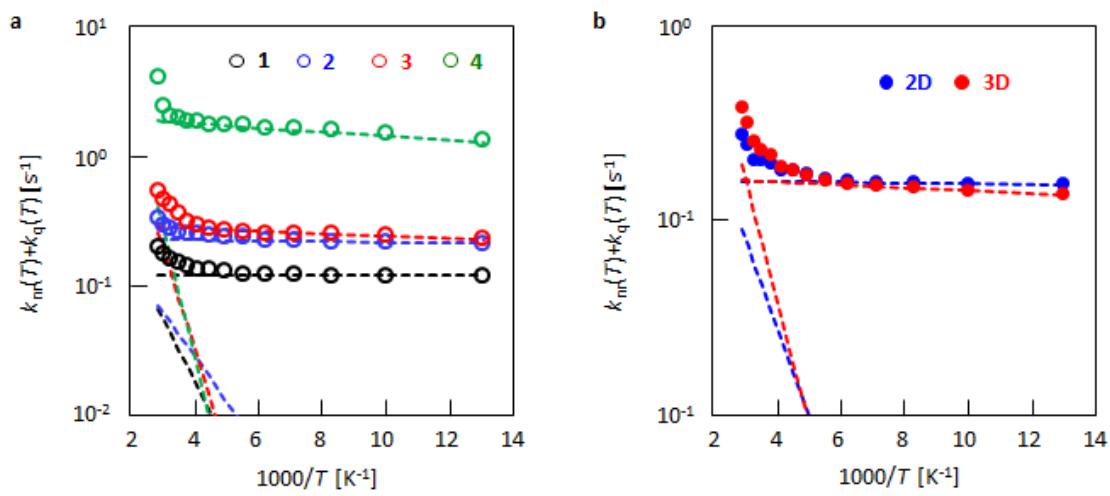
Figure S21. Temperature-dependent $k_{nr}(T)$+ $k_q(T)$ in 0.3 wt% chromophore doped in amorphous β-estradiol of (a) **1−4** and (b) **2D** and **3D**. Red and black dashed line indicates fitting of $k_{nr}(T)$ and $k_q(T)$ based on Arrhenius equation, respectively.
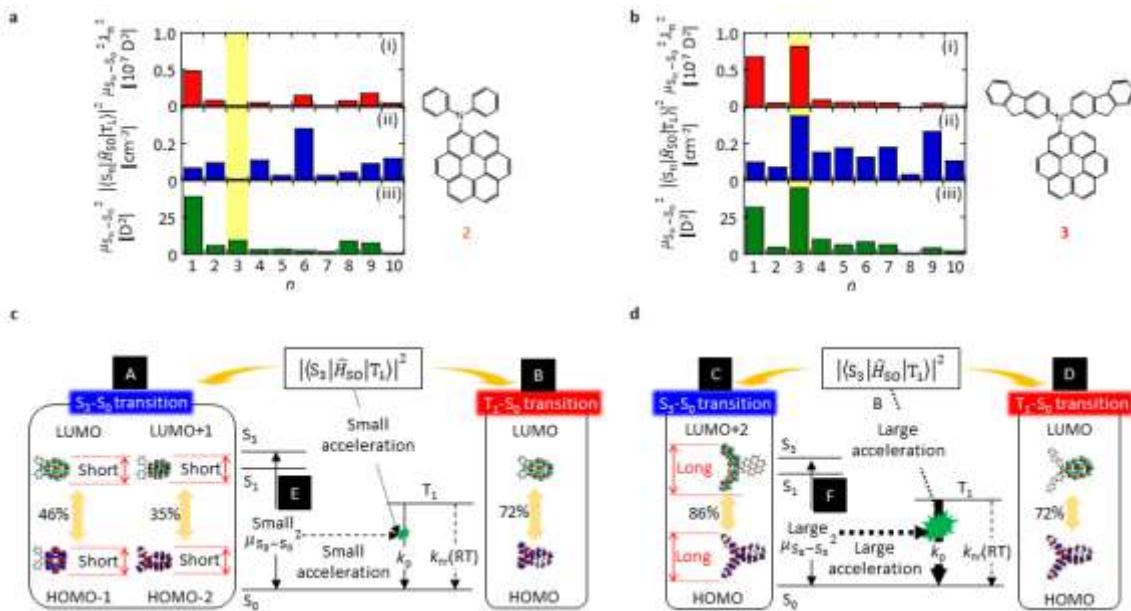
Figure S22. Role of RTP antenna in **2** and **3**. (a) $\mu_{S_n-S_0}^{2}\lambda_n^{2}$ ((i)), $\left|\langle S_n|\hat{H}_{SO}|T_1\rangle\right|^{2}$ ((ii))

and $\mu_{S_n-S_0}^{2}\lambda_n^{2}$ ((iii)) for each n in **2**. (b) $\mu_{S_n-S_0}^{2}\lambda_n^{2}$ ((i)), $\left|\langle S_n|\hat{H}_{SO}|T_1\rangle\right|^{2}$ ((ii)) and

$\mu_{S_n-S_0}^{2}$ ((iii)) for each n in **3**. (c) Molecular orbital related to S_3–S_0 and T_1–S_0 transitions

of **2**. (d) Molecular orbital related to S_3–S_0 and T_1–S_0 transitions of **3**. In (c) and (d) iso

values of the displayed molecular orbital were set to 0.02.
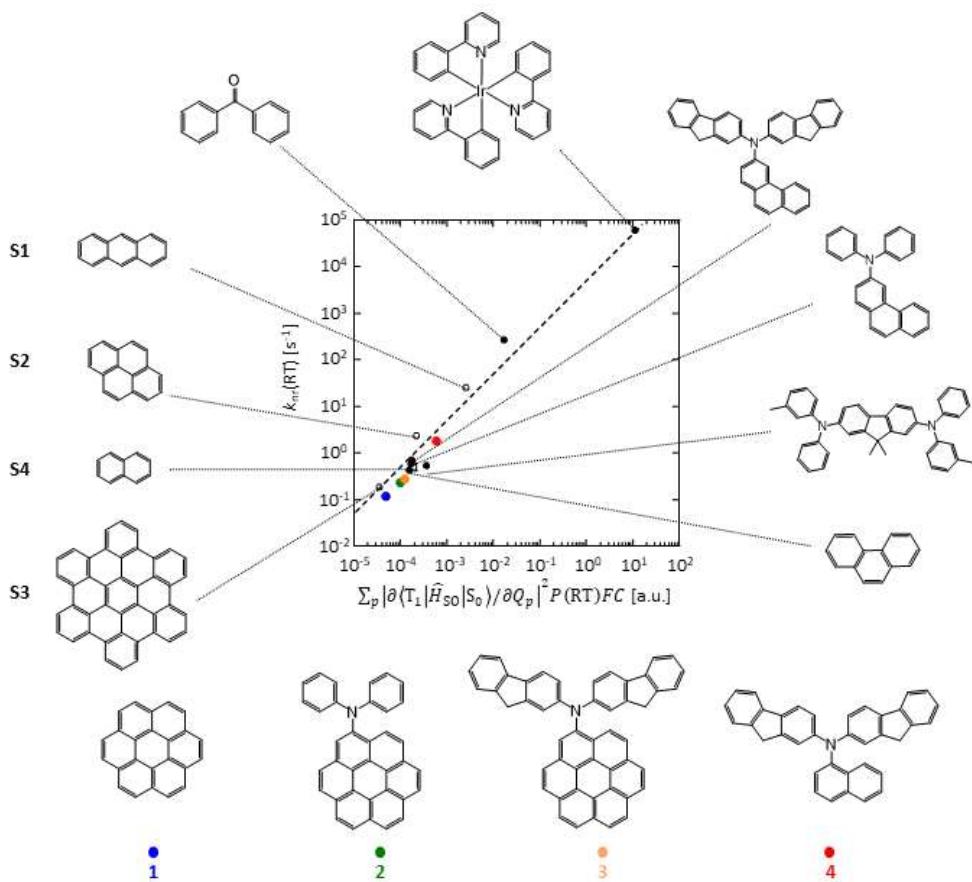
Figure S23. Correlation between optically determined k_{nr}(RT) and $\sum_p|\partial\langle T_1|\hat{H}_{SO}|S_0\rangle/\partial Q_p|^2 P(RT)FC$ for chromophores with a variety of phosphorescence colors. Data of black solid circles.[S9] Black open circles are additional data for chromophores with red RTP characteristics in a β-estradiol matrix. k_{nr}(RT) of **S1** and **S2** in an amorphous β-estradiol matrix determined from k_{nr}(RT)=1/τ_p(RT) because k_p could be ignored as Φ_p(RT) was small (less than 0.1%). k_q(RT) could be ignored compared with k_{nr}(RT) because the temperature dependence of k_{nr}(RT)+k_q(RT) was linear for an Arrhenius plot between 77 K and RT. For **S3**, the reported optically measured k_{nr}(RT) of alkyl-substituted hexabenzocoronene in an β-estradiol matrix was used,[S10] because unsubstituted hexabenzocoronene hardly dissolved in β-estradiol. $\sum_p|\partial\langle T_1|\hat{H}_{SO}|S_0\rangle/\partial Q_p|^2 P(RT)FC$ are calculated data using hexabenzocoronene (Table S7). Solid squares are data of molecularly dispersed naphthalene in ZEONEX under vacuum. k_{nr}(RT) of the molecularly dispersed naphthalene in ZEONEX was determined from data in Figure S24. $\sum_p|\partial\langle T_1|\hat{H}_{SO}|S_0\rangle/\partial Q_p|^2 P(RT)FC$ of **S1**, **S2**, and **S4** is calculated data using Table S4, S5 and S7, respectively.
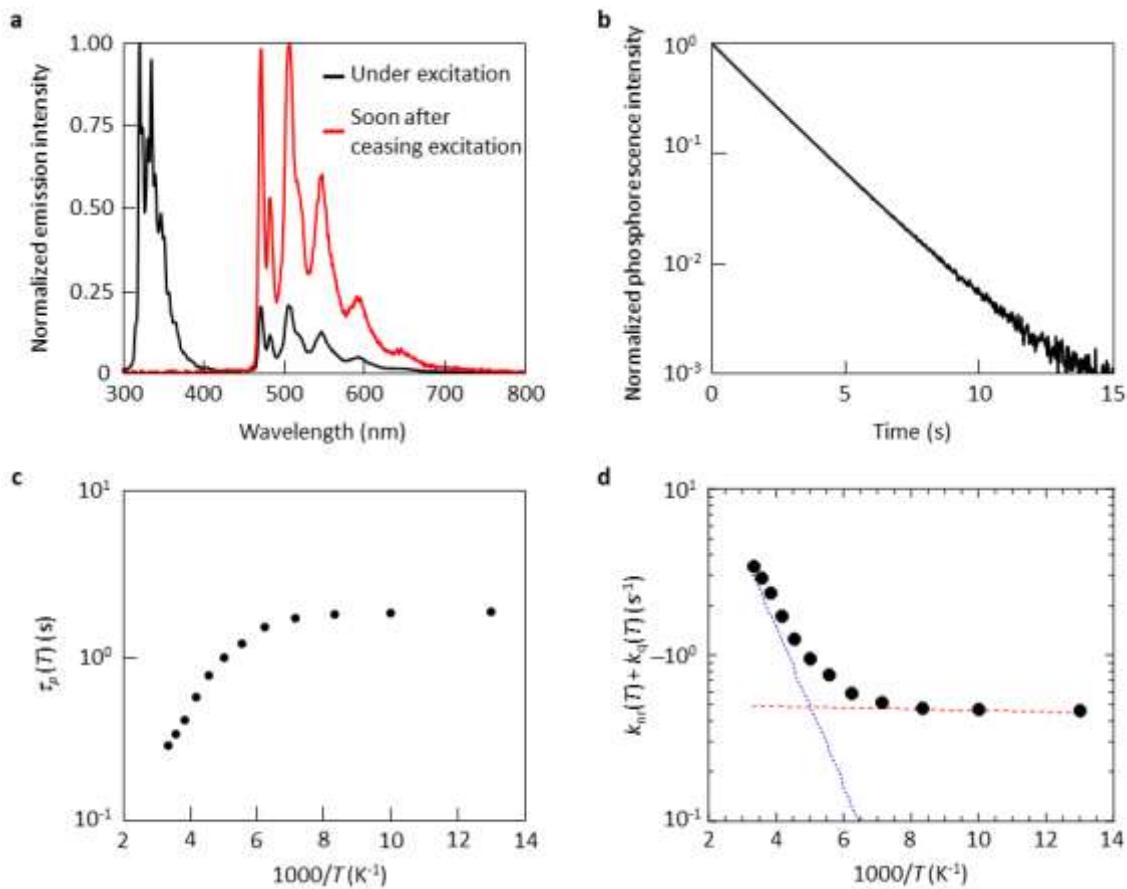
Figure S24. Optical characteristics of 0.3 wt% naphthalene-doped ZEONEX. (a) Emission spectra under excitation and soon after ceasing excitation at 77 K. (b) Phosphorescence lifetime at 77 K. (c) Temperature dependence of $\tau_p(T)$. (d) Temperature dependence of $k_{nr}(T)+k_q(T)$. Excitation is 275 nm.

Table S2. Photo-physical parameters (ΔE_{Q_p}, $P_{Q_p}(\text{RT})$, $E_{T_1-S_0}$, and $\langle T_1|\hat{H}_{SO}|S_0\rangle_{Q_p}^{~2}$) calculated for geometries allowed by normal-mode vibrations with frequency in T_1 at RT for chromophore **2**. ω_p is the wavenumber of the pth normal vibrational mode in the structure optimized at T_1. Q_p is the mass weighted normal coordinates at T_1. Calculation regarding geometries was stopped when ΔE_{Q_p} becomes larger than 0.2 eV because these geometries with $\Delta E_{Q_p}>0.2$ eV are hardly allowed below RT. $E_{T_1-S_0}$ does not largely change for Q_p with $P_{Q_p}(\text{RT})>0.01$ which corresponds to geometries much allowed at RT.

ω_p	Q_p	ΔE_{Q_p}	$P_{Q_p}(\text{RT})$	$\langle T_1\|\hat{H}_{SO}\|S_0\rangle_{Q_p}^{~2}$	$E_{T_1-S_0}$
(cm^{-1})	(a.u.)	(eV)		(cm^{-2})	(eV)
22.39573	-1	0.0060	0.7923	0.2278	2.11
22.39573	-0.8	0.0034	0.8775	0.2340	2.12
22.39573	-0.6	0.0016	0.9381	0.2399	2.12
22.39573	-0.4	0.0006	0.9767	0.2457	2.12
22.39573	-0.2	0.0001	0.9965	0.2509	2.13
22.39573	0	0.0000	1.0000	0.2557	2.13
22.39573	0.2	0.0003	0.9879	0.2602	2.13
22.39573	0.4	0.0011	0.9593	0.2639	2.13
22.39573	0.6	0.0024	0.9119	0.2674	2.13
22.39573	0.8	0.0044	0.8434	0.2702	2.13
22.39573	1	0.0073	0.7526	0.2729	2.13
23.22645	-1	0.0076	0.7430	0.2061	2.14
23.22645	-0.8	0.0042	0.8487	0.2150	2.13
23.22645	-0.6	0.0020	0.9242	0.2238	2.13
23.22645	-0.4	0.0007	0.9717	0.2339	2.13
23.22645	-0.2	0.0001	0.9956	0.2444	2.13
23.22645	0	0.0000	1.0000	0.2557	2.13
23.22645	0.2	0.0003	0.9868	0.2677	2.13
23.22645	0.4	0.0012	0.9552	0.2807	2.13
23.22645	0.6	0.0026	0.9022	0.2939	2.12
23.22645	0.8	0.0050	0.8240	0.3075	2.12
23.22645	1	0.0085	0.7186	0.3221	2.12

42.48147	-1	0.0378	0.2298	0.2774	2.13
42.48147	-0.8	0.0186	0.4850	0.2723	2.13
42.48147	-0.6	0.0080	0.7323	0.2674	2.13
42.48147	-0.4	0.0028	0.8971	0.2630	2.13
42.48147	-0.2	0.0006	0.9773	0.2592	2.13
42.48147	0	0.0000	1.0000	0.2557	2.13
42.48147	0.2	0.0006	0.9762	0.2526	2.13
42.48147	0.4	0.0030	0.8884	0.2503	2.13
42.48147	0.6	0.0088	0.7094	0.2484	2.13
42.48147	0.8	0.0204	0.4517	0.2470	2.12
42.48147	1	0.0411	0.2017	0.2458	2.12
52.1149	-1	0.0434	0.1844	0.2629	2.13
52.1149	-0.8	0.0236	0.3998	0.2623	2.13
52.1149	-0.6	0.0114	0.6427	0.2610	2.13
52.1149	-0.4	0.0044	0.8415	0.2599	2.13
52.1149	-0.2	0.0010	0.9611	0.2581	2.13
52.1149	0	0.0000	1.0000	0.2557	2.13
52.1149	0.2	0.0010	0.9636	0.2530	2.13
52.1149	0.4	0.0042	0.8489	0.2500	2.13
52.1149	0.6	0.0109	0.6549	0.2464	2.13
52.1149	0.8	0.0228	0.4115	0.2425	2.13
52.1149	1	0.0426	0.1907	0.2381	2.13
64.64087	-1	0.0511	0.1370	0.2337	2.11
64.64087	-0.8	0.0294	0.3184	0.2388	2.12
64.64087	-0.6	0.0150	0.5570	0.2437	2.12
64.64087	-0.4	0.0061	0.7875	0.2482	2.12
64.64087	-0.2	0.0014	0.9469	0.2518	2.13
64.64087	0	0.0000	1.0000	0.2557	2.13
64.64087	0.2	0.0016	0.9397	0.2594	2.13
64.64087	0.4	0.0063	0.7820	0.2617	2.13
64.64087	0.6	0.0148	0.5628	0.2652	2.13
64.64087	0.8	0.0280	0.3357	0.2674	2.13
64.64087	1	0.0477	0.1561	0.2696	2.14
75.38879	-1	0.0631	0.0858	0.2739	2.11
75.38879	-0.8	0.0385	0.2234	0.2713	2.11
75.38879	-0.6	0.0208	0.4457	0.2683	2.12

75.38879	-0.4	0.0089	0.7079	0.2648	2.12
75.38879	-0.2	0.0021	0.9211	0.2610	2.13
75.38879	0	0.0000	1.0000	0.2557	2.13
75.38879	0.2	0.0023	0.9135	0.2501	2.13
75.38879	0.4	0.0091	0.7007	0.2434	2.13
75.38879	0.6	0.0208	0.4456	0.2399	2.12
75.38879	0.8	0.0378	0.2296	0.2549	2.12
75.38879	1	0.0611	0.0927	0.2708	2.11
81.38092	-1	0.0688	0.0686	0.2660	2.12
81.38092	-0.8	0.0393	0.2165	0.2633	2.12
81.38092	-0.6	0.0201	0.4574	0.2606	2.12
81.38092	-0.4	0.0083	0.7226	0.2585	2.13
81.38092	-0.2	0.0020	0.9241	0.2567	2.13
81.38092	0	0.0000	1.0000	0.2557	2.13
81.38092	0.2	0.0021	0.9223	0.2557	2.13
81.38092	0.4	0.0090	0.7042	0.2553	2.13
81.38092	0.6	0.0225	0.4160	0.2564	2.13
81.38092	0.8	0.0454	0.1709	0.2584	2.12
81.38092	1	0.0813	0.0422	0.2608	2.12
92.19134	-1	0.0840	0.0381	0.1605	2.14
92.19134	-0.8	0.0518	0.1332	0.1745	2.14
92.19134	-0.6	0.0283	0.3322	0.1910	2.14
92.19134	-0.4	0.0123	0.6185	0.2098	2.13
92.19134	-0.2	0.0031	0.8875	0.2317	2.13
92.19134	0	0.0000	1.0000	0.2557	2.13
92.19134	0.2	0.0030	0.8888	0.2823	2.12
92.19134	0.4	0.0124	0.6172	0.3110	2.12
92.19134	0.6	0.0287	0.3267	0.3419	2.11
92.19134	0.8	0.0531	0.1266	0.3750	2.10
92.19134	1	0.0869	0.0340	0.4097	2.09
129.9647	-1	0.1985	0.0004	0.1975	2.10
129.9647	-0.8	0.1198	0.0094	0.1998	2.11
129.9647	-0.6	0.0642	0.0823	0.1997	2.12
129.9647	-0.4	0.0275	0.3428	0.2058	2.13
129.9647	-0.2	0.0067	0.7690	0.2305	2.13
129.9647	0	0.0000	1.0000	0.2557	2.13

129.9647	0.2	0.0066	0.7732	0.2811	2.12
129.9647	0.4	0.0272	0.3473	0.3064	2.11
129.9647	0.6	0.0635	0.0845	0.3310	2.10
129.9647	0.8	0.1185	0.0099	0.3555	2.09
129.9647	1	0.1962	0.0005	0.3788	2.07
139.7246	-1	0.1964	0.0005	0.1090	2.11
139.7246	-0.8	0.1185	0.0099	0.1271	2.12
139.7246	-0.6	0.0634	0.0847	0.1554	2.12
139.7246	-0.4	0.0271	0.3479	0.1862	2.12
139.7246	-0.2	0.0066	0.7731	0.2196	2.13
139.7246	0	0.0000	1.0000	0.2557	2.13
139.7246	0.2	0.0066	0.7734	0.2937	2.13
139.7246	0.4	0.0270	0.3497	0.3331	2.13
139.7246	0.6	0.0630	0.0861	0.3732	2.12
139.7246	0.8	0.1177	0.0103	0.4143	2.12
139.7246	1	0.1952	0.0005	0.4549	2.12
171.4148	-1	0.3045	0.0000	0.2324	2.10
171.4148	-0.8	0.1913	0.0006	0.2396	2.10
171.4148	-0.6	0.1061	0.0161	0.2455	2.11
171.4148	-0.4	0.0468	0.1621	0.2500	2.12
171.4148	-0.2	0.0117	0.6349	0.2535	2.12
171.4148	0	0.0000	1.0000	0.2557	2.13
171.4148	0.2	0.0117	0.6339	0.2564	2.13
171.4148	0.4	0.0476	0.1566	0.2561	2.13
171.4148	0.6	0.1095	0.0141	0.2543	2.14
171.4148	0.8	0.1998	0.0004	0.2507	2.14
171.4148	1	0.3218	0.0000	0.2520	2.14
196.8336	-0.8	0.2435	0.0001	0.7046	1.97
196.8336	-0.6	0.1333	0.0056	0.5166	2.02
196.8336	-0.4	0.0580	0.1045	0.3822	2.06
196.8336	-0.2	0.0143	0.5732	0.3107	2.10
196.8336	0	0.0000	1.0000	0.2557	2.13
196.8336	0.2	0.0144	0.5713	0.2139	2.15
196.8336	0.4	0.0582	0.1039	0.1822	2.16
196.8336	0.6	0.1336	0.0055	0.1580	2.16
196.8336	0.8	0.2444	0.0001	0.1390	2.16

204.8164	-0.8	0.2983	0.0000	0.1469	2.17
204.8164	-0.6	0.1662	0.0015	0.1693	2.16
204.8164	-0.4	0.0733	0.0576	0.1950	2.15
204.8164	-0.2	0.0182	0.4924	0.2235	2.14
204.8164	0	0.0000	1.0000	0.2557	2.13
204.8164	0.2	0.0185	0.4864	0.2912	2.11
204.8164	0.4	0.0742	0.0556	0.3298	2.10
204.8164	0.6	0.1683	0.0014	0.3717	2.08
204.8164	0.8	0.3025	0.0000	0.4160	2.07
242.3149	-0.6	0.2061	0.0003	0.3639	2.06
242.3149	-0.4	0.0891	0.0311	0.3235	2.09
242.3149	-0.2	0.0219	0.4268	0.2864	2.11
242.3149	0	0.0000	1.0000	0.2557	2.13
242.3149	0.2	0.0218	0.4277	0.2319	2.14
242.3149	0.4	0.0884	0.0320	0.2160	2.14
242.3149	0.6	0.2035	0.0004	0.2086	2.13
250.7109	-0.6	0.2064	0.0003	0.2637	2.12
250.7109	-0.4	0.0895	0.0308	0.2623	2.12
250.7109	-0.2	0.0220	0.4252	0.2597	2.12
250.7109	0	0.0000	1.0000	0.2557	2.13
250.7109	0.2	0.0216	0.4312	0.2509	2.13
250.7109	0.4	0.0869	0.0339	0.0000	2.13
250.7109	0.6	0.1981	0.0004	0.2406	2.13
250.7109	0.8	0.3586	0.0000	0.2362	2.13
263.3815	-0.6	0.2306	0.0001	0.3805	2.09
263.3815	-0.4	0.1018	0.0190	0.3150	2.11
263.3815	-0.2	0.0254	0.3727	0.2734	2.12
263.3815	0	0.0000	1.0000	0.2557	2.13
263.3815	0.2	0.0252	0.3749	0.2365	2.13
263.3815	0.4	0.1012	0.0195	0.2152	2.13
263.3815	0.6	0.2291	0.0001	0.1928	2.12
283.224	-0.6	0.2609	0.0000	0.2915	2.09
283.224	-0.4	0.1127	0.0124	0.2815	2.11
283.224	-0.2	0.0277	0.3406	0.2691	2.13
283.224	0	0.0000	1.0000	0.2557	2.13
283.224	0.2	0.0280	0.3367	0.2412	2.12

283.224	0.4	0.1139	0.0119	0.2256	2.10
283.224	0.6	0.2643	0.0000	0.2097	2.08
288.3902	-0.6	0.2696	0.0000	0.0318	2.09
288.3902	-0.4	0.1168	0.0106	0.0745	2.12
288.3902	-0.2	0.0287	0.3275	0.1484	2.13
288.3902	0	0.0000	1.0000	0.2557	2.13
288.3902	0.2	0.0284	0.3313	0.3960	2.11
288.3902	0.4	0.1147	0.0115	0.5649	2.08
288.3902	0.6	0.2630	0.0000	0.7540	2.04
305.8392	-0.6	0.2950	0.0000	0.5662	2.05
305.8392	-0.4	0.1290	0.0066	0.4123	2.08
305.8392	-0.2	0.0319	0.2890	0.3091	2.11
305.8392	0	0.0000	1.0000	0.2557	2.13
305.8392	0.2	0.0320	0.2875	0.2047	2.14
305.8392	0.4	0.1291	0.0066	0.1582	2.15
305.8392	0.6	0.2952	0.0000	0.1180	2.14
316.0882	-0.6	0.4726	0.0000	0.8444	1.85
316.0882	-0.4	0.1987	0.0004	0.5863	1.99
316.0882	-0.2	0.0470	0.1606	0.3681	2.08
316.0882	0	0.0000	1.0000	0.2557	2.13
316.0882	0.2	0.0443	0.1782	0.1643	2.11
316.0882	0.4	0.1833	0.0008	0.1019	2.04
316.0882	0.6	0.4340	0.0000	0.0624	1.93
320.6745	-0.6	0.3376	0.0000	0.1716	2.13
320.6745	-0.4	0.1512	0.0028	0.2009	2.13
320.6745	-0.2	0.0381	0.2271	0.2291	2.13
320.6745	0	0.0000	1.0000	0.2557	2.13
320.6745	0.2	0.0393	0.2165	0.2792	2.12
320.6745	0.4	0.1592	0.0020	0.2977	2.12
320.6745	0.6	0.3635	0.0000	0.3099	2.11
346.1167	-0.4	0.2099	0.0003	0.3862	2.03
346.1167	-0.2	0.0519	0.1327	0.2924	2.09
346.1167	0	0.0000	1.0000	0.2557	2.13
346.1167	0.2	0.0513	0.1356	0.2380	2.14
346.1167	0.4	0.2058	0.0003	0.1977	2.13
374.0578	-0.4	0.2478	0.0001	0.1836	2.22

374.0578	-0.2	0.0616	0.0908	0.2201	2.18
374.0578	0	0.0000	1.0000	0.2557	2.13
374.0578	0.2	0.0614	0.0918	0.2884	2.07
374.0578	0.4	0.2447	0.0001	0.3169	2.01
391.9648	-0.4	0.3121	0.0000	0.1644	2.04
391.9648	-0.2	0.0786	0.0470	0.2065	2.09
391.9648	0	0.0000	1.0000	0.2557	2.13
391.9648	0.2	0.0793	0.0456	0.3118	2.16
391.9648	0.4	0.3201	0.0000	0.3735	2.19
403.1072	-0.4	0.2661	0.0000	0.3039	2.18
403.1072	-0.2	0.0665	0.0751	0.2815	2.16
403.1072	0	0.0000	1.0000	0.2557	2.13
403.1072	0.2	0.0667	0.0747	0.2280	2.10
403.1072	0.4	0.2672	0.0000	0.1992	2.06
420.748	-0.6	0.3754	0.0000	0.2734	2.12
420.748	-0.4	0.1632	0.0017	0.2650	2.13
420.748	-0.2	0.0402	0.2088	0.2592	2.13
420.748	0	0.0000	1.0000	0.2557	2.13
420.748	0.2	0.0401	0.2098	0.2542	2.13
420.748	0.4	0.1627	0.0018	0.2544	2.13
420.748	0.6	0.3739	0.0000	0.2574	2.13
425.6565	-0.6	0.3869	0.0000	0.2220	2.14
425.6565	-0.4	0.1684	0.0014	0.2306	2.14
425.6565	-0.2	0.0416	0.1983	0.2420	2.13
425.6565	0	0.0000	1.0000	0.2557	2.13
425.6565	0.2	0.0416	0.1984	0.2723	2.12
425.6565	0.4	0.1685	0.0014	0.2921	2.12
425.6565	0.6	0.3873	0.0000	0.3159	2.11
440.068	-0.4	0.2958	0.0000	0.1909	2.09
440.068	-0.2	0.0740	0.0561	0.2230	2.11
440.068	0	0.0000	1.0000	0.2557	2.13
440.068	0.2	0.0744	0.0552	0.2874	2.13
440.068	0.4	0.2989	0.0000	0.3149	2.13
444.6616	-0.4	0.2437	0.0001	0.3844	2.07
444.6616	-0.2	0.0604	0.0954	0.3195	2.10
444.6616	0	0.0000	1.0000	0.2557	2.13

444.6616	0.2	0.0601	0.0963	0.1949	2.14
444.6616	0.4	0.2416	0.0001	0.1387	2.15
463.6607	-0.4	0.3022	0.0000	0.3177	2.05
463.6607	-0.2	0.0749	0.0542	0.2836	2.10
463.6607	0	0.0000	1.0000	0.2557	2.13
463.6607	0.2	0.0743	0.0555	0.2298	2.15
463.6607	0.4	0.2973	0.0000	0.2051	2.15
475.2207	-0.4	0.4463	0.0000	0.2043	2.06
475.2207	-0.2	0.1123	0.0126	0.2296	2.10
475.2207	0	0.0000	1.0000	0.2557	2.13
475.2207	0.2	0.1136	0.0120	0.2819	2.15
475.2207	0.4	0.4579	0.0000	0.3089	2.16
486.7418	-0.4	0.3402	0.0000	0.1406	2.19
486.7418	-0.2	0.0850	0.0366	0.1966	2.16
486.7418	0	0.0000	1.0000	0.2557	2.13
486.7418	0.2	0.0852	0.0363	0.3143	2.08
486.7418	0.4	0.3412	0.0000	0.3690	2.03
488.6372	-0.4	0.3251	0.0000	0.2939	2.14
488.6372	-0.2	0.0806	0.0434	0.2746	2.14
488.6372	0	0.0000	1.0000	0.2557	2.13
488.6372	0.2	0.0800	0.0445	0.2363	2.11
488.6372	0.4	0.3187	0.0000	0.2159	2.09
508.8203	-0.4	0.3342	0.0000	0.1241	2.04
508.8203	-0.2	0.0830	0.0396	0.1654	2.10
508.8203	0	0.0000	1.0000	0.2557	2.13
508.8203	0.2	0.0821	0.0410	0.3657	2.13
508.8203	0.4	0.3287	0.0000	0.5013	2.10
517.2451	-0.4	0.3408	0.0000	0.2384	2.17
517.2451	-0.2	0.0849	0.0367	0.2488	2.15
517.2451	0	0.0000	1.0000	0.2557	2.13
517.2451	0.2	0.0849	0.0367	0.2603	2.09
517.2451	0.4	0.3414	0.0000	0.2633	2.05
529.4512	-0.4	0.3642	0.0000	0.2173	2.14
529.4512	-0.2	0.0903	0.0298	0.2303	2.13
529.4512	0	0.0000	1.0000	0.2557	2.13
529.4512	0.2	0.0901	0.0300	0.2804	2.12

529.4512	0.4	0.3617	0.0000	0.3024	2.10
534.9099	-0.4	0.3729	0.0000	0.3388	2.11
534.9099	-0.2	0.0928	0.0270	0.2950	2.12
534.9099	0	0.0000	1.0000	0.2557	2.13
534.9099	0.2	0.0926	0.0272	0.2206	2.12
534.9099	0.4	0.3715	0.0000	0.1891	2.10
542.2004	-0.4	0.3849	0.0000	0.1353	2.12
542.2004	-0.2	0.0956	0.0243	0.1910	2.13
542.2004	0	0.0000	1.0000	0.2557	2.13
542.2004	0.2	0.0952	0.0246	0.3251	2.12
542.2004	0.4	0.3835	0.0000	0.4023	2.11
547.2982	-0.4	0.3717	0.0000	0.1882	2.11
547.2982	-0.2	0.0926	0.0272	0.2133	2.12
547.2982	0	0.0000	1.0000	0.2557	2.13
547.2982	0.2	0.0924	0.0275	0.3154	2.12
547.2982	0.4	0.3718	0.0000	0.3911	2.11
572.1508	-0.4	0.4218	0.0000	0.4118	2.06
572.1508	-0.2	0.1046	0.0171	0.2875	2.10
572.1508	0	0.0000	1.0000	0.2557	2.13
572.1508	0.2	0.1042	0.0173	0.2424	2.14
572.1508	0.4	0.4190	0.0000	0.2287	2.13
591.0848	-0.4	0.6224	0.0000	0.4472	2.08
591.0848	-0.2	0.1553	0.0024	0.3006	2.11
591.0848	0	0.0000	1.0000	0.2557	2.13
591.0848	0.2	0.1555	0.0024	0.2220	2.13
591.0848	0.4	0.6235	0.0000	0.1899	2.11
619.4819	-0.4	0.6691	0.0000	0.1852	2.09
619.4819	-0.2	0.1630	0.0018	0.2149	2.12
619.4819	0	0.0000	1.0000	0.2557	2.13
619.4819	0.2	0.1627	0.0018	0.3014	2.13
619.4819	0.4	0.6661	0.0000	0.3558	2.11
629.0966	-0.4	0.7285	0.0000	0.2017	2.13
629.0966	-0.2	0.1810	0.0009	0.2281	2.13
629.0966	0	0.0000	1.0000	0.2557	2.13
629.0966	0.2	0.1809	0.0009	0.2848	2.12
629.0966	0.4	0.7263	0.0000	0.3152	2.12

631.5182	-0.4	0.7459	0.0000	0.2883	2.12
631.5182	-0.2	0.1857	0.0007	0.2731	2.12
631.5182	0	0.0000	1.0000	0.2557	2.13
631.5182	0.2	0.1855	0.0007	0.2376	2.13
631.5182	0.4	0.7460	0.0000	0.2192	2.13
636.4164	-0.4	0.7603	0.0000	0.1712	2.13
636.4164	-0.2	0.1893	0.0006	0.2017	2.14
636.4164	0	0.0000	1.0000	0.2557	2.13
636.4164	0.2	0.1898	0.0006	0.3380	2.10
636.4164	0.4	0.7649	0.0000	0.4543	2.04
637.4615	-0.2	0.2266	0.0001	0.2345	2.15
637.4615	0	0.0000	1.0000	0.2557	2.13
637.4615	0.2	0.2268	0.0001	0.2783	2.10
648.4423	-0.4	0.5437	0.0000	0.1541	2.09
648.4423	-0.2	0.1347	0.0053	0.1946	2.12
648.4423	0	0.0000	1.0000	0.2557	2.13
648.4423	0.2	0.1344	0.0053	0.3385	2.11
648.4423	0.4	0.5433	0.0000	0.4475	2.07
669.6632	-0.2	0.2017	0.0004	0.2181	2.14
669.6632	0	0.0000	1.0000	0.2557	2.13
669.6632	0.2	0.2006	0.0004	0.3006	2.11
672.7602	-0.4	0.5357	0.0000	0.5017	2.07
672.7602	-0.2	0.1328	0.0057	0.3530	2.11
672.7602	0	0.0000	1.0000	0.2557	2.13
672.7602	0.2	0.1334	0.0056	0.1833	2.13
672.7602	0.4	0.5390	0.0000	0.1313	2.11
682.9728	-0.2	0.2189	0.0002	0.2081	2.12
682.9728	0	0.0000	1.0000	0.2557	2.13
682.9728	0.2	0.2160	0.0002	0.3096	2.13
692.9592	-0.4	0.6775	0.0000	0.4770	2.07
692.9592	-0.2	0.1695	0.0014	0.3521	2.10
692.9592	0	0.0000	1.0000	0.2557	2.13
692.9592	0.2	0.1704	0.0013	0.1815	2.15
692.9592	0.4	0.6836	0.0000	0.1258	2.17
706.2962	-0.4	0.3186	0.0000	0.2248	2.14
706.2962	-0.2	0.0787	0.0467	0.2277	2.13

706.2962	0	0.0000	1.0000	0.2557	2.13
706.2962	0.2	0.0787	0.0467	0.2881	2.12
706.2962	0.4	0.3185	0.0000	0.3258	2.11
709.7009	-0.4	0.3031	0.0000	0.2524	2.13
709.7009	-0.2	0.0749	0.0543	0.2524	2.13
709.7009	0	0.0000	1.0000	0.2557	2.13
709.7009	0.2	0.0747	0.0546	0.2630	2.13
709.7009	0.4	0.3031	0.0000	0.2755	2.12
730.9989	-0.2	0.2378	0.0001	0.2488	2.10
730.9989	0	0.0000	1.0000	0.2557	2.13
730.9989	0.2	0.2403	0.0001	0.2547	2.15
744.9636	-0.4	0.7484	0.0000	0.3276	2.08
744.9636	-0.2	0.1798	0.0009	0.2791	2.12
744.9636	0	0.0000	1.0000	0.2557	2.13
744.9636	0.2	0.1806	0.0009	0.2554	2.12
744.9636	0.4	0.7512	0.0000	0.2821	2.10
761.3388	-0.4	0.5487	0.0000	0.4815	2.10
761.3388	-0.2	0.1329	0.0057	0.3640	2.12
761.3388	0	0.0000	1.0000	0.2557	2.13
761.3388	0.2	0.1328	0.0057	0.1951	2.12
761.3388	0.4	0.5488	0.0000	0.1972	2.09
764.7436	-0.4	0.2888	0.0000	0.3031	2.11
764.7436	-0.2	0.0684	0.0697	0.2469	2.12
764.7436	0	0.0000	1.0000	0.2557	2.13
764.7436	0.2	0.0685	0.0696	0.2862	2.12
764.7436	0.4	0.2893	0.0000	0.3186	2.11
767.7311	-0.4	0.3789	0.0000	0.2606	2.12
767.7311	-0.2	0.0925	0.0274	0.2598	2.13
767.7311	0	0.0000	1.0000	0.2557	2.13
767.7311	0.2	0.0923	0.0275	0.2482	2.12
767.7311	0.4	0.3776	0.0000	0.2375	2.11
771.3582	-0.4	0.3174	0.0000	0.2253	2.13
771.3582	-0.2	0.0764	0.0510	0.2409	2.13
771.3582	0	0.0000	1.0000	0.2557	2.13
771.3582	0.2	0.0763	0.0513	0.2694	2.13
771.3582	0.4	0.3170	0.0000	0.2816	2.13

777.5385	-0.2	0.2088	0.0003	0.2160	2.15
777.5385	0	0.0000	1.0000	0.2557	2.13
777.5385	0.2	0.2089	0.0003	0.2862	2.10
778.1848	-0.4	0.4853	0.0000	0.3409	2.10
778.1848	-0.2	0.1164	0.0108	0.2975	2.12
778.1848	0	0.0000	1.0000	0.2557	2.13
778.1848	0.2	0.1162	0.0108	0.2169	2.13
778.1848	0.4	0.4823	0.0000	0.1832	2.11
789.6987	-0.2	0.2769	0.0000	0.2042	2.08
789.6987	0	0.0000	1.0000	0.2557	2.13
789.6987	0.2	0.2771	0.0000	0.2892	2.13
791.5943	-0.4	0.6189	0.0000	0.1912	2.13
791.5943	-0.2	0.1523	0.0027	0.1920	2.14
791.5943	0	0.0000	1.0000	0.2557	2.13
791.5943	0.2	0.1519	0.0027	0.3513	2.10
791.5943	0.4	0.6147	0.0000	0.4737	2.06
794.4002	-0.4	0.4844	0.0000	0.4862	2.11
794.4002	-0.2	0.1170	0.0105	0.3603	2.13
794.4002	0	0.0000	1.0000	0.2557	2.13
794.4002	0.2	0.1171	0.0105	0.2077	2.11
794.4002	0.4	0.4843	0.0000	0.2354	2.08
805.3342	-0.4	0.3671	0.0000	0.3763	2.10
805.3342	-0.2	0.0882	0.0322	0.2993	2.12
805.3342	0	0.0000	1.0000	0.2557	2.13
805.3342	0.2	0.0879	0.0327	0.2428	2.12
805.3342	0.4	0.3650	0.0000	0.2706	2.10
824.7721	-0.4	0.3364	0.0000	0.1918	2.11
824.7721	-0.2	0.0802	0.0440	0.2220	2.13
824.7721	0	0.0000	1.0000	0.2557	2.13
824.7721	0.2	0.0804	0.0437	0.2906	2.12
824.7721	0.4	0.3366	0.0000	0.3236	2.09
828.244	-0.2	0.2850	0.0000	0.2764	2.11
828.244	0	0.0000	1.0000	0.2557	2.13
828.244	0.2	0.2834	0.0000	0.2280	2.13
837.7315	-0.4	0.3967	0.0000	0.1573	2.07
837.7315	-0.2	0.0915	0.0284	0.1648	2.11

837.7315	0	0.0000	1.0000	0.2557	2.13
837.7315	0.2	0.0879	0.0327	0.4309	2.10
837.7315	0.4	0.3701	0.0000	0.7063	2.02
846.1911	-0.4	0.2817	0.0000	0.2569	2.13
846.1911	-0.2	0.0671	0.0733	0.2556	2.13
846.1911	0	0.0000	1.0000	0.2557	2.13
846.1911	0.2	0.0672	0.0731	0.2575	2.13
846.1911	0.4	0.2823	0.0000	0.2605	2.13
850.3916	-0.4	0.2926	0.0000	0.3853	2.12
850.3916	-0.2	0.0707	0.0637	0.3178	2.12
850.3916	0	0.0000	1.0000	0.2557	2.13
850.3916	0.2	0.0708	0.0636	0.2005	2.13
850.3916	0.4	0.2931	0.0000	0.1528	2.13
851.3382	-0.4	0.3351	0.0000	0.1148	2.11
851.3382	-0.2	0.0815	0.0419	0.1755	2.12
851.3382	0	0.0000	1.0000	0.2557	2.13
851.3382	0.2	0.0816	0.0418	0.3488	2.12
851.3382	0.4	0.3360	0.0000	0.4539	2.11
882.5261	-0.2	0.2332	0.0001	0.3655	1.99
882.5261	0	0.0000	1.0000	0.2557	2.13
882.5261	0.2	0.2304	0.0001	0.1276	1.97
916.7111	-0.4	0.4096	0.0000	0.3287	2.13
916.7111	-0.2	0.0978	0.0222	0.2982	2.13
916.7111	0	0.0000	1.0000	0.2557	2.13
916.7111	0.2	0.0971	0.0228	0.2084	2.11
916.7111	0.4	0.4061	0.0000	0.1745	2.08
918.2242	-0.4	0.4277	0.0000	0.1924	2.12
918.2242	-0.2	0.1020	0.0188	0.2258	2.12
918.2242	0	0.0000	1.0000	0.2557	2.13
918.2242	0.2	0.1022	0.0187	0.2823	2.13
918.2242	0.4	0.4290	0.0000	0.3059	2.14
923.6281	-0.4	0.3582	0.0000	0.1966	2.10
923.6281	-0.2	0.0844	0.0374	0.2242	2.12
923.6281	0	0.0000	1.0000	0.2557	2.13
923.6281	0.2	0.0845	0.0373	0.2908	2.13
923.6281	0.4	0.3582	0.0000	0.3308	2.12

928.7401	-0.4	0.4541	0.0000	0.3610	2.13
928.7401	-0.2	0.1091	0.0143	0.3032	2.13
928.7401	0	0.0000	1.0000	0.2557	2.13
928.7401	0.2	0.1088	0.0145	0.2113	2.11
928.7401	0.4	0.4513	0.0000	0.1651	2.08
929.8553	-0.4	0.6197	0.0000	0.2483	2.11
929.8553	-0.2	0.1524	0.0027	0.2504	2.13
929.8553	0	0.0000	1.0000	0.2557	2.13
929.8553	0.2	0.1523	0.0027	0.2589	2.12
929.8553	0.4	0.6193	0.0000	0.2562	2.10
935.1128	-0.4	0.3688	0.0000	0.4687	2.12
935.1128	-0.2	0.0871	0.0337	0.3491	2.13
935.1128	0	0.0000	1.0000	0.2557	2.13
935.1128	0.2	0.0870	0.0338	0.1794	2.12
935.1128	0.4	0.3684	0.0000	0.1478	2.10
945.1761	-0.2	0.2690	0.0000	0.3002	2.04
945.1761	0	0.0000	1.0000	0.2557	2.13
945.1761	0.2	0.2686	0.0000	0.2077	2.13
962.2516	-0.4	0.3951	0.0000	0.5958	2.12
962.2516	-0.2	0.0914	0.0285	0.3979	2.13
962.2516	0	0.0000	1.0000	0.2557	2.13
962.2516	0.2	0.0914	0.0285	0.1527	2.13
962.2516	0.4	0.3953	0.0000	0.0846	2.12
966.0444	-0.4	0.4011	0.0000	0.3631	2.12
966.0444	-0.2	0.0929	0.0269	0.3047	2.13
966.0444	0	0.0000	1.0000	0.2557	2.13
966.0444	0.2	0.0928	0.0270	0.2116	2.13
966.0444	0.4	0.4004	0.0000	0.1673	2.12
968.0805	-0.4	0.3958	0.0000	0.2426	2.12
968.0805	-0.2	0.0952	0.0246	0.2492	2.12
968.0805	0	0.0000	1.0000	0.2557	2.13
968.0805	0.2	0.0949	0.0248	0.2627	2.13
968.0805	0.4	0.3949	0.0000	0.2698	2.14
969.4005	-0.4	0.3897	0.0000	0.3061	2.12
969.4005	-0.2	0.0937	0.0261	0.2806	2.12
969.4005	0	0.0000	1.0000	0.2557	2.13

969.4005	0.2	0.0939	0.0259	0.2311	2.13
969.4005	0.4	0.3905	0.0000	0.2070	2.14
984.6882	-0.2	0.3206	0.0000	0.2001	2.14
984.6882	0	0.0000	1.0000	0.2557	2.13
984.6882	0.2	0.3178	0.0000	0.3140	2.09
990.9975	-0.4	0.3794	0.0000	0.2654	2.13
990.9975	-0.2	0.0922	0.0276	0.2603	2.13
990.9975	0	0.0000	1.0000	0.2557	2.13
990.9975	0.2	0.0922	0.0276	0.2502	2.13
990.9975	0.4	0.3794	0.0000	0.2425	2.13
991.9721	-0.4	0.3873	0.0000	0.2519	2.13
991.9721	-0.2	0.0944	0.0254	0.2537	2.13
991.9721	0	0.0000	1.0000	0.2557	2.13
991.9721	0.2	0.0944	0.0254	0.2569	2.13
991.9721	0.4	0.3876	0.0000	0.2564	2.13
994.715	-0.2	0.3317	0.0000	0.2587	2.12
994.715	0	0.0000	1.0000	0.2557	2.13
994.715	0.2	0.3291	0.0000	0.2477	2.12
1013.264	-0.2	0.4612	0.0000	0.2351	2.14
1013.264	0	0.0000	1.0000	0.2557	2.13
1013.264	0.2	0.4322	0.0000	0.2665	2.12
1015.008	-0.2	0.4396	0.0000	0.2863	2.13
1015.008	0	0.0000	1.0000	0.2557	2.13
1015.008	0.2	0.4678	0.0000	0.2292	2.13
1050.671	-0.2	0.2749	0.0000	0.2383	2.07
1050.671	0	0.0000	1.0000	0.2557	2.13
1050.671	0.2	0.2718	0.0000	0.2718	2.18
1055.513	-0.4	0.7142	0.0000	0.2656	2.07
1055.513	-0.2	0.1830	0.0008	0.2614	2.10
1055.513	0	0.0000	1.0000	0.2557	2.13
1055.513	0.2	0.1942	0.0005	0.2480	2.15
1055.513	0.4	0.8064	0.0000	0.2389	2.18
1057.41	-0.4	0.6834	0.0000	0.2369	2.10
1057.41	-0.2	0.1737	0.0012	0.2475	2.11
1057.41	0	0.0000	1.0000	0.2557	2.13
1057.41	0.2	0.1817	0.0008	0.2621	2.14

1057.41	0.4	0.7476	0.0000	0.2658	2.15
1075.207	-0.2	0.3393	0.0000	0.3909	2.02
1075.207	0	0.0000	1.0000	0.2557	2.13
1075.207	0.2	0.3263	0.0000	0.1225	2.13
1115.424	-0.4	0.5753	0.0000	0.2332	2.13
1115.424	-0.2	0.1427	0.0039	0.2451	2.13
1115.424	0	0.0000	1.0000	0.2557	2.13
1115.424	0.2	0.1429	0.0038	0.2656	2.13
1115.424	0.4	0.5755	0.0000	0.2757	2.12
1118.536	-0.4	0.5871	0.0000	0.3215	2.10
1118.536	-0.2	0.1456	0.0035	0.2880	2.12
1118.536	0	0.0000	1.0000	0.2557	2.13
1118.536	0.2	0.1452	0.0035	0.2254	2.14
1118.536	0.4	0.5838	0.0000	0.1972	2.14
1146.654	-0.2	0.2051	0.0003	0.1796	2.12
1146.654	0	0.0000	1.0000	0.2557	2.13
1146.654	0.2	0.2069	0.0003	0.3433	2.12
1151.921	-0.4	0.6470	0.0000	0.2741	2.14
1151.921	-0.2	0.1603	0.0020	0.2689	2.14
1151.921	0	0.0000	1.0000	0.2557	2.13
1151.921	0.2	0.1602	0.0020	0.2352	2.11
1151.921	0.4	0.6450	0.0000	0.2094	2.09
1162.573	-0.4	0.6365	0.0000	0.2570	2.14
1162.573	-0.2	0.1571	0.0022	0.2576	2.14
1162.573	0	0.0000	1.0000	0.2557	2.13
1162.573	0.2	0.1570	0.0022	0.2513	2.11
1162.573	0.4	0.6360	0.0000	0.2450	2.09
1177.825	-0.4	0.7871	0.0000	0.3051	1.96
1177.825	-0.2	0.1953	0.0005	0.2808	2.04
1177.825	0	0.0000	1.0000	0.2557	2.13
1177.825	0.2	0.1965	0.0005	0.2291	2.21
1177.825	0.4	0.7975	0.0000	0.2003	2.28
1191.821	-0.4	0.4754	0.0000	0.2573	2.12
1191.821	-0.2	0.1166	0.0107	0.2570	2.12
1191.821	0	0.0000	1.0000	0.2557	2.13
1191.821	0.2	0.1165	0.0108	0.2538	2.13

1191.821	0.4	0.4745	0.0000	0.2518	2.14
1192.593	-0.4	0.4936	0.0000	0.2960	2.11
1192.593	-0.2	0.1211	0.0090	0.2757	2.12
1192.593	0	0.0000	1.0000	0.2557	2.13
1192.593	0.2	0.1209	0.0091	0.2372	2.13
1192.593	0.4	0.4916	0.0000	0.2201	2.14
1194.435	-0.2	0.2337	0.0001	0.1810	2.14
1194.435	0	0.0000	1.0000	0.2557	2.13
1194.435	0.2	0.2376	0.0001	0.3476	2.10
1206.895	-0.4	0.5260	0.0000	0.2270	2.17
1206.895	-0.2	0.1310	0.0061	0.2429	2.15
1206.895	0	0.0000	1.0000	0.2557	2.13
1206.895	0.2	0.1316	0.0060	0.2657	2.10
1206.895	0.4	0.5321	0.0000	0.2729	2.08
1210.189	-0.4	0.6367	0.0000	0.2961	2.04
1210.189	-0.2	0.1582	0.0021	0.2776	2.09
1210.189	0	0.0000	1.0000	0.2557	2.13
1210.189	0.2	0.1580	0.0021	0.2315	2.16
1210.189	0.4	0.6359	0.0000	0.2060	2.19
1212.63	-0.4	0.5701	0.0000	0.3364	2.11
1212.63	-0.2	0.1428	0.0039	0.2942	2.12
1212.63	0	0.0000	1.0000	0.2557	2.13
1212.63	0.2	0.1446	0.0036	0.2208	2.13
1212.63	0.4	0.5860	0.0000	0.1887	2.12
1216.107	-0.4	0.6507	0.0000	0.2034	1.99
1216.107	-0.2	0.1616	0.0019	0.2306	2.06
1216.107	0	0.0000	1.0000	0.2557	2.13
1216.107	0.2	0.1625	0.0018	0.2745	2.19
1216.107	0.4	0.6569	0.0000	0.2814	2.25
1234.424	-0.2	0.2116	0.0003	0.2664	2.06
1234.424	0	0.0000	1.0000	0.2557	2.13
1234.424	0.2	0.2142	0.0002	0.2399	2.19
1250.015	-0.2	0.2132	0.0002	0.2278	2.15
1250.015	0	0.0000	1.0000	0.2557	2.13
1250.015	0.2	0.2105	0.0003	0.2771	2.10
1257.771	-0.2	0.2165	0.0002	0.2829	2.14

1257.771	0	0.0000	1.0000	0.2557	2.13
1257.771	0.2	0.2148	0.0002	0.2216	2.11
1268.475	-0.2	0.3177	0.0000	0.2673	2.08
1268.475	0	0.0000	1.0000	0.2557	2.13
1268.475	0.2	0.3234	0.0000	0.2345	2.19
1281.288	-0.2	0.3340	0.0000	0.2215	2.18
1281.288	0	0.0000	1.0000	0.2557	2.13
1281.288	0.2	0.3261	0.0000	0.2881	2.06
1296.597	-0.2	0.4809	0.0000	0.2117	2.12
1296.597	0	0.0000	1.0000	0.2557	2.13
1296.597	0.2	0.5227	0.0000	0.2445	2.10
1310.471	-0.2	0.3144	0.0000	0.2509	2.16
1310.471	0	0.0000	1.0000	0.2557	2.13
1310.471	0.2	0.3218	0.0000	0.2430	2.09
1324.92	-0.2	0.5688	0.0000	0.3179	2.30
1324.92	0	0.0000	1.0000	0.2557	2.13
1324.92	0.2	0.5899	0.0000	0.1969	1.88
1338.779	-0.2	0.4915	0.0000	0.2449	2.05
1338.779	0	0.0000	1.0000	0.2557	2.13
1338.779	0.2	0.4867	0.0000	0.2525	2.19
1342.38	-0.2	0.4760	0.0000	0.2077	2.04
1342.38	0	0.0000	1.0000	0.2557	2.13
1342.38	0.2	0.4718	0.0000	0.2931	2.19
1355.449	-0.2	0.3700	0.0000	0.2069	2.08
1355.449	0	0.0000	1.0000	0.2557	2.13
1355.449	0.2	0.3695	0.0000	0.3091	2.16
1360.448	-0.2	0.6547	0.0000	0.2851	2.25
1360.448	0	0.0000	1.0000	0.2557	2.13
1360.448	0.2	0.6510	0.0000	0.2080	1.96
1366.4	-0.2	0.5303	0.0000	0.2612	2.13
1366.4	0	0.0000	1.0000	0.2557	2.13
1366.4	0.2	0.5259	0.0000	0.2403	2.12
1367.926	-0.2	0.2560	0.0000	0.2622	2.13
1367.926	0	0.0000	1.0000	0.2557	2.13
1367.926	0.2	0.2561	0.0000	0.2489	2.13
1377.145	-0.2	0.2940	0.0000	0.2482	2.10

1377.145	0	0.0000	1.0000	0.2557	2.13
1377.145	0.2	0.2884	0.0000	0.2571	2.14
1399.644	-0.2	1.0408	0.0000	0.2457	2.35
1399.644	0	0.0000	1.0000	0.2557	2.13
1399.644	0.2	1.0996	0.0000	0.2664	1.95
1405.91	-0.2	0.6650	0.0000	0.2063	1.92
1405.91	0	0.0000	1.0000	0.2557	2.13
1405.91	0.2	0.7111	0.0000	0.2624	2.32
1423.211	-0.2	0.4708	0.0000	0.2081	2.14
1423.211	0	0.0000	1.0000	0.2557	2.13
1423.211	0.2	0.4815	0.0000	0.3137	2.12
1436.749	-0.2	0.7130	0.0000	0.2103	2.06
1436.749	0	0.0000	1.0000	0.2557	2.13
1436.749	0.2	0.6744	0.0000	0.2849	2.21
1446.842	-0.2	0.3740	0.0000	0.2139	2.14
1446.842	0	0.0000	1.0000	0.2557	2.13
1446.842	0.2	0.3839	0.0000	0.3136	2.11
1455.327	-0.2	0.2972	0.0000	0.2986	2.12
1455.327	0	0.0000	1.0000	0.2557	2.13
1455.327	0.2	0.2996	0.0000	0.2178	2.13
1467.233	-0.2	0.4573	0.0000	0.2743	2.10
1467.233	0	0.0000	1.0000	0.2557	2.13
1467.233	0.2	0.4561	0.0000	0.2441	2.15
1495.458	-0.2	0.8211	0.0000	0.2730	2.20
1495.458	0	0.0000	1.0000	0.2557	2.13
1495.458	0.2	0.8205	0.0000	0.2282	2.11
1496.824	-0.2	0.3998	0.0000	0.2646	2.11
1496.824	0	0.0000	1.0000	0.2557	2.13
1496.824	0.2	0.4006	0.0000	0.2485	2.14
1506.292	-0.2	0.4308	0.0000	0.2566	2.16
1506.292	0	0.0000	1.0000	0.2557	2.13
1506.292	0.2	0.4314	0.0000	0.2533	2.10
1508.475	-0.2	0.5120	0.0000	0.2754	2.21
1508.475	0	0.0000	1.0000	0.2557	2.13
1508.475	0.2	0.5169	0.0000	0.2284	2.05
1518.601	-0.2	0.8003	0.0000	0.2651	2.27

1518.601	0	0.0000	1.0000	0.2557	2.13
1518.601	0.2	0.8037	0.0000	0.1946	2.01
1529.602	-0.2	0.9491	0.0000	0.1893	2.18
1529.602	0	0.0000	1.0000	0.2557	2.13
1529.602	0.2	0.9618	0.0000	0.3145	2.06
1532.806	-0.2	0.4038	0.0000	0.2765	2.12
1532.806	0	0.0000	1.0000	0.2557	2.13
1532.806	0.2	0.4040	0.0000	0.2383	2.13
1534.29	-0.2	0.5691	0.0000	0.1869	2.12
1534.29	0	0.0000	1.0000	0.2557	2.13
1534.29	0.2	0.5702	0.0000	0.3188	2.12
1537.712	-0.2	0.3880	0.0000	0.2973	2.13
1537.712	0	0.0000	1.0000	0.2557	2.13
1537.712	0.2	0.3866	0.0000	0.2191	2.12
1569.609	-0.2	1.0298	0.0000	0.1767	2.12
1569.609	0	0.0000	1.0000	0.2557	2.13
1569.609	0.2	1.1355	0.0000	0.2446	2.08
1587.548	-0.2	1.0362	0.0000	0.2458	2.08
1587.548	0	0.0000	1.0000	0.2557	2.13
1587.548	0.2	0.9765	0.0000	0.2119	2.13
1598.763	-0.2	1.0398	0.0000	0.1977	2.15
1598.763	0	0.0000	1.0000	0.2557	2.13
1598.763	0.2	1.0339	0.0000	0.2399	2.02
1618.826	-0.2	1.0441	0.0000	0.2300	1.88
1618.826	0	0.0000	1.0000	0.2557	2.13
1618.826	0.2	1.1381	0.0000	0.2465	2.35
1627.449	-0.2	1.0716	0.0000	0.2046	2.03
1627.449	0	0.0000	1.0000	0.2557	2.13
1627.449	0.2	1.0423	0.0000	0.3249	2.20
1631.686	-0.2	1.1736	0.0000	0.2413	2.36
1631.686	0	0.0000	1.0000	0.2557	2.13
1631.686	0.2	1.1495	0.0000	0.1764	1.84
1636.246	-0.2	1.1584	0.0000	0.2513	2.13
1636.246	0	0.0000	1.0000	0.2557	2.13
1636.246	0.2	1.1305	0.0000	0.2774	2.12
1643.883	-0.2	1.0345	0.0000	0.2575	2.11

1643.883	0	0.0000	1.0000	0.2557	2.13
1643.883	0.2	1.0795	0.0000	0.2880	2.12
1651.928	-0.2	1.1138	0.0000	0.2053	1.95
1651.928	0	0.0000	1.0000	0.2557	2.13
1651.928	0.2	1.1777	0.0000	0.2868	2.28
1662.899	-0.2	1.4520	0.0000	0.1831	1.64
1662.899	0	0.0000	1.0000	0.2557	2.13
1662.899	0.2	1.0615	0.0000	0.0688	2.36
3173.951	-0.2	0.8179	0.0000	0.2583	2.13
3173.951	0	0.0000	1.0000	0.2557	2.13
3173.951	0.2	0.8240	0.0000	0.2547	2.13
3174.25	-0.2	0.8608	0.0000	0.2547	2.13
3174.25	0	0.0000	1.0000	0.2557	2.13
3174.25	0.2	0.7915	0.0000	0.2580	2.12
3176.503	-0.2	0.7898	0.0000	0.2558	2.12
3176.503	0	0.0000	1.0000	0.2557	2.13
3176.503	0.2	0.8532	0.0000	0.2558	2.13
3177.723	-0.2	0.8864	0.0000	0.2570	2.13
3177.723	0	0.0000	1.0000	0.2557	2.13
3177.723	0.2	0.7682	0.0000	0.2547	2.12
3180.94	-0.2	1.2060	0.0000	0.2485	2.13
3180.94	0	0.0000	1.0000	0.2557	2.13
3180.94	0.2	0.5816	0.0000	0.2649	2.12
3187.707	-0.2	0.9069	0.0000	0.2523	2.13
3187.707	0	0.0000	1.0000	0.2557	2.13
3187.707	0.2	0.7699	0.0000	0.2562	2.13
3187.991	-0.2	0.8877	0.0000	0.2595	2.13
3187.991	0	0.0000	1.0000	0.2557	2.13
3187.991	0.2	0.7896	0.0000	0.2496	2.13
3192.895	-0.2	0.7701	0.0000	0.2568	2.13
3192.895	0	0.0000	1.0000	0.2557	2.13
3192.895	0.2	0.9154	0.0000	0.2543	2.13
3194.942	-0.2	0.9333	0.0000	0.2522	2.13
3194.942	0	0.0000	1.0000	0.2557	2.13
3194.942	0.2	0.7494	0.0000	0.2600	2.13
3195.46	-0.2	0.9660	0.0000	0.2543	2.13

3195.46	0	0.0000	1.0000	0.2557	2.13
3195.46	0.2	0.7339	0.0000	0.2573	2.13
3195.735	-0.2	0.9191	0.0000	0.2532	2.13
3195.735	0	0.0000	1.0000	0.2557	2.13
3195.735	0.2	0.7977	0.0000	0.2552	2.13
3196.622	-0.2	0.8288	0.0000	0.2570	2.13
3196.622	0	0.0000	1.0000	0.2557	2.13
3196.622	0.2	0.8921	0.0000	0.2520	2.13
3197.379	-0.2	0.6730	0.0000	0.2659	2.13
3197.379	0	0.0000	1.0000	0.2557	2.13
3197.379	0.2	1.0291	0.0000	0.2459	2.12
3208.706	-0.2	1.2836	0.0000	0.2812	2.12
3208.706	0	0.0000	1.0000	0.2557	2.13
3208.706	0.2	0.5618	0.0000	0.2422	2.14
3209.929	-0.2	0.9373	0.0000	0.2492	2.13
3209.929	0	0.0000	1.0000	0.2557	2.13
3209.929	0.2	0.7786	0.0000	0.2606	2.13
3210.457	-0.2	0.7125	0.0000	0.2616	2.13
3210.457	0	0.0000	1.0000	0.2557	2.13
3210.457	0.2	1.0100	0.0000	0.2477	2.13
3217.316	-0.2	0.6756	0.0000	0.2501	2.13
3217.316	0	0.0000	1.0000	0.2557	2.13
3217.316	0.2	1.0787	0.0000	0.2592	2.13
3221.769	-0.2	0.8805	0.0000	0.2548	2.13
3221.769	0	0.0000	1.0000	0.2557	2.13
3221.769	0.2	0.8425	0.0000	0.2510	2.13
3221.843	-0.2	0.7126	0.0000	0.2363	2.13
3221.843	0	0.0000	1.0000	0.2557	2.13
3221.843	0.2	1.0121	0.0000	0.2705	2.13
3223.328	-0.2	1.1094	0.0000	0.2594	2.12
3223.328	0	0.0000	1.0000	0.2557	2.13
3223.328	0.2	0.6536	0.0000	0.2511	2.13
3234.819	-0.2	1.3016	0.0000	0.2486	2.12
3234.819	0	0.0000	1.0000	0.2557	2.13
3234.819	0.2	0.5731	0.0000	0.2680	2.13

Table S3. Photo-physical parameters (ΔE_{Q_p}, $P_{Q_\mathrm{p}}(\mathrm{RT})$, $E_{\mathrm{T_1-S_0}}$, and $\langle \mathrm{T_1}|\hat{H}_{\mathrm{SO}}|\mathrm{S_0}\rangle_{Q_\mathrm{p}}{}^2$) calculated for geometries allowed by normal-mode vibrations with frequency in $\mathrm{T_1}$ at RT for chromophore **3**. ω_p is the wavenumber of the pth normal vibrational mode in the structure optimized at $\mathrm{T_1}$. Q_p is the mass weighted normal coordinates at $\mathrm{T_1}$. Calculation regarding geometries was stopped when ΔE_{Q_p} becomes larger than 0.2 eV because these geometries with $\Delta E_{Q_\mathrm{p}}>0.2$ eV are hardly allowed below RT. $E_{\mathrm{T_1-S_0}}$ does not largely change for Q_p with $P_{Q_\mathrm{p}}(\mathrm{RT})>0.01$ which corresponds to geometries much allowed at RT.

ω_p	Q_p	ΔE_{Q_p}	$P_{Q_\mathrm{p}}(\mathrm{RT})$	$\langle \mathrm{T_1}\|\hat{H}_{\mathrm{SO}}\|\mathrm{S_0}\rangle_{Q_\mathrm{p}}{}^2$	$E_{\mathrm{T_1-S_0}}$
$(\mathrm{cm^{-1}})$	(a.u.)	(eV)		$(\mathrm{cm^{-2}})$	(eV)
15.40404	-1	0.0033	0.8791	0.3186	2.10
15.40404	-0.8	0.0023	0.9145	0.3267	2.10
15.40404	-0.6	0.0016	0.9384	0.3359	2.10
15.40404	-0.4	0.0010	0.9604	0.3451	2.09
15.40404	-0.2	0.0005	0.9821	0.3552	2.09
15.40404	0	0.0000	1.0000	0.3656	2.09
15.40404	0.2	0.0000	1.0000	0.3766	2.09
15.40404	0.4	0.0000	1.0000	0.3883	2.09
15.40404	0.6	0.0003	0.9874	0.4004	2.09
15.40404	0.8	0.0012	0.9548	0.4131	2.09
15.40404	1	0.0025	0.9064	0.4257	2.09
18.36152	-1	0.0055	0.8058	0.3402	2.08
18.36152	-0.8	0.0032	0.8833	0.3461	2.08
18.36152	-0.6	0.0016	0.9392	0.3519	2.09
18.36152	-0.4	0.0006	0.9754	0.3568	2.09
18.36152	-0.2	0.0001	0.9948	0.3616	2.09
18.36152	0	0.0000	1.0000	0.3656	2.09
18.36152	0.2	0.0002	0.9921	0.3697	2.09
18.36152	0.4	0.0007	0.9714	0.3725	2.09
18.36152	0.6	0.0017	0.9367	0.3751	2.09
18.36152	0.8	0.0031	0.8860	0.3772	2.09

18.36152	1	0.0052	0.8170	0.3791	2.09
19.31795	-1	0.0070	0.7614	0.3908	2.09
19.31795	-0.8	0.0041	0.8510	0.3857	2.09
19.31795	-0.6	0.0022	0.9164	0.3808	2.09
19.31795	-0.4	0.0010	0.9608	0.3758	2.09
19.31795	-0.2	0.0003	0.9878	0.3706	2.09
19.31795	0	0.0000	1.0000	0.3656	2.09
19.31795	0.2	0.0001	0.9977	0.3605	2.09
19.31795	0.4	0.0005	0.9792	0.3555	2.09
19.31795	0.6	0.0016	0.9408	0.3501	2.09
19.31795	0.8	0.0034	0.8777	0.3448	2.09
19.31795	1	0.0062	0.7865	0.3399	2.09
21.3418	-1	0.0064	0.7789	0.3821	2.10
21.3418	-0.8	0.0042	0.8489	0.3794	2.10
21.3418	-0.6	0.0026	0.9035	0.3760	2.10
21.3418	-0.4	0.0014	0.9461	0.3727	2.09
21.3418	-0.2	0.0006	0.9786	0.3691	2.09
21.3418	0	0.0000	1.0000	0.3656	2.09
21.3418	0.2	0.0000	1.0000	0.3619	2.09
21.3418	0.4	0.0005	0.9816	0.3580	2.09
21.3418	0.6	0.0020	0.9259	0.3546	2.09
21.3418	0.8	0.0044	0.8416	0.3512	2.09
21.3418	1	0.0077	0.7419	0.3473	2.09
28.48751	-1	0.0174	0.5077	0.3458	2.09
28.48751	-0.8	0.0086	0.7155	0.3487	2.09
28.48751	-0.6	0.0037	0.8654	0.3522	2.09
28.48751	-0.4	0.0013	0.9510	0.3560	2.09
28.48751	-0.2	0.0003	0.9896	0.3603	2.09
28.48751	0	0.0000	1.0000	0.3656	2.09
28.48751	0.2	0.0003	0.9898	0.3713	2.09
28.48751	0.4	0.0013	0.9525	0.3776	2.09
28.48751	0.6	0.0036	0.8698	0.3841	2.09
28.48751	0.8	0.0083	0.7239	0.3923	2.09
28.48751	1	0.0168	0.5194	0.4004	2.09
44.23038	-1	0.0272	0.3467	0.3576	2.10
44.23038	-0.8	0.0144	0.5717	0.3583	2.10

44.23038	-0.6	0.0067	0.7700	0.3594	2.10
44.23038	-0.4	0.0025	0.9057	0.3610	2.10
44.23038	-0.2	0.0006	0.9783	0.3629	2.09
44.23038	0	0.0000	1.0000	0.3656	2.09
44.23038	0.2	0.0006	0.9768	0.3686	2.09
44.23038	0.4	0.0027	0.9018	0.3718	2.09
44.23038	0.6	0.0069	0.7636	0.3758	2.09
44.23038	0.8	0.0148	0.5631	0.3806	2.08
44.23038	1	0.0280	0.3369	0.3856	2.08
63.7835	-1	0.0493	0.1470	0.3955	2.08
63.7835	-0.8	0.0306	0.3039	0.3911	2.08
63.7835	-0.6	0.0169	0.5189	0.3864	2.09
63.7835	-0.4	0.0074	0.7490	0.3806	2.09
63.7835	-0.2	0.0019	0.9293	0.3737	2.09
63.7835	0	0.0000	1.0000	0.3656	2.09
63.7835	0.2	0.0017	0.9355	0.3566	2.09
63.7835	0.4	0.0071	0.7583	0.3461	2.10
63.7835	0.6	0.0165	0.5271	0.3347	2.09
63.7835	0.8	0.0302	0.3087	0.3215	2.09
63.7835	1	0.0489	0.1490	0.3074	2.09
77.66401	-1	0.0698	0.0662	0.2768	2.10
77.66401	-0.8	0.0429	0.1883	0.2945	2.10
77.66401	-0.6	0.0234	0.4028	0.3126	2.10
77.66401	-0.4	0.0101	0.6743	0.3303	2.10
77.66401	-0.2	0.0025	0.9081	0.3478	2.10
77.66401	0	0.0000	1.0000	0.3656	2.09
77.66401	0.2	0.0026	0.9047	0.3833	2.09
77.66401	0.4	0.0104	0.6678	0.4005	2.09
77.66401	0.6	0.0239	0.3945	0.4177	2.09
77.66401	0.8	0.0439	0.1810	0.4344	2.09
77.66401	1	0.0715	0.0618	0.4506	2.08
79.57408	-1	0.0818	0.0414	0.3935	2.10
79.57408	-0.8	0.0491	0.1481	0.3890	2.10
79.57408	-0.6	0.0262	0.3609	0.3837	2.10
79.57408	-0.4	0.0112	0.6455	0.3775	2.10
79.57408	-0.2	0.0028	0.8964	0.3720	2.09

79.57408	0	0.0000	1.0000	0.3656	2.09
79.57408	0.2	0.0025	0.9072	0.3593	2.09
79.57408	0.4	0.0106	0.6624	0.3526	2.09
79.57408	0.6	0.0251	0.3766	0.3451	2.09
79.57408	0.8	0.0474	0.1578	0.3374	2.09
79.57408	1	0.0796	0.0452	0.3297	2.09
93.08721	-1	0.0903	0.0298	0.2561	2.10
93.08721	-0.8	0.0557	0.1143	0.2743	2.10
93.08721	-0.6	0.0305	0.3056	0.2945	2.10
93.08721	-0.4	0.0133	0.5960	0.3164	2.10
93.08721	-0.2	0.0033	0.8786	0.3401	2.10
93.08721	0	0.0000	1.0000	0.3656	2.09
93.08721	0.2	0.0032	0.8838	0.3926	2.09
93.08721	0.4	0.0130	0.6022	0.4212	2.08
93.08721	0.6	0.0302	0.3093	0.4505	2.08
93.08721	0.8	0.0555	0.1153	0.4808	2.07
93.08721	1	0.0904	0.0297	0.5115	2.06
121.2646	-1	0.1681	0.0014	0.2038	2.09
121.2646	-0.8	0.1025	0.0185	0.2319	2.10
121.2646	-0.6	0.0554	0.1159	0.2625	2.10
121.2646	-0.4	0.0239	0.3950	0.2949	2.10
121.2646	-0.2	0.0059	0.7959	0.3296	2.10
121.2646	0	0.0000	1.0000	0.3656	2.09
121.2646	0.2	0.0059	0.7951	0.4033	2.09
121.2646	0.4	0.0240	0.3936	0.4429	2.07
121.2646	0.6	0.0555	0.1152	0.4834	2.06
121.2646	0.8	0.1028	0.0183	0.5239	2.04
121.2646	1	0.1686	0.0014	0.5643	2.02
134.8478	-1	0.1656	0.0016	0.4351	2.09
134.8478	-0.8	0.1029	0.0183	0.4233	2.09
134.8478	-0.6	0.0564	0.1112	0.4104	2.09
134.8478	-0.4	0.0246	0.3841	0.3965	2.09
134.8478	-0.2	0.0061	0.7901	0.3812	2.09
134.8478	0	0.0000	1.0000	0.3656	2.09
134.8478	0.2	0.0061	0.7899	0.3491	2.09
134.8478	0.4	0.0243	0.3883	0.3327	2.09

134.8478	0.6	0.0553	0.1162	0.3158	2.09
134.8478	0.8	0.1001	0.0203	0.2985	2.09
134.8478	1	0.1601	0.0020	0.2813	2.08
140.1908	-1	0.1765	0.0010	0.4591	2.10
140.1908	-0.8	0.1101	0.0138	0.4402	2.10
140.1908	-0.6	0.0606	0.0945	0.4215	2.10
140.1908	-0.4	0.0265	0.3565	0.4029	2.10
140.1908	-0.2	0.0066	0.7747	0.3837	2.10
140.1908	0	0.0000	1.0000	0.3656	2.09
140.1908	0.2	0.0066	0.7748	0.3475	2.09
140.1908	0.4	0.0263	0.3586	0.3294	2.09
140.1908	0.6	0.0600	0.0968	0.3123	2.08
140.1908	0.8	0.1085	0.0146	0.2953	2.08
140.1908	1	0.1735	0.0012	0.2788	2.08
142.4348	-1	0.2133	0.0002	0.2103	2.09
142.4348	-0.8	0.1328	0.0057	0.2364	2.09
142.4348	-0.6	0.0731	0.0582	0.2645	2.09
142.4348	-0.4	0.0319	0.2886	0.2957	2.09
142.4348	-0.2	0.0079	0.7353	0.3295	2.09
142.4348	0	0.0000	1.0000	0.3656	2.09
142.4348	0.2	0.0079	0.7364	0.4047	2.09
142.4348	0.4	0.0317	0.2912	0.4464	2.09
142.4348	0.6	0.0723	0.0599	0.4902	2.09
142.4348	0.8	0.1313	0.0060	0.5363	2.08
142.4348	1	0.2105	0.0003	0.5848	2.08
147.8437	-1	0.2355	0.0001	0.5356	2.04
147.8437	-0.8	0.1492	0.0030	0.4955	2.05
147.8437	-0.6	0.0832	0.0392	0.4595	2.06
147.8437	-0.4	0.0368	0.2390	0.4255	2.07
147.8437	-0.2	0.0091	0.7006	0.3946	2.08
147.8437	0	0.0000	1.0000	0.3656	2.09
147.8437	0.2	0.0093	0.6960	0.3391	2.10
147.8437	0.4	0.0373	0.2345	0.3154	2.11
147.8437	0.6	0.0845	0.0373	0.2936	2.12
147.8437	0.8	0.1517	0.0027	0.2740	2.12
147.8437	1	0.2401	0.0001	0.2565	2.12

150.8789	-1	0.1887	0.0006	0.3610	2.09
150.8789	-0.8	0.1161	0.0109	0.3622	2.09
150.8789	-0.6	0.0632	0.0855	0.3632	2.09
150.8789	-0.4	0.0274	0.3443	0.3644	2.09
150.8789	-0.2	0.0067	0.7691	0.3649	2.09
150.8789	0	0.0000	1.0000	0.3656	2.09
150.8789	0.2	0.0067	0.7713	0.3661	2.09
150.8789	0.4	0.0269	0.3508	0.3667	2.09
150.8789	0.6	0.0617	0.0907	0.3670	2.09
150.8789	0.8	0.1125	0.0126	0.3676	2.10
150.8789	1	0.1815	0.0009	0.3678	2.10
165.9329	-1	0.2945	0.0000	0.5057	2.05
165.9329	-0.8	0.1879	0.0007	0.4748	2.06
165.9329	-0.6	0.1055	0.0165	0.4451	2.07
165.9329	-0.4	0.0469	0.1612	0.4169	2.08
165.9329	-0.2	0.0118	0.6322	0.3901	2.09
165.9329	0	0.0000	1.0000	0.3656	2.09
165.9329	0.2	0.0115	0.6380	0.3418	2.10
165.9329	0.4	0.0465	0.1637	0.3194	2.11
165.9329	0.6	0.1051	0.0167	0.2978	2.11
165.9329	0.8	0.1876	0.0007	0.2774	2.11
165.9329	1	0.2944	0.0000	0.2572	2.12
182.8979	-0.8	0.2110	0.0003	0.5932	2.06
182.8979	-0.6	0.1169	0.0106	0.5230	2.07
182.8979	-0.4	0.0513	0.1360	0.4612	2.08
182.8979	-0.2	0.0127	0.6101	0.4090	2.09
182.8979	0	0.0000	1.0000	0.3656	2.09
182.8979	0.2	0.0125	0.6145	0.3299	2.10
182.8979	0.4	0.0500	0.1431	0.3012	2.10
182.8979	0.6	0.1126	0.0125	0.2780	2.10
182.8979	0.8	0.2010	0.0004	0.2595	2.10
202.7845	-0.8	0.2642	0.0000	0.6510	1.98
202.7845	-0.6	0.1460	0.0034	0.5555	2.02
202.7845	-0.4	0.0641	0.0825	0.4778	2.05
202.7845	-0.2	0.0159	0.5378	0.4156	2.07
202.7845	0	0.0000	1.0000	0.3656	2.09

202.7845	0.2	0.0158	0.5404	0.3261	2.11
202.7845	0.4	0.0638	0.0834	0.2942	2.12
202.7845	0.6	0.1453	0.0035	0.2684	2.13
202.7845	0.8	0.2624	0.0000	0.2472	2.13
216.018	-0.8	0.3257	0.0000	0.5155	2.04
216.018	-0.6	0.1786	0.0010	0.4691	2.05
216.018	-0.4	0.0776	0.0488	0.4293	2.07
216.018	-0.2	0.0190	0.4778	0.3949	2.08
216.018	0	0.0000	1.0000	0.3656	2.09
216.018	0.2	0.0188	0.4805	0.3408	2.10
216.018	0.4	0.0746	0.0548	0.3191	2.11
216.018	0.6	0.1675	0.0015	0.3007	2.12
216.018	0.8	0.2987	0.0000	0.2852	2.13
241.898	-0.6	0.2028	0.0004	0.4624	2.04
241.898	-0.4	0.0877	0.0329	0.4315	2.07
241.898	-0.2	0.0216	0.4322	0.3988	2.08
241.898	0	0.0000	1.0000	0.3656	2.09
241.898	0.2	0.0215	0.4338	0.3345	2.10
241.898	0.4	0.0872	0.0336	0.3067	2.09
241.898	0.6	0.2014	0.0004	0.2835	2.08
246.6435	-0.8	0.2327	0.0001	0.3473	2.10
246.6435	-0.6	0.1134	0.0121	0.3514	2.10
246.6435	-0.4	0.0445	0.1769	0.3558	2.10
246.6435	-0.2	0.0102	0.6726	0.3607	2.10
246.6435	0	0.0000	1.0000	0.3656	2.09
246.6435	0.2	0.0101	0.6748	0.3715	2.09
246.6435	0.4	0.0441	0.1796	0.3769	2.09
246.6435	0.6	0.1127	0.0124	0.3833	2.09
246.6435	0.8	0.2318	0.0001	0.3901	2.08
248.8315	-0.8	0.2322	0.0001	0.3432	2.10
248.8315	-0.6	0.1132	0.0122	0.3481	2.10
248.8315	-0.4	0.0445	0.1772	0.3541	2.10
248.8315	-0.2	0.0102	0.6713	0.3597	2.10
248.8315	0	0.0000	1.0000	0.3656	2.09
248.8315	0.2	0.0103	0.6688	0.3720	2.09
248.8315	0.4	0.0451	0.1726	0.3784	2.09

248.8315	0.6	0.1149	0.0114	0.3850	2.09
248.8315	0.8	0.2352	0.0001	0.3920	2.08
267.522	-0.6	0.2615	0.0000	0.4577	2.06
267.522	-0.4	0.1160	0.0110	0.4303	2.07
267.522	-0.2	0.0290	0.3235	0.3995	2.08
267.522	0	0.0000	1.0000	0.3656	2.09
267.522	0.2	0.0291	0.3219	0.3287	2.10
267.522	0.4	0.1172	0.0104	0.2889	2.12
267.522	0.6	0.2660	0.0000	0.2477	2.13
280.5514	-0.6	0.2894	0.0000	0.4272	2.06
280.5514	-0.4	0.1277	0.0069	0.4079	2.07
280.5514	-0.2	0.0317	0.2914	0.3873	2.08
280.5514	0	0.0000	1.0000	0.3656	2.09
280.5514	0.2	0.0319	0.2894	0.3427	2.10
280.5514	0.4	0.1269	0.0071	0.3183	2.11
280.5514	0.6	0.2857	0.0000	0.2930	2.11
284.5285	-0.6	0.2625	0.0000	0.4277	2.06
284.5285	-0.4	0.1135	0.0121	0.4100	2.08
284.5285	-0.2	0.0279	0.3371	0.3893	2.09
284.5285	0	0.0000	1.0000	0.3656	2.09
284.5285	0.2	0.0278	0.3383	0.3401	2.09
284.5285	0.4	0.1136	0.0120	0.3133	2.07
284.5285	0.6	0.2632	0.0000	0.2858	2.05
289.9034	-0.6	0.2676	0.0000	0.0710	2.08
289.9034	-0.4	0.1161	0.0109	0.1313	2.09
289.9034	-0.2	0.0286	0.3290	0.2291	2.10
289.9034	0	0.0000	1.0000	0.3656	2.09
289.9034	0.2	0.0283	0.3325	0.5405	2.08
289.9034	0.4	0.1143	0.0117	0.7505	2.06
289.9034	0.6	0.2619	0.0000	0.9899	2.03
307.5823	-0.6	0.3000	0.0000	0.6040	2.02
307.5823	-0.4	0.1311	0.0061	0.5204	2.05
307.5823	-0.2	0.0324	0.2831	0.4400	2.07
307.5823	0	0.0000	1.0000	0.3656	2.09
307.5823	0.2	0.0323	0.2841	0.2974	2.11
307.5823	0.4	0.1306	0.0062	0.2373	2.11

307.5823	0.6	0.2984	0.0000	0.1847	2.11
319.9816	-0.6	0.3937	0.0000	1.1045	1.93
319.9816	-0.4	0.1708	0.0013	0.7856	2.01
319.9816	-0.2	0.0419	0.1961	0.5419	2.06
319.9816	0	0.0000	1.0000	0.3656	2.09
319.9816	0.2	0.0411	0.2023	0.2478	2.10
319.9816	0.4	0.1642	0.0017	0.1753	2.08
319.9816	0.6	0.3728	0.0000	0.1335	2.03
334.7384	-0.4	0.2077	0.0003	0.2490	2.03
334.7384	-0.2	0.0514	0.1351	0.3112	2.07
334.7384	0	0.0000	1.0000	0.3656	2.09
334.7384	0.2	0.0518	0.1332	0.3967	2.09
334.7384	0.4	0.2102	0.0003	0.3939	2.05
348.8845	-0.6	0.4208	0.0000	0.2506	2.11
348.8845	-0.4	0.1852	0.0007	0.2932	2.10
348.8845	-0.2	0.0461	0.1665	0.3317	2.10
348.8845	0	0.0000	1.0000	0.3656	2.09
348.8845	0.2	0.0461	0.1663	0.3955	2.09
348.8845	0.4	0.1862	0.0007	0.4221	2.08
348.8845	0.6	0.4248	0.0000	0.4457	2.08
351.513	-0.4	0.2014	0.0004	0.3381	2.10
351.513	-0.2	0.0500	0.1427	0.3611	2.10
351.513	0	0.0000	1.0000	0.3656	2.09
351.513	0.2	0.0498	0.1438	0.3554	2.07
351.513	0.4	0.1993	0.0004	0.3329	2.04
351.513	0.6	0.4494	0.0000	0.3031	2.00
375.0931	-0.4	0.2447	0.0001	0.4250	1.98
375.0931	-0.2	0.0613	0.0920	0.3989	2.04
375.0931	0	0.0000	1.0000	0.3656	2.09
375.0931	0.2	0.0618	0.0902	0.3270	2.14
375.0931	0.4	0.2483	0.0001	0.2842	2.19
393.1523	-0.4	0.3063	0.0000	0.2395	2.01
393.1523	-0.2	0.0770	0.0500	0.2975	2.05
393.1523	0	0.0000	1.0000	0.3656	2.09
393.1523	0.2	0.0783	0.0475	0.4423	2.13
393.1523	0.4	0.3152	0.0000	0.5257	2.16

404.6724	-0.4	0.2801	0.0000	0.2782	2.06
404.6724	-0.2	0.0699	0.0658	0.3203	2.08
404.6724	0	0.0000	1.0000	0.3656	2.09
404.6724	0.2	0.0698	0.0660	0.4124	2.11
404.6724	0.4	0.2794	0.0000	0.4604	2.13
410.3266	-0.4	0.3017	0.0000	0.3502	2.01
410.3266	-0.2	0.0752	0.0535	0.3557	2.06
410.3266	0	0.0000	1.0000	0.3656	2.09
410.3266	0.2	0.0753	0.0533	0.3805	2.11
410.3266	0.4	0.3016	0.0000	0.3997	2.11
428.9071	-0.6	0.3925	0.0000	0.3773	2.11
428.9071	-0.4	0.1718	0.0012	0.3724	2.10
428.9071	-0.2	0.0425	0.1910	0.3687	2.10
428.9071	0	0.0000	1.0000	0.3656	2.09
428.9071	0.2	0.0425	0.1912	0.3642	2.09
428.9071	0.4	0.1716	0.0013	0.3636	2.08
428.9071	0.6	0.3918	0.0000	0.3656	2.08
433.7621	-0.6	0.3831	0.0000	0.4026	2.06
433.7621	-0.4	0.1677	0.0015	0.3883	2.07
433.7621	-0.2	0.0416	0.1984	0.3760	2.08
433.7621	0	0.0000	1.0000	0.3656	2.09
433.7621	0.2	0.0417	0.1971	0.3567	2.10
433.7621	0.4	0.1691	0.0014	0.3484	2.11
433.7621	0.6	0.3881	0.0000	0.3409	2.12
444.0827	-0.6	0.4173	0.0000	0.4099	2.09
444.0827	-0.4	0.1800	0.0009	0.3932	2.09
444.0827	-0.2	0.0442	0.1790	0.3781	2.09
444.0827	0	0.0000	1.0000	0.3656	2.09
444.0827	0.2	0.0443	0.1783	0.3552	2.10
444.0827	0.4	0.1809	0.0009	0.3473	2.10
444.0827	0.6	0.4206	0.0000	0.3416	2.10
445.4551	-0.6	0.4236	0.0000	0.3833	2.09
445.4551	-0.4	0.1833	0.0008	0.3775	2.09
445.4551	-0.2	0.0451	0.1728	0.3715	2.09
445.4551	0	0.0000	1.0000	0.3656	2.09
445.4551	0.2	0.0453	0.1714	0.3595	2.10

445.4551	0.4	0.1849	0.0007	0.3540	2.10
445.4551	0.6	0.4290	0.0000	0.3484	2.11
447.5939	-0.4	0.2415	0.0001	0.5779	2.04
447.5939	-0.2	0.0599	0.0973	0.4683	2.07
447.5939	0	0.0000	1.0000	0.3656	2.09
447.5939	0.2	0.0598	0.0975	0.2731	2.11
447.5939	0.4	0.2403	0.0001	0.1923	2.11
451.977	-0.4	0.2847	0.0000	0.3835	2.11
451.977	-0.2	0.0709	0.0632	0.3801	2.10
451.977	0	0.0000	1.0000	0.3656	2.09
451.977	0.2	0.0709	0.0634	0.3420	2.08
451.977	0.4	0.2839	0.0000	0.3124	2.07
468.2187	-0.4	0.3205	0.0000	0.2593	2.14
468.2187	-0.2	0.0802	0.0440	0.3104	2.12
468.2187	0	0.0000	1.0000	0.3656	2.09
468.2187	0.2	0.0807	0.0432	0.4214	2.06
468.2187	0.4	0.3252	0.0000	0.4748	2.01
472.7216	-0.4	0.3478	0.0000	0.4422	2.08
472.7216	-0.2	0.0867	0.0343	0.4027	2.09
472.7216	0	0.0000	1.0000	0.3656	2.09
472.7216	0.2	0.0864	0.0346	0.3316	2.10
472.7216	0.4	0.3452	0.0000	0.3007	2.09
477.6501	-0.4	0.4246	0.0000	0.4479	2.15
477.6501	-0.2	0.1053	0.0166	0.4052	2.13
477.6501	0	0.0000	1.0000	0.3656	2.09
477.6501	0.2	0.1039	0.0175	0.3283	2.06
477.6501	0.4	0.4127	0.0000	0.2939	2.02
488.3076	-0.4	0.3200	0.0000	0.5028	2.02
488.3076	-0.2	0.0793	0.0456	0.4363	2.06
488.3076	0	0.0000	1.0000	0.3656	2.09
488.3076	0.2	0.0788	0.0466	0.2923	2.12
488.3076	0.4	0.3144	0.0000	0.2203	2.13
507.0748	-0.4	0.4594	0.0000	0.4049	2.03
507.0748	-0.2	0.1153	0.0113	0.3858	2.06
507.0748	0	0.0000	1.0000	0.3656	2.09
507.0748	0.2	0.1164	0.0108	0.3441	2.12

507.0748	0.4	0.4682	0.0000	0.3229	2.14
511.8082	-0.4	0.3322	0.0000	0.1439	2.02
511.8082	-0.2	0.0827	0.0400	0.2378	2.07
511.8082	0	0.0000	1.0000	0.3656	2.09
511.8082	0.2	0.0824	0.0405	0.5248	2.10
511.8082	0.4	0.3303	0.0000	0.7210	2.08
513.7712	-0.4	0.2911	0.0000	0.4155	2.08
513.7712	-0.2	0.0724	0.0598	0.3909	2.09
513.7712	0	0.0000	1.0000	0.3656	2.09
513.7712	0.2	0.0723	0.0600	0.3396	2.10
513.7712	0.4	0.2904	0.0000	0.3127	2.10
515.5716	-0.4	0.2931	0.0000	0.3985	2.11
515.5716	-0.2	0.0728	0.0589	0.3825	2.10
515.5716	0	0.0000	1.0000	0.3656	2.09
515.5716	0.2	0.0727	0.0590	0.3478	2.08
515.5716	0.4	0.2926	0.0000	0.3298	2.07
521.7309	-0.4	0.3568	0.0000	0.4311	2.03
521.7309	-0.2	0.0891	0.0312	0.3981	2.07
521.7309	0	0.0000	1.0000	0.3656	2.09
521.7309	0.2	0.0890	0.0313	0.3309	2.11
521.7309	0.4	0.3569	0.0000	0.2938	2.12
526.5411	-0.4	0.3727	0.0000	0.3004	2.11
526.5411	-0.2	0.0927	0.0271	0.3323	2.10
526.5411	0	0.0000	1.0000	0.3656	2.09
526.5411	0.2	0.0922	0.0276	0.3992	2.08
526.5411	0.4	0.3688	0.0000	0.4320	2.07
534.6314	-0.4	0.3807	0.0000	0.4445	2.09
534.6314	-0.2	0.0949	0.0249	0.4054	2.10
534.6314	0	0.0000	1.0000	0.3656	2.09
534.6314	0.2	0.0950	0.0248	0.3267	2.08
534.6314	0.4	0.3803	0.0000	0.2886	2.06
543.4112	-0.4	0.3938	0.0000	0.5086	2.07
543.4112	-0.2	0.0977	0.0223	0.4327	2.09
543.4112	0	0.0000	1.0000	0.3656	2.09
543.4112	0.2	0.0978	0.0222	0.3020	2.10
543.4112	0.4	0.3941	0.0000	0.2392	2.09

549.5704	-0.4	0.3860	0.0000	0.5431	2.07
549.5704	-0.2	0.0959	0.0239	0.4483	2.09
549.5704	0	0.0000	1.0000	0.3656	2.09
549.5704	0.2	0.0958	0.0240	0.2975	2.09
549.5704	0.4	0.3843	0.0000	0.2453	2.08
556.5681	-0.4	0.5121	0.0000	0.3254	2.09
556.5681	-0.2	0.1278	0.0069	0.3438	2.09
556.5681	0	0.0000	1.0000	0.3656	2.09
556.5681	0.2	0.1276	0.0070	0.3910	2.09
556.5681	0.4	0.5104	0.0000	0.4200	2.08
559.8604	-0.4	0.5408	0.0000	0.3815	2.09
559.8604	-0.2	0.1357	0.0051	0.3733	2.09
559.8604	0	0.0000	1.0000	0.3656	2.09
559.8604	0.2	0.1370	0.0048	0.3585	2.09
559.8604	0.4	0.5513	0.0000	0.3515	2.09
577.1873	-0.4	0.4455	0.0000	0.5979	2.00
577.1873	-0.2	0.1104	0.0136	0.4556	2.06
577.1873	0	0.0000	1.0000	0.3656	2.09
577.1873	0.2	0.1104	0.0136	0.3070	2.11
577.1873	0.4	0.4445	0.0000	0.2668	2.09
586.3107	-0.4	0.5194	0.0000	0.2790	2.08
586.3107	-0.2	0.1295	0.0065	0.3209	2.09
586.3107	0	0.0000	1.0000	0.3656	2.09
586.3107	0.2	0.1294	0.0065	0.4148	2.09
586.3107	0.4	0.5187	0.0000	0.4709	2.07
603.3236	-0.4	0.3947	0.0000	0.4554	2.08
603.3236	-0.2	0.0976	0.0224	0.4068	2.09
603.3236	0	0.0000	1.0000	0.3656	2.09
603.3236	0.2	0.0978	0.0223	0.3308	2.10
603.3236	0.4	0.3951	0.0000	0.3023	2.10
607.3702	-0.4	0.4944	0.0000	0.3789	2.08
607.3702	-0.2	0.1229	0.0084	0.3740	2.09
607.3702	0	0.0000	1.0000	0.3656	2.09
607.3702	0.2	0.1230	0.0083	0.3546	2.10
607.3702	0.4	0.4952	0.0000	0.3426	2.10
622.7969	-0.4	0.6537	0.0000	0.2301	2.07

622.7969	-0.2	0.1586	0.0021	0.2916	2.09
622.7969	0	0.0000	1.0000	0.3656	2.09
622.7969	0.2	0.1584	0.0021	0.4588	2.08
622.7969	0.4	0.6509	0.0000	0.5814	2.05
639.2499	-0.2	0.2007	0.0004	0.4129	2.06
639.2499	0	0.0000	1.0000	0.3656	2.09
639.2499	0.2	0.2007	0.0004	0.3220	2.11
640.0007	-0.2	0.2114	0.0003	0.2983	2.09
640.0007	0	0.0000	1.0000	0.3656	2.09
640.0007	0.2	0.2114	0.0003	0.4426	2.08
648.0776	-0.4	0.5386	0.0000	0.5358	2.04
648.0776	-0.2	0.1333	0.0056	0.4464	2.08
648.0776	0	0.0000	1.0000	0.3656	2.09
648.0776	0.2	0.1334	0.0056	0.2944	2.08
648.0776	0.4	0.5387	0.0000	0.2330	2.05
651.292	-0.4	0.7982	0.0000	0.4085	2.08
651.292	-0.2	0.1994	0.0004	0.3866	2.09
651.292	0	0.0000	1.0000	0.3656	2.09
651.292	0.2	0.1994	0.0004	0.3452	2.09
651.292	0.4	0.7982	0.0000	0.3240	2.09
658.6475	-0.4	0.7874	0.0000	0.4205	2.09
658.6475	-0.2	0.1968	0.0005	0.3951	2.09
658.6475	0	0.0000	1.0000	0.3656	2.09
658.6475	0.2	0.1970	0.0005	0.3325	2.09
658.6475	0.4	0.7884	0.0000	0.2951	2.09
673.414	-0.4	0.5218	0.0000	0.6965	2.04
673.414	-0.2	0.1292	0.0066	0.5091	2.08
673.414	0	0.0000	1.0000	0.3656	2.09
673.414	0.2	0.1296	0.0064	0.2594	2.10
673.414	0.4	0.5248	0.0000	0.1826	2.09
678.39	-0.4	0.7873	0.0000	0.4246	2.09
678.39	-0.2	0.1963	0.0005	0.3918	2.09
678.39	0	0.0000	1.0000	0.3656	2.09
678.39	0.2	0.1955	0.0005	0.3449	2.09
678.39	0.4	0.7804	0.0000	0.3292	2.08
683.4381	-0.2	0.2171	0.0002	0.3066	2.08

683.4381	0	0.0000	1.0000	0.3656	2.09
683.4381	0.2	0.2140	0.0002	0.4320	2.09
692.0582	-0.4	0.7102	0.0000	0.6378	2.04
692.0582	-0.2	0.1776	0.0010	0.4899	2.07
692.0582	0	0.0000	1.0000	0.3656	2.09
692.0582	0.2	0.1779	0.0010	0.2615	2.12
692.0582	0.4	0.7135	0.0000	0.1761	2.14
709.1786	-0.4	0.7010	0.0000	0.3353	2.08
709.1786	-0.2	0.1749	0.0011	0.3495	2.09
709.1786	0	0.0000	1.0000	0.3656	2.09
709.1786	0.2	0.1748	0.0011	0.3857	2.10
709.1786	0.4	0.7004	0.0000	0.4088	2.10
712.9853	-0.4	0.5698	0.0000	0.3557	2.08
712.9853	-0.2	0.1419	0.0040	0.3592	2.09
712.9853	0	0.0000	1.0000	0.3656	2.09
712.9853	0.2	0.1419	0.0040	0.3773	2.10
712.9853	0.4	0.5701	0.0000	0.3947	2.10
722.0335	-0.4	0.6703	0.0000	0.3232	2.06
722.0335	-0.2	0.1676	0.0015	0.3440	2.08
722.0335	0	0.0000	1.0000	0.3656	2.09
722.0335	0.2	0.1680	0.0014	0.3878	2.10
722.0335	0.4	0.6738	0.0000	0.4095	2.11
745.951	-0.4	0.7502	0.0000	0.3980	2.06
745.951	-0.2	0.1803	0.0009	0.3752	2.09
745.951	0	0.0000	1.0000	0.3656	2.09
745.951	0.2	0.1813	0.0009	0.3683	2.08
745.951	0.4	0.7530	0.0000	0.3853	2.05
747.601	-0.4	0.2935	0.0000	0.3954	2.10
747.601	-0.2	0.0698	0.0662	0.3802	2.10
747.601	0	0.0000	1.0000	0.3656	2.09
747.601	0.2	0.0699	0.0659	0.3521	2.09
747.601	0.4	0.2937	0.0000	0.3394	2.09
748.2742	-0.4	0.3007	0.0000	0.3837	2.08
748.2742	-0.2	0.0715	0.0619	0.3741	2.09
748.2742	0	0.0000	1.0000	0.3656	2.09
748.2742	0.2	0.0714	0.0621	0.3570	2.10

748.2742	0.4	0.3004	0.0000	0.3496	2.10
757.4	-0.4	0.6957	0.0000	0.3065	2.09
757.4	-0.2	0.1758	0.0011	0.3324	2.09
757.4	0	0.0000	1.0000	0.3656	2.09
757.4	0.2	0.1807	0.0009	0.4061	2.09
757.4	0.4	0.7353	0.0000	0.4525	2.08
760.6302	-0.4	0.7502	0.0000	0.4446	2.06
760.6302	-0.2	0.1906	0.0006	0.4030	2.08
760.6302	0	0.0000	1.0000	0.3656	2.09
760.6302	0.2	0.1978	0.0005	0.3316	2.11
760.6302	0.4	0.8081	0.0000	0.3006	2.12
762.4313	-0.4	0.5077	0.0000	0.2094	2.06
762.4313	-0.2	0.1227	0.0084	0.2576	2.08
762.4313	0	0.0000	1.0000	0.3656	2.09
762.4313	0.2	0.1227	0.0084	0.4890	2.09
762.4313	0.4	0.5073	0.0000	0.6253	2.06
764.7005	-0.4	0.2834	0.0000	0.3284	2.09
764.7005	-0.2	0.0672	0.0732	0.3458	2.09
764.7005	0	0.0000	1.0000	0.3656	2.09
764.7005	0.2	0.0672	0.0731	0.3882	2.09
764.7005	0.4	0.2833	0.0000	0.4148	2.07
776.3476	-0.4	0.7461	0.0000	0.3976	2.04
776.3476	-0.2	0.1858	0.0007	0.3806	2.07
776.3476	0	0.0000	1.0000	0.3656	2.09
776.3476	0.2	0.1866	0.0007	0.3545	2.10
776.3476	0.4	0.7536	0.0000	0.3499	2.08
778.0253	-0.4	0.6482	0.0000	0.3972	2.05
778.0253	-0.2	0.1591	0.0020	0.3855	2.08
778.0253	0	0.0000	1.0000	0.3656	2.09
778.0253	0.2	0.1592	0.0020	0.3398	2.10
778.0253	0.4	0.6510	0.0000	0.3093	2.10
781.2838	-0.4	0.5302	0.0000	0.1968	2.09
781.2838	-0.2	0.1301	0.0063	0.2729	2.10
781.2838	0	0.0000	1.0000	0.3656	2.09
781.2838	0.2	0.1299	0.0064	0.4762	2.08
781.2838	0.4	0.5286	0.0000	0.6072	2.06

784.4522	-0.4	0.4120	0.0000	0.2923	2.11
784.4522	-0.2	0.1010	0.0196	0.3272	2.10
784.4522	0	0.0000	1.0000	0.3656	2.09
784.4522	0.2	0.1010	0.0196	0.4074	2.09
784.4522	0.4	0.4117	0.0000	0.4531	2.08
788.7649	-0.4	0.4792	0.0000	0.4906	2.07
788.7649	-0.2	0.1185	0.0099	0.4216	2.08
788.7649	0	0.0000	1.0000	0.3656	2.09
788.7649	0.2	0.1189	0.0098	0.3207	2.10
788.7649	0.4	0.4814	0.0000	0.2850	2.10
793.1046	-0.4	0.4433	0.0000	0.2273	2.08
793.1046	-0.2	0.1056	0.0164	0.2831	2.09
793.1046	0	0.0000	1.0000	0.3656	2.09
793.1046	0.2	0.1060	0.0162	0.4770	2.07
793.1046	0.4	0.4454	0.0000	0.6162	2.04
794.3135	-0.2	0.2698	0.0000	0.3055	2.04
794.3135	0	0.0000	1.0000	0.3656	2.09
794.3135	0.2	0.2691	0.0000	0.4293	2.11
801.9523	-0.4	0.5404	0.0000	0.4984	2.04
801.9523	-0.2	0.1320	0.0059	0.4283	2.08
801.9523	0	0.0000	1.0000	0.3656	2.09
801.9523	0.2	0.1310	0.0061	0.3137	2.09
801.9523	0.4	0.5336	0.0000	0.2796	2.08
810.3101	-0.4	0.5082	0.0000	0.5969	2.05
810.3101	-0.2	0.1256	0.0075	0.4581	2.08
810.3101	0	0.0000	1.0000	0.3656	2.09
810.3101	0.2	0.1259	0.0075	0.3158	2.10
810.3101	0.4	0.5101	0.0000	0.3038	2.09
815.1611	-0.2	0.2850	0.0000	0.3100	2.11
815.1611	0	0.0000	1.0000	0.3656	2.09
815.1611	0.2	0.2860	0.0000	0.4254	2.07
825.4647	-0.4	0.3363	0.0000	0.2669	2.08
825.4647	-0.2	0.0804	0.0438	0.3106	2.09
825.4647	0	0.0000	1.0000	0.3656	2.09
825.4647	0.2	0.0800	0.0445	0.4308	2.08
825.4647	0.4	0.3340	0.0000	0.5022	2.05

836.8992	-0.4	0.4517	0.0000	0.2672	2.06
836.8992	-0.2	0.1082	0.0148	0.3004	2.09
836.8992	0	0.0000	1.0000	0.3656	2.09
836.8992	0.2	0.1060	0.0162	0.4678	2.08
836.8992	0.4	0.4333	0.0000	0.6134	2.04
837.1327	-0.4	0.6341	0.0000	0.2605	2.09
837.1327	-0.2	0.1597	0.0020	0.3018	2.09
837.1327	0	0.0000	1.0000	0.3656	2.09
837.1327	0.2	0.1648	0.0016	0.4550	2.08
837.1327	0.4	0.6750	0.0000	0.5749	2.05
840.0861	-0.4	0.3779	0.0000	0.3915	2.09
840.0861	-0.2	0.0907	0.0293	0.3758	2.09
840.0861	0	0.0000	1.0000	0.3656	2.09
840.0861	0.2	0.0906	0.0294	0.3612	2.09
840.0861	0.4	0.3776	0.0000	0.3622	2.09
847.0841	-0.4	0.4403	0.0000	0.3097	2.09
847.0841	-0.2	0.1055	0.0165	0.3370	2.09
847.0841	0	0.0000	1.0000	0.3656	2.09
847.0841	0.2	0.1056	0.0164	0.3972	2.09
847.0841	0.4	0.4409	0.0000	0.4329	2.09
848.0743	-0.4	0.5392	0.0000	0.4782	2.07
848.0743	-0.2	0.1307	0.0062	0.4135	2.08
848.0743	0	0.0000	1.0000	0.3656	2.09
848.0743	0.2	0.1304	0.0063	0.3290	2.10
848.0743	0.4	0.5376	0.0000	0.2980	2.11
851.7578	-0.4	0.3620	0.0000	0.1594	2.08
851.7578	-0.2	0.0868	0.0340	0.2560	2.09
851.7578	0	0.0000	1.0000	0.3656	2.09
851.7578	0.2	0.0869	0.0340	0.4865	2.09
851.7578	0.4	0.3625	0.0000	0.6203	2.07
878.0852	-0.4	0.3414	0.0000	0.3633	2.10
878.0852	-0.2	0.0802	0.0440	0.3653	2.09
878.0852	0	0.0000	1.0000	0.3656	2.09
878.0852	0.2	0.0801	0.0442	0.3641	2.09
878.0852	0.4	0.3409	0.0000	0.3599	2.09
878.1682	-0.4	0.3408	0.0000	0.3693	2.09

878.1682	-0.2	0.0801	0.0443	0.3671	2.09
878.1682	0	0.0000	1.0000	0.3656	2.09
878.1682	0.2	0.0801	0.0442	0.3647	2.09
878.1682	0.4	0.3411	0.0000	0.3629	2.10
890.3477	-0.4	0.3912	0.0000	0.3681	2.09
890.3477	-0.2	0.0873	0.0334	0.3684	2.09
890.3477	0	0.0000	1.0000	0.3656	2.09
890.3477	0.2	0.0869	0.0340	0.3639	2.10
890.3477	0.4	0.3908	0.0000	0.3668	2.10
890.829	-0.4	0.3913	0.0000	0.3438	2.09
890.829	-0.2	0.0874	0.0333	0.3524	2.09
890.829	0	0.0000	1.0000	0.3656	2.09
890.829	0.2	0.0872	0.0335	0.3807	2.09
890.829	0.4	0.3898	0.0000	0.4001	2.08
907.3498	-0.2	0.2908	0.0000	0.3852	2.08
907.3498	0	0.0000	1.0000	0.3656	2.09
907.3498	0.2	0.2860	0.0000	0.3412	2.09
922.148	-0.4	0.6335	0.0000	0.6670	1.91
922.148	-0.2	0.1429	0.0038	0.5551	2.05
922.148	0	0.0000	1.0000	0.3656	2.09
922.148	0.2	0.1359	0.0050	0.1693	2.01
922.148	0.4	0.5954	0.0000	0.0668	1.83
925.0941	-0.4	0.3837	0.0000	0.3787	2.06
925.0941	-0.2	0.0898	0.0303	0.3773	2.09
925.0941	0	0.0000	1.0000	0.3656	2.09
925.0941	0.2	0.0892	0.0311	0.3464	2.08
925.0941	0.4	0.3781	0.0000	0.3260	2.04
932.6202	-0.4	0.5069	0.0000	0.3730	2.03
932.6202	-0.2	0.1209	0.0090	0.3839	2.08
932.6202	0	0.0000	1.0000	0.3656	2.09
932.6202	0.2	0.1180	0.0101	0.3304	2.07
932.6202	0.4	0.4842	0.0000	0.2994	2.00
934.0143	-0.4	0.4469	0.0000	0.4717	2.07
934.0143	-0.2	0.1092	0.0143	0.4261	2.09
934.0143	0	0.0000	1.0000	0.3656	2.09
934.0143	0.2	0.1089	0.0144	0.2986	2.09

934.0143	0.4	0.4438	0.0000	0.2322	2.07
934.7225	-0.4	0.4038	0.0000	0.3374	2.09
934.7225	-0.2	0.0977	0.0223	0.3514	2.09
934.7225	0	0.0000	1.0000	0.3656	2.09
934.7225	0.2	0.0976	0.0224	0.3795	2.10
934.7225	0.4	0.4037	0.0000	0.3932	2.10
935.4578	-0.4	0.3733	0.0000	0.6055	2.08
935.4578	-0.2	0.0898	0.0304	0.4748	2.09
935.4578	0	0.0000	1.0000	0.3656	2.09
935.4578	0.2	0.0900	0.0301	0.2690	2.09
935.4578	0.4	0.3747	0.0000	0.1823	2.07
936.5461	-0.4	0.5897	0.0000	0.2863	1.99
936.5461	-0.2	0.1444	0.0036	0.3233	2.06
936.5461	0	0.0000	1.0000	0.3656	2.09
936.5461	0.2	0.1460	0.0034	0.3848	2.07
936.5461	0.4	0.6005	0.0000	0.3646	2.01
950.7635	-0.4	0.3846	0.0000	0.3716	2.09
950.7635	-0.2	0.0894	0.0309	0.3678	2.09
950.7635	0	0.0000	1.0000	0.3656	2.09
950.7635	0.2	0.0898	0.0303	0.3648	2.10
950.7635	0.4	0.3873	0.0000	0.3653	2.10
954.9507	-0.4	0.3886	0.0000	0.4411	2.10
954.9507	-0.2	0.0905	0.0295	0.4021	2.09
954.9507	0	0.0000	1.0000	0.3656	2.09
954.9507	0.2	0.0907	0.0293	0.3311	2.09
954.9507	0.4	0.3908	0.0000	0.2965	2.10
960.577	-0.4	0.3949	0.0000	0.7384	2.09
960.577	-0.2	0.0913	0.0286	0.5288	2.09
960.577	0	0.0000	1.0000	0.3656	2.09
960.577	0.2	0.0914	0.0285	0.2344	2.09
960.577	0.4	0.3952	0.0000	0.1285	2.09
964.7843	-0.4	0.4019	0.0000	0.4785	2.09
964.7843	-0.2	0.0930	0.0268	0.4176	2.09
964.7843	0	0.0000	1.0000	0.3656	2.09
964.7843	0.2	0.0927	0.0271	0.3159	2.09
964.7843	0.4	0.4006	0.0000	0.2632	2.08

976.8776	-0.4	0.5260	0.0000	0.3988	2.09
976.8776	-0.2	0.1289	0.0066	0.3824	2.09
976.8776	0	0.0000	1.0000	0.3656	2.09
976.8776	0.2	0.1286	0.0067	0.3486	2.09
976.8776	0.4	0.5248	0.0000	0.3314	2.10
977.0116	-0.4	0.5357	0.0000	0.3464	2.10
977.0116	-0.2	0.1315	0.0060	0.3562	2.10
977.0116	0	0.0000	1.0000	0.3656	2.09
977.0116	0.2	0.1316	0.0060	0.3754	2.09
977.0116	0.4	0.5361	0.0000	0.3864	2.09
981.7859	-0.4	0.4173	0.0000	0.3579	2.10
981.7859	-0.2	0.0993	0.0209	0.3619	2.09
981.7859	0	0.0000	1.0000	0.3656	2.09
981.7859	0.2	0.0994	0.0209	0.3684	2.09
981.7859	0.4	0.4175	0.0000	0.3703	2.09
982.3613	-0.4	0.4107	0.0000	0.3510	2.09
982.3613	-0.2	0.0975	0.0225	0.3599	2.09
982.3613	0	0.0000	1.0000	0.3656	2.09
982.3613	0.2	0.0975	0.0225	0.3708	2.09
982.3613	0.4	0.4106	0.0000	0.3749	2.10
986.8844	-0.2	0.3198	0.0000	0.4150	2.08
986.8844	0	0.0000	1.0000	0.3656	2.09
986.8844	0.2	0.3216	0.0000	0.3139	2.09
996.3128	-0.2	0.3685	0.0000	0.3520	2.07
996.3128	0	0.0000	1.0000	0.3656	2.09
996.3128	0.2	0.3634	0.0000	0.3628	2.10
1004.564	-0.2	0.2264	0.0001	0.4121	2.04
1004.564	0	0.0000	1.0000	0.3656	2.09
1004.564	0.2	0.2230	0.0002	0.3309	2.13
1022.167	-0.2	0.5486	0.0000	0.3226	2.09
1022.167	0	0.0000	1.0000	0.3656	2.09
1022.167	0.2	0.5496	0.0000	0.4097	2.09
1025.942	-0.2	0.4595	0.0000	0.4062	2.07
1025.942	0	0.0000	1.0000	0.3656	2.09
1025.942	0.2	0.4572	0.0000	0.3293	2.12
1052.202	-0.2	0.2814	0.0000	0.3501	2.03

1052.202	0	0.0000	1.0000	0.3656	2.09
1052.202	0.2	0.2823	0.0000	0.3750	2.14
1056.346	-0.4	0.6587	0.0000	0.3829	2.08
1056.346	-0.2	0.1692	0.0014	0.3742	2.09
1056.346	0	0.0000	1.0000	0.3656	2.09
1056.346	0.2	0.1818	0.0008	0.3566	2.10
1056.346	0.4	0.7602	0.0000	0.3471	2.11
1056.747	-0.4	0.7600	0.0000	0.3687	2.11
1056.747	-0.2	0.1828	0.0008	0.3674	2.10
1056.747	0	0.0000	1.0000	0.3656	2.09
1056.747	0.2	0.1717	0.0013	0.3633	2.08
1056.747	0.4	0.6707	0.0000	0.3607	2.07
1084.477	-0.2	0.3267	0.0000	0.4881	2.01
1084.477	0	0.0000	1.0000	0.3656	2.09
1084.477	0.2	0.3140	0.0000	0.2179	2.11
1121.816	-0.2	0.2057	0.0003	0.2896	2.10
1121.816	0	0.0000	1.0000	0.3656	2.09
1121.816	0.2	0.2040	0.0004	0.4449	2.08
1126.495	-0.4	0.7961	0.0000	0.3728	2.09
1126.495	-0.2	0.1980	0.0004	0.3709	2.09
1126.495	0	0.0000	1.0000	0.3656	2.09
1126.495	0.2	0.1976	0.0005	0.3577	2.10
1126.495	0.4	0.7926	0.0000	0.3481	2.10
1138.217	-0.4	0.7248	0.0000	0.1978	2.10
1138.217	-0.2	0.1803	0.0009	0.2760	2.10
1138.217	0	0.0000	1.0000	0.3656	2.09
1138.217	0.2	0.1803	0.0009	0.4628	2.07
1138.217	0.4	0.7238	0.0000	0.5633	2.05
1151.379	-0.4	0.7622	0.0000	0.3112	2.10
1151.379	-0.2	0.1896	0.0006	0.3393	2.10
1151.379	0	0.0000	1.0000	0.3656	2.09
1151.379	0.2	0.1902	0.0006	0.3900	2.09
1151.379	0.4	0.7672	0.0000	0.4122	2.08
1153.292	-0.4	0.6326	0.0000	0.4102	2.08
1153.292	-0.2	0.1571	0.0022	0.3910	2.09
1153.292	0	0.0000	1.0000	0.3656	2.09

1153.292	0.2	0.1585	0.0021	0.3344	2.09
1153.292	0.4	0.6460	0.0000	0.2990	2.09
1155.943	-0.4	0.7159	0.0000	0.2652	2.04
1155.943	-0.2	0.1784	0.0010	0.3162	2.07
1155.943	0	0.0000	1.0000	0.3656	2.09
1155.943	0.2	0.1802	0.0009	0.4102	2.10
1155.943	0.4	0.7291	0.0000	0.4472	2.11
1163.607	-0.4	0.6453	0.0000	0.3646	2.05
1163.607	-0.2	0.1596	0.0020	0.3668	2.07
1163.607	0	0.0000	1.0000	0.3656	2.09
1163.607	0.2	0.1597	0.0020	0.3604	2.11
1163.607	0.4	0.6465	0.0000	0.3507	2.11
1169.871	-0.4	0.4756	0.0000	0.3490	2.09
1169.871	-0.2	0.1155	0.0111	0.3575	2.09
1169.871	0	0.0000	1.0000	0.3656	2.09
1169.871	0.2	0.1154	0.0112	0.3737	2.09
1169.871	0.4	0.4749	0.0000	0.3810	2.09
1170.736	-0.4	0.4757	0.0000	0.3693	2.10
1170.736	-0.2	0.1157	0.0111	0.3680	2.09
1170.736	0	0.0000	1.0000	0.3656	2.09
1170.736	0.2	0.1157	0.0111	0.3631	2.09
1170.736	0.4	0.4760	0.0000	0.3603	2.09
1175.935	-0.4	0.6147	0.0000	0.2979	2.17
1175.935	-0.2	0.1508	0.0028	0.3324	2.13
1175.935	0	0.0000	1.0000	0.3656	2.09
1175.935	0.2	0.1478	0.0032	0.3970	2.05
1175.935	0.4	0.5900	0.0000	0.4271	2.00
1179.735	-0.4	0.7791	0.0000	0.3454	2.22
1179.735	-0.2	0.1937	0.0005	0.3571	2.16
1179.735	0	0.0000	1.0000	0.3656	2.09
1179.735	0.2	0.1944	0.0005	0.3734	2.03
1179.735	0.4	0.7835	0.0000	0.3805	1.96
1181.69	-0.4	0.6403	0.0000	0.3569	2.04
1181.69	-0.2	0.1599	0.0020	0.3613	2.07
1181.69	0	0.0000	1.0000	0.3656	2.09
1181.69	0.2	0.1608	0.0019	0.3697	2.12

1181.69	0.4	0.6490	0.0000	0.3745	2.14
1189.451	-0.4	0.5119	0.0000	0.3805	2.09
1189.451	-0.2	0.1262	0.0074	0.3734	2.09
1189.451	0	0.0000	1.0000	0.3656	2.09
1189.451	0.2	0.1264	0.0073	0.3578	2.10
1189.451	0.4	0.5131	0.0000	0.3497	2.10
1190.606	-0.4	0.5134	0.0000	0.3525	2.09
1190.606	-0.2	0.1265	0.0073	0.3591	2.09
1190.606	0	0.0000	1.0000	0.3656	2.09
1190.606	0.2	0.1264	0.0073	0.3722	2.09
1190.606	0.4	0.5127	0.0000	0.3781	2.09
1204.537	-0.2	0.2271	0.0001	0.4317	2.11
1204.537	0	0.0000	1.0000	0.3656	2.09
1204.537	0.2	0.2264	0.0001	0.3028	2.07
1208.847	-0.2	0.2081	0.0003	0.3554	2.13
1208.847	0	0.0000	1.0000	0.3656	2.09
1208.847	0.2	0.2067	0.0003	0.3714	2.05
1209.976	-0.2	0.2314	0.0001	0.3844	2.11
1209.976	0	0.0000	1.0000	0.3656	2.09
1209.976	0.2	0.2291	0.0001	0.3481	2.08
1214.444	-0.4	0.7366	0.0000	0.5627	2.09
1214.444	-0.2	0.1835	0.0008	0.4609	2.10
1214.444	0	0.0000	1.0000	0.3656	2.09
1214.444	0.2	0.1865	0.0007	0.2811	2.08
1214.444	0.4	0.7633	0.0000	0.2100	2.06
1221.307	-0.4	0.7845	0.0000	0.3790	1.96
1221.307	-0.2	0.1940	0.0005	0.3770	2.03
1221.307	0	0.0000	1.0000	0.3656	2.09
1221.307	0.2	0.1928	0.0006	0.3431	2.16
1221.307	0.4	0.7754	0.0000	0.3073	2.22
1234.604	-0.4	0.7844	0.0000	0.3559	2.11
1234.604	-0.2	0.1934	0.0005	0.3614	2.10
1234.604	0	0.0000	1.0000	0.3656	2.09
1234.604	0.2	0.1932	0.0005	0.3683	2.09
1234.604	0.4	0.7823	0.0000	0.3700	2.08
1235.476	-0.2	0.2034	0.0004	0.3504	2.13

1235.476	0	0.0000	1.0000	0.3656	2.09
1235.476	0.2	0.2039	0.0004	0.3777	2.06
1235.582	-0.2	0.2008	0.0004	0.3778	2.04
1235.582	0	0.0000	1.0000	0.3656	2.09
1235.582	0.2	0.2019	0.0004	0.3489	2.15
1249.746	-0.2	0.2137	0.0002	0.3267	2.10
1249.746	0	0.0000	1.0000	0.3656	2.09
1249.746	0.2	0.2126	0.0003	0.3929	2.08
1251.696	-0.2	0.2324	0.0001	0.3711	2.12
1251.696	0	0.0000	1.0000	0.3656	2.09
1251.696	0.2	0.2277	0.0001	0.3670	2.07
1253.75	-0.2	0.2149	0.0002	0.3516	2.05
1253.75	0	0.0000	1.0000	0.3656	2.09
1253.75	0.2	0.2170	0.0002	0.3711	2.13
1267.243	-0.2	0.2827	0.0000	0.3111	2.17
1267.243	0	0.0000	1.0000	0.3656	2.09
1267.243	0.2	0.2794	0.0000	0.4196	2.03
1271.724	-0.2	0.2981	0.0000	0.4169	2.09
1271.724	0	0.0000	1.0000	0.3656	2.09
1271.724	0.2	0.3019	0.0000	0.3147	2.10
1288.886	-0.2	0.4192	0.0000	0.3631	2.03
1288.886	0	0.0000	1.0000	0.3656	2.09
1288.886	0.2	0.4264	0.0000	0.3797	2.14
1300.268	-0.2	0.6018	0.0000	0.3504	2.08
1300.268	0	0.0000	1.0000	0.3656	2.09
1300.268	0.2	0.5501	0.0000	0.2895	2.07
1311.182	-0.2	0.3162	0.0000	0.3504	2.06
1311.182	0	0.0000	1.0000	0.3656	2.09
1311.182	0.2	0.3097	0.0000	0.3625	2.12
1320.311	-0.2	0.2971	0.0000	0.3205	2.00
1320.311	0	0.0000	1.0000	0.3656	2.09
1320.311	0.2	0.2976	0.0000	0.4159	2.17
1323.786	-0.2	0.3816	0.0000	0.4301	2.21
1323.786	0	0.0000	1.0000	0.3656	2.09
1323.786	0.2	0.3885	0.0000	0.2943	1.94
1332.014	-0.2	0.2782	0.0000	0.3919	2.12

1332.014	0	0.0000	1.0000	0.3656	2.09
1332.014	0.2	0.2798	0.0000	0.3343	2.06
1339.167	-0.2	0.2265	0.0001	0.3653	2.10
1339.167	0	0.0000	1.0000	0.3656	2.09
1339.167	0.2	0.2253	0.0002	0.3649	2.09
1340.483	-0.2	0.2295	0.0001	0.3762	2.09
1340.483	0	0.0000	1.0000	0.3656	2.09
1340.483	0.2	0.2308	0.0001	0.3547	2.10
1345.418	-0.2	0.5185	0.0000	0.2850	1.95
1345.418	0	0.0000	1.0000	0.3656	2.09
1345.418	0.2	0.5170	0.0000	0.4559	2.22
1352.983	-0.2	0.6835	0.0000	0.3178	2.08
1352.983	0	0.0000	1.0000	0.3656	2.09
1352.983	0.2	0.6938	0.0000	0.3946	2.10
1359.558	-0.2	0.5256	0.0000	0.3006	2.05
1359.558	0	0.0000	1.0000	0.3656	2.09
1359.558	0.2	0.5252	0.0000	0.4297	2.13
1362.486	-0.2	0.8373	0.0000	0.3256	1.95
1362.486	0	0.0000	1.0000	0.3656	2.09
1362.486	0.2	0.8536	0.0000	0.3458	2.17
1369.736	-0.2	0.5840	0.0000	0.3617	2.08
1369.736	0	0.0000	1.0000	0.3656	2.09
1369.736	0.2	0.5994	0.0000	0.3454	2.08
1387.139	-0.2	0.5996	0.0000	0.3552	2.09
1387.139	0	0.0000	1.0000	0.3656	2.09
1387.139	0.2	0.6003	0.0000	0.3725	2.10
1393.307	-0.2	0.7278	0.0000	0.4248	2.12
1393.307	0	0.0000	1.0000	0.3656	2.09
1393.307	0.2	0.7552	0.0000	0.2907	2.07
1396.568	-0.2	0.9558	0.0000	0.3795	1.97
1396.568	0	0.0000	1.0000	0.3656	2.09
1396.568	0.2	0.9146	0.0000	0.3486	2.26
1406.804	-0.2	0.7973	0.0000	0.3617	2.28
1406.804	0	0.0000	1.0000	0.3656	2.09
1406.804	0.2	0.7438	0.0000	0.2958	1.87
1423.607	-0.2	0.4835	0.0000	0.3013	2.11

1423.607	0	0.0000	1.0000	0.3656	2.09
1423.607	0.2	0.4949	0.0000	0.4444	2.08
1435.198	-0.2	0.6356	0.0000	0.4048	2.16
1435.198	0	0.0000	1.0000	0.3656	2.09
1435.198	0.2	0.6664	0.0000	0.3094	2.04
1446.406	-0.2	0.3919	0.0000	0.3169	2.12
1446.406	0	0.0000	1.0000	0.3656	2.09
1446.406	0.2	0.4027	0.0000	0.4335	2.07
1456.274	-0.2	0.2984	0.0000	0.3247	2.11
1456.274	0	0.0000	1.0000	0.3656	2.09
1456.274	0.2	0.2963	0.0000	0.4107	2.08
1468.977	-0.2	0.4469	0.0000	0.3618	2.11
1468.977	0	0.0000	1.0000	0.3656	2.09
1468.977	0.2	0.4459	0.0000	0.3731	2.08
1477.087	-0.2	0.4618	0.0000	0.3933	2.07
1477.087	0	0.0000	1.0000	0.3656	2.09
1477.087	0.2	0.4660	0.0000	0.3464	2.11
1478.967	-0.4	0.7464	0.0000	0.3750	2.09
1478.967	-0.2	0.1894	0.0006	0.3705	2.09
1478.967	0	0.0000	1.0000	0.3656	2.09
1478.967	0.2	0.1966	0.0005	0.3612	2.09
1478.967	0.4	0.7958	0.0000	0.3583	2.09
1479.476	-0.2	0.2064	0.0003	0.3636	2.09
1479.476	0	0.0000	1.0000	0.3656	2.09
1479.476	0.2	0.2129	0.0003	0.3683	2.09
1482.06	-0.2	0.5438	0.0000	0.3510	2.09
1482.06	0	0.0000	1.0000	0.3656	2.09
1482.06	0.2	0.5594	0.0000	0.3900	2.09
1493.435	-0.2	0.9366	0.0000	0.3140	2.06
1493.435	0	0.0000	1.0000	0.3656	2.09
1493.435	0.2	0.9318	0.0000	0.3948	2.19
1498.837	-0.2	0.3833	0.0000	0.3560	2.10
1498.837	0	0.0000	1.0000	0.3656	2.09
1498.837	0.2	0.3832	0.0000	0.3788	2.09
1501.177	-0.2	0.3934	0.0000	0.4021	2.10
1501.177	0	0.0000	1.0000	0.3656	2.09

1501.177	0.2	0.3936	0.0000	0.3324	2.08
1508.527	-0.2	0.5572	0.0000	0.3780	2.20
1508.527	0	0.0000	1.0000	0.3656	2.09
1508.527	0.2	0.5699	0.0000	0.3306	1.99
1513.84	-0.2	0.4371	0.0000	0.3702	2.09
1513.84	0	0.0000	1.0000	0.3656	2.09
1513.84	0.2	0.4359	0.0000	0.3643	2.09
1515.861	-0.2	0.4653	0.0000	0.3855	2.12
1515.861	0	0.0000	1.0000	0.3656	2.09
1515.861	0.2	0.4673	0.0000	0.3464	2.07
1519.035	-0.2	0.7255	0.0000	0.4009	2.20
1519.035	0	0.0000	1.0000	0.3656	2.09
1519.035	0.2	0.7163	0.0000	0.2858	2.00
1526.511	-0.2	0.4854	0.0000	0.3646	2.10
1526.511	0	0.0000	1.0000	0.3656	2.09
1526.511	0.2	0.4855	0.0000	0.3688	2.08
1528.569	-0.2	0.4912	0.0000	0.4166	2.10
1528.569	0	0.0000	1.0000	0.3656	2.09
1528.569	0.2	0.4939	0.0000	0.3202	2.09
1529.735	-0.2	1.0595	0.0000	0.4051	2.02
1529.735	0	0.0000	1.0000	0.3656	2.09
1529.735	0.2	1.0355	0.0000	0.3005	2.14
1537.834	-0.2	0.6779	0.0000	0.2659	2.11
1537.834	0	0.0000	1.0000	0.3656	2.09
1537.834	0.2	0.6838	0.0000	0.4347	2.06
1571.042	-0.2	1.0218	0.0000	0.2661	2.08
1571.042	0	0.0000	1.0000	0.3656	2.09
1571.042	0.2	1.1260	0.0000	0.3427	2.05
1587.839	-0.2	0.9942	0.0000	0.3470	2.04
1587.839	0	0.0000	1.0000	0.3656	2.09
1587.839	0.2	0.9477	0.0000	0.3073	2.10
1601.6	-0.2	1.0599	0.0000	0.3263	1.96
1601.6	0	0.0000	1.0000	0.3656	2.09
1601.6	0.2	1.0501	0.0000	0.2938	2.15
1609.037	-0.2	1.1833	0.0000	0.4277	2.11
1609.037	0	0.0000	1.0000	0.3656	2.09

1609.037	0.2	1.1325	0.0000	0.3748	2.06
1615.836	-0.2	1.2029	0.0000	0.4561	2.29
1615.836	0	0.0000	1.0000	0.3656	2.09
1615.836	0.2	1.2357	0.0000	0.2698	1.86
1619.664	-0.2	1.1512	0.0000	0.3411	1.87
1619.664	0	0.0000	1.0000	0.3656	2.09
1619.664	0.2	1.1980	0.0000	0.3621	2.30
1630.663	-0.2	1.1469	0.0000	0.3353	2.33
1630.663	0	0.0000	1.0000	0.3656	2.09
1630.663	0.2	1.2504	0.0000	0.2286	1.80
1636.341	-0.2	1.0978	0.0000	0.3672	2.08
1636.341	0	0.0000	1.0000	0.3656	2.09
1636.341	0.2	1.2538	0.0000	0.3662	2.10
1636.665	-0.2	1.2611	0.0000	0.3682	2.09
1636.665	0	0.0000	1.0000	0.3656	2.09
1636.665	0.2	1.1021	0.0000	0.3630	2.10
1644.033	-0.2	1.2296	0.0000	0.3202	2.08
1644.033	0	0.0000	1.0000	0.3656	2.09
1644.033	0.2	1.2695	0.0000	0.4920	2.05
1649.479	-0.2	1.3125	0.0000	0.3066	1.92
1649.479	0	0.0000	1.0000	0.3656	2.09
1649.479	0.2	1.2291	0.0000	0.3114	2.21
1662.393	-0.2	1.3423	0.0000	0.3080	1.83
1662.393	0	0.0000	1.0000	0.3656	2.09
1662.393	0.2	1.3000	0.0000	0.3051	2.35
1663.796	-0.2	1.3274	0.0000	0.3666	2.14
1663.796	0	0.0000	1.0000	0.3656	2.09
1663.796	0.2	1.3294	0.0000	0.3700	2.04
1666.175	-0.2	1.4238	0.0000	0.3292	1.80
1666.175	0	0.0000	1.0000	0.3656	2.09
1666.175	0.2	1.3592	0.0000	0.2633	2.38
3039.875	-0.2	0.5457	0.0000	0.3638	2.10
3039.875	0	0.0000	1.0000	0.3656	2.09
3039.875	0.2	0.9778	0.0000	0.3663	2.09
3039.983	-0.2	0.9765	0.0000	0.3668	2.09
3039.983	0	0.0000	1.0000	0.3656	2.09

3039.983	0.2	0.5461	0.0000	0.3630	2.10
3067.88	-0.2	0.7939	0.0000	0.3616	2.09
3067.88	0	0.0000	1.0000	0.3656	2.09
3067.88	0.2	0.8333	0.0000	0.3672	2.09
3068.109	-0.2	0.8541	0.0000	0.3659	2.09
3068.109	0	0.0000	1.0000	0.3656	2.09
3068.109	0.2	0.7742	0.0000	0.3632	2.09
3172.943	-0.2	0.8183	0.0000	0.3691	2.09
3172.943	0	0.0000	1.0000	0.3656	2.09
3172.943	0.2	0.8323	0.0000	0.3638	2.09
3173.405	-0.2	0.8696	0.0000	0.3651	2.09
3173.405	0	0.0000	1.0000	0.3656	2.09
3173.405	0.2	0.7925	0.0000	0.3684	2.09
3175.413	-0.2	0.8046	0.0000	0.3660	2.09
3175.413	0	0.0000	1.0000	0.3656	2.09
3175.413	0.2	0.8364	0.0000	0.3653	2.10
3176.592	-0.2	0.8922	0.0000	0.3676	2.10
3176.592	0	0.0000	1.0000	0.3656	2.09
3176.592	0.2	0.7564	0.0000	0.3653	2.09
3179.389	-0.2	0.8842	0.0000	0.3668	2.09
3179.389	0	0.0000	1.0000	0.3656	2.09
3179.389	0.2	0.7831	0.0000	0.3632	2.09
3179.789	-0.2	1.0746	0.0000	0.3572	2.10
3179.789	0	0.0000	1.0000	0.3656	2.09
3179.789	0.2	0.6500	0.0000	0.3764	2.09
3179.858	-0.2	0.7607	0.0000	0.3677	2.09
3179.858	0	0.0000	1.0000	0.3656	2.09
3179.858	0.2	0.8976	0.0000	0.3626	2.09
3184.913	-0.2	0.6941	0.0000	0.3647	2.09
3184.913	0	0.0000	1.0000	0.3656	2.09
3184.913	0.2	0.9969	0.0000	0.3657	2.09
3185.613	-0.2	0.9821	0.0000	0.3655	2.09
3185.613	0	0.0000	1.0000	0.3656	2.09
3185.613	0.2	0.7081	0.0000	0.3649	2.09
3191.677	-0.2	0.6300	0.0000	0.3647	2.10
3191.677	0	0.0000	1.0000	0.3656	2.09

3191.677	0.2	1.1346	0.0000	0.3626	2.09
3191.938	-0.2	0.9353	0.0000	0.3629	2.09
3191.938	0	0.0000	1.0000	0.3656	2.09
3191.938	0.2	0.7520	0.0000	0.3685	2.09
3192.305	-0.2	0.6149	0.0000	0.3601	2.10
3192.305	0	0.0000	1.0000	0.3656	2.09
3192.305	0.2	1.1582	0.0000	0.3709	2.09
3193.991	-0.2	0.7155	0.0000	0.3723	2.09
3193.991	0	0.0000	1.0000	0.3656	2.09
3193.991	0.2	0.9747	0.0000	0.3592	2.09
3194.516	-0.2	0.8922	0.0000	0.3666	2.09
3194.516	0	0.0000	1.0000	0.3656	2.09
3194.516	0.2	0.7881	0.0000	0.3658	2.09
3196.33	-0.2	0.8227	0.0000	0.3634	2.09
3196.33	0	0.0000	1.0000	0.3656	2.09
3196.33	0.2	0.8657	0.0000	0.3673	2.09
3196.413	-0.2	1.0192	0.0000	0.3520	2.09
3196.413	0	0.0000	1.0000	0.3656	2.09
3196.413	0.2	0.6783	0.0000	0.3800	2.10
3196.944	-0.2	0.8709	0.0000	0.3662	2.09
3196.944	0	0.0000	1.0000	0.3656	2.09
3196.944	0.2	0.8217	0.0000	0.3640	2.09
3208.433	-0.2	0.5650	0.0000	0.3504	2.10
3208.433	0	0.0000	1.0000	0.3656	2.09
3208.433	0.2	1.2769	0.0000	0.3951	2.08
3208.741	-0.2	1.0602	0.0000	0.3639	2.09
3208.741	0	0.0000	1.0000	0.3656	2.09
3208.741	0.2	0.6680	0.0000	0.3667	2.10
3209.136	-0.2	0.6603	0.0000	0.3635	2.10
3209.136	0	0.0000	1.0000	0.3656	2.09
3209.136	0.2	1.0714	0.0000	0.3659	2.09
3209.473	-0.2	1.2706	0.0000	0.3800	2.09
3209.473	0	0.0000	1.0000	0.3656	2.09
3209.473	0.2	0.5713	0.0000	0.3443	2.10
3210.88	-0.2	1.2901	0.0000	0.3817	2.09
3210.88	0	0.0000	1.0000	0.3656	2.09

3210.88	0.2	0.5629	0.0000	0.3386	2.10
3217.5	-0.2	0.5909	0.0000	0.3488	2.09
3217.5	0	0.0000	1.0000	0.3656	2.09
3217.5	0.2	1.2393	0.0000	0.3771	2.09
3222.268	-0.2	1.2596	0.0000	0.3622	2.09
3222.268	0	0.0000	1.0000	0.3656	2.09
3222.268	0.2	0.5856	0.0000	0.3708	2.10
3232.073	-0.2	0.5734	0.0000	0.3878	2.09
3232.073	0	0.0000	1.0000	0.3656	2.09
3232.073	0.2	1.2995	0.0000	0.3513	2.09

Table S4. Photo-physical parameters (ΔE_{Q_p}, $P_{Q_p}(\text{RT})$, $E_{T_1-S_0}$, and $\langle T_1|\hat{H}_{SO}|S_0\rangle_{Q_p}^{2}$) calculated for geometries allowed by normal-mode vibrations with frequency in T_1 at RT for chromophore **S1**. ω_p is the wavenumber of the p_{th} normal vibrational mode in the structure optimized at T_1. Q_p is the mass weighted normal coordinates at T_1. Calculation regarding geometries was stopped when ΔE_{Q_p} becomes larger than 0.2 eV because these geometries with $\Delta E_{Q_p} > 0.2$ eV are hardly allowed below RT. $E_{T_1-S_0}$ does not largely change for Q_p with $P_{Q_p}(\text{RT}) > 0.01$ which corresponds to geometries much allowed at RT.

ω_p	Q_p	ΔE_{Q_p}	$P_{Q_p}(\text{RT})$	$\langle T_1|\hat{H}_{SO}|S_0\rangle_{Q_p}^{2}$	$E_{T_1-S_0}$
(cm^{-1})	(a.u.)	(eV)		(cm^{-2})	(eV)
85.01098	-1	0.0984	0.0217	0.0315	1.41
85.01098	-0.8	0.0557	0.1146	0.0205	1.44
85.01098	-0.6	0.0281	0.3354	0.0116	1.46
85.01098	-0.4	0.0114	0.6408	0.0052	1.48
85.01098	-0.2	0.0027	0.9002	0.0013	1.49
85.01098	0	0.0000	1.0000	0.0000	1.49
85.01098	0.2	0.0027	0.9002	0.0013	1.49
85.01098	0.4	0.0114	0.6408	0.0052	1.48

85.01098	0.6	0.0281	0.3354	0.0116	1.46
85.01098	0.8	0.0557	0.1146	0.0205	1.44
85.01098	1	0.0984	0.0217	0.0315	1.41
117.0036	-1	0.1428	0.0039	0.0528	1.56
117.0036	-0.8	0.0810	0.0427	0.0343	1.54
117.0036	-0.6	0.0409	0.2035	0.0194	1.52
117.0036	-0.4	0.0167	0.5227	0.0087	1.51
117.0036	-0.2	0.0039	0.8579	0.0022	1.50
117.0036	0	0.0000	1.0000	0.0000	1.49
117.0036	0.2	0.0039	0.8579	0.0022	1.50
117.0036	0.4	0.0167	0.5227	0.0087	1.51
117.0036	0.6	0.0409	0.2035	0.0194	1.52
117.0036	0.8	0.0810	0.0427	0.0343	1.54
117.0036	1	0.1428	0.0039	0.0528	1.56
234.6066	-0.8	0.3015	0.0000	0.0000	1.50
234.6066	-0.6	0.1669	0.0015	0.0000	1.50
234.6066	-0.4	0.0733	0.0578	0.0000	1.50
234.6066	-0.2	0.0182	0.4929	0.0000	1.49
234.6066	0	0.0000	1.0000	0.0000	1.49
234.6066	0.2	0.0182	0.4929	0.0000	1.49
234.6066	0.4	0.0733	0.0578	0.0000	1.50
234.6066	0.6	0.1669	0.0015	0.0000	1.50
234.6066	0.8	0.3015	0.0000	0.0000	1.50
244.1035	-0.6	0.2025	0.0004	0.0000	1.41
244.1035	-0.4	0.0861	0.0350	0.0000	1.46
244.1035	-0.2	0.0209	0.4426	0.0000	1.48
244.1035	0	0.0000	1.0000	0.0000	1.49
244.1035	0.2	0.0209	0.4426	0.0000	1.48
244.1035	0.4	0.0861	0.0350	0.0000	1.46
244.1035	0.6	0.2025	0.0004	0.0000	1.41
253.9025	-0.8	0.2919	0.0000	0.0000	1.43
253.9025	-0.6	0.1593	0.0020	0.0000	1.46
253.9025	-0.4	0.0687	0.0690	0.0000	1.48
253.9025	-0.2	0.0174	0.5073	0.0000	1.49
253.9025	0	0.0000	1.0000	0.0000	1.49
253.9025	0.2	0.0174	0.5073	0.0000	1.49

253.9025	0.4	0.0687	0.0690	0.0000	1.48
253.9025	0.6	0.1593	0.0020	0.0000	1.46
253.9025	0.8	0.2919	0.0000	0.0000	1.43
331.8857	-0.6	0.2557	0.0000	0.0676	1.34
331.8857	-0.4	0.1106	0.0135	0.0293	1.42
331.8857	-0.2	0.0272	0.3471	0.0073	1.48
331.8857	0	0.0000	1.0000	0.0000	1.49
331.8857	0.2	0.0272	0.3471	0.0073	1.48
331.8857	0.4	0.1106	0.0135	0.0293	1.42
331.8857	0.6	0.2557	0.0000	0.0676	1.34
383.4501	-0.4	0.2095	0.0003	0.0000	1.48
383.4501	-0.2	0.0518	0.1329	0.0000	1.49
383.4501	0	0.0000	1.0000	0.0000	1.49
383.4501	0.2	0.0519	0.1327	0.0000	1.49
383.4501	0.4	0.2095	0.0003	0.0000	1.48
389.4141	-0.4	0.3186	0.0000	0.0000	1.69
389.4141	-0.2	0.0775	0.0489	0.0000	1.59
389.4141	0	0.0000	1.0000	0.0000	1.49
389.4141	0.2	0.0746	0.0549	0.0000	1.39
389.4141	0.4	0.2904	0.0000	0.0000	1.29
429.3715	-0.6	0.3182	0.0000	1.2665	1.41
429.3715	-0.4	0.1329	0.0057	0.5630	1.46
429.3715	-0.2	0.0319	0.2889	0.1409	1.48
429.3715	0	0.0000	1.0000	0.0000	1.49
429.3715	0.2	0.0319	0.2889	0.1409	1.48
429.3715	0.4	0.1329	0.0057	0.5630	1.46
429.3715	0.6	0.3182	0.0000	1.2665	1.41
447.8516	-0.4	0.2045	0.0003	0.0000	1.45
447.8516	-0.2	0.0501	0.1425	0.0000	1.48
447.8516	0	0.0000	1.0000	0.0000	1.49
447.8516	0.2	0.0501	0.1425	0.0000	1.48
447.8516	0.4	0.2045	0.0003	0.0000	1.45
525.3127	-0.4	0.3246	0.0000	0.0080	1.49
525.3127	-0.2	0.0804	0.0437	0.0020	1.49
525.3127	0	0.0000	1.0000	0.0000	1.49
525.3127	0.2	0.0804	0.0437	0.0020	1.49

525.3127	0.4	0.3246	0.0000	0.0080	1.49
528.5704	-0.4	0.5088	0.0000	0.0000	1.48
528.5704	-0.2	0.1267	0.0072	0.0000	1.49
528.5704	0	0.0000	1.0000	0.0000	1.49
528.5704	0.2	0.1265	0.0073	0.0000	1.49
528.5704	0.4	0.5088	0.0000	0.0000	1.48
548.3606	-0.4	0.2659	0.0000	0.0000	1.44
548.3606	-0.2	0.0656	0.0777	0.0000	1.48
548.3606	0	0.0000	1.0000	0.0000	1.49
548.3606	0.2	0.0656	0.0777	0.0000	1.48
548.3606	0.4	0.2659	0.0000	0.0000	1.44
613.4573	-0.4	0.7628	0.0000	0.0000	1.46
613.4573	-0.2	0.1902	0.0006	0.0000	1.49
613.4573	0	0.0000	1.0000	0.0000	1.49
613.4573	0.2	0.1902	0.0006	0.0000	1.49
613.4573	0.4	0.7628	0.0000	0.0000	1.46
616.5262	-0.4	0.7694	0.0000	0.0000	1.35
616.5262	-0.2	0.1914	0.0006	0.0000	1.44
616.5262	0	0.0000	1.0000	0.0000	1.49
616.5262	0.2	0.1918	0.0006	0.0000	1.51
616.5262	0.4	0.7698	0.0000	0.0000	1.48
675.8564	-0.4	0.8025	0.0000	0.0000	1.52
675.8564	-0.2	0.1998	0.0004	0.0000	1.50
675.8564	0	0.0000	1.0000	0.0000	1.49
675.8564	0.2	0.1998	0.0004	0.0000	1.50
675.8564	0.4	0.8025	0.0000	0.0000	1.52
717.0857	-0.4	0.3083	0.0000	0.0000	1.44
717.0857	-0.2	0.0696	0.0666	0.0000	1.48
717.0857	0	0.0000	1.0000	0.0000	1.49
717.0857	0.2	0.0696	0.0666	0.0000	1.48
717.0857	0.4	0.3083	0.0000	0.0000	1.44
732.8369	-0.6	0.4668	0.0000	0.0063	1.48
732.8369	-0.4	0.1929	0.0005	0.0027	1.49
732.8369	-0.2	0.0459	0.1677	0.0007	1.49
732.8369	0	0.0000	1.0000	0.0000	1.49
732.8369	0.2	0.0459	0.1677	0.0007	1.49

732.8369	0.4	0.1929	0.0005	0.0027	1.49
732.8369	0.6	0.4668	0.0000	0.0063	1.48
735.6357	-0.4	0.6622	0.0000	0.0141	1.47
735.6357	-0.2	0.1644	0.0017	0.0039	1.49
735.6357	0	0.0000	1.0000	0.0000	1.49
735.6357	0.2	0.1644	0.0017	0.0039	1.49
735.6357	0.4	0.6622	0.0000	0.0141	1.47
742.9809	-0.4	0.2122	0.0003	0.0000	1.48
742.9809	-0.2	0.0498	0.1439	0.0000	1.49
742.9809	0	0.0000	1.0000	0.0000	1.49
742.9809	0.2	0.0498	0.1439	0.0000	1.49
742.9809	0.4	0.2122	0.0003	0.0000	1.48
754.821	-0.2	0.2254	0.0002	0.0000	1.50
754.821	0	0.0000	1.0000	0.0000	1.49
754.821	0.2	0.2525	0.0001	0.0000	1.46
779.8538	-0.4	0.2991	0.0000	0.5282	1.43
779.8538	-0.2	0.0691	0.0679	0.1289	1.48
779.8538	0	0.0000	1.0000	0.0000	1.49
779.8538	0.2	0.0691	0.0679	0.1289	1.48
779.8538	0.4	0.2991	0.0000	0.5282	1.43
781.6645	-0.4	0.4153	0.0000	0.0000	1.44
781.6645	-0.2	0.1023	0.0186	0.0000	1.48
781.6645	0	0.0000	1.0000	0.0000	1.49
781.6645	0.2	0.1023	0.0186	0.0000	1.48
781.6645	0.4	0.4153	0.0000	0.0000	1.44
829.9283	-0.4	0.7527	0.0000	0.0001	1.46
829.9283	-0.2	0.1866	0.0007	0.0000	1.49
829.9283	0	0.0000	1.0000	0.0000	1.49
829.9283	0.2	0.1866	0.0007	0.0000	1.49
829.9283	0.4	0.7527	0.0000	0.0001	1.46
862.6989	-0.4	0.3374	0.0000	0.0182	1.49
862.6989	-0.2	0.0803	0.0439	0.0041	1.49
862.6989	0	0.0000	1.0000	0.0000	1.49
862.6989	0.2	0.0803	0.0439	0.0041	1.49
862.6989	0.4	0.3374	0.0000	0.0182	1.49
878.328	-0.4	0.3733	0.0000	0.0000	1.48

878.328	-0.2	0.0912	0.0288	0.0000	1.49
878.328	0	0.0000	1.0000	0.0000	1.49
878.328	0.2	0.0912	0.0288	0.0000	1.49
878.328	0.4	0.3733	0.0000	0.0000	1.48
899.0153	-0.4	0.3524	0.0000	0.0000	1.46
899.0153	-0.2	0.0841	0.0378	0.0000	1.49
899.0153	0	0.0000	1.0000	0.0000	1.49
899.0153	0.2	0.0841	0.0378	0.0000	1.49
899.0153	0.4	0.3524	0.0000	0.0000	1.46
901.5669	-0.2	0.3365	0.0000	0.0000	1.48
901.5669	0	0.0000	1.0000	0.0000	1.49
901.5669	0.2	0.3365	0.0000	0.0000	1.48
901.7742	-0.4	0.3637	0.0000	0.3424	1.46
901.7742	-0.2	0.0870	0.0339	0.0829	1.49
901.7742	0	0.0000	1.0000	0.0000	1.49
901.7742	0.2	0.0870	0.0339	0.0829	1.49
901.7742	0.4	0.3637	0.0000	0.3424	1.46
909.2965	-0.2	0.2894	0.0000	0.0000	1.48
909.2965	0	0.0000	1.0000	0.0000	1.49
909.2965	0.2	0.2893	0.0000	0.0000	1.48
955.8558	-0.4	0.3667	0.0000	0.0493	1.48
955.8558	-0.2	0.0873	0.0334	0.0122	1.49
955.8558	0	0.0000	1.0000	0.0000	1.49
955.8558	0.2	0.0873	0.0334	0.0122	1.49
955.8558	0.4	0.3667	0.0000	0.0493	1.48
956.6658	-0.4	0.3661	0.0000	0.0000	1.48
956.6658	-0.2	0.0875	0.0332	0.0000	1.49
956.6658	0	0.0000	1.0000	0.0000	1.49
956.6658	0.2	0.0875	0.0332	0.0000	1.49
956.6658	0.4	0.3661	0.0000	0.0000	1.48
1048.784	-0.4	0.7655	0.0000	0.0003	1.45
1048.784	-0.2	0.1896	0.0006	0.0001	1.48
1048.784	0	0.0000	1.0000	0.0000	1.49
1048.784	0.2	0.1896	0.0006	0.0001	1.48
1048.784	0.4	0.7655	0.0000	0.0003	1.45
1050.856	-0.2	0.2294	0.0001	0.0000	1.43

1050.856	0	0.0000	1.0000	0.0000	1.49
1050.856	0.2	0.2515	0.0001	0.0000	1.55
1092.369	-0.4	0.7116	0.0000	0.0000	1.48
1092.369	-0.2	0.1766	0.0010	0.0000	1.49
1092.369	0	0.0000	1.0000	0.0000	1.49
1092.369	0.2	0.1767	0.0010	0.0000	1.49
1092.369	0.4	0.7117	0.0000	0.0000	1.48
1126.394	-0.4	0.6082	0.0000	0.0000	1.49
1126.394	-0.2	0.1507	0.0028	0.0000	1.49
1126.394	0	0.0000	1.0000	0.0000	1.49
1126.394	0.2	0.1507	0.0028	0.0000	1.49
1126.394	0.4	0.6082	0.0000	0.0000	1.49
1163.055	-0.4	0.6618	0.0000	0.0004	1.39
1163.055	-0.2	0.1627	0.0018	0.0001	1.47
1163.055	0	0.0000	1.0000	0.0000	1.49
1163.055	0.2	0.1627	0.0018	0.0001	1.47
1163.055	0.4	0.6618	0.0000	0.0004	1.39
1190.3	-0.4	0.5809	0.0000	0.0000	1.37
1190.3	-0.2	0.1405	0.0042	0.0000	1.44
1190.3	0	0.0000	1.0000	0.0000	1.49
1190.3	0.2	0.1367	0.0049	0.0000	1.54
1190.3	0.4	0.5463	0.0000	0.0000	1.56
1195.203	-0.4	0.7124	0.0000	0.0000	1.42
1195.203	-0.2	0.1757	0.0011	0.0000	1.47
1195.203	0	0.0000	1.0000	0.0000	1.49
1195.203	0.2	0.1757	0.0011	0.0000	1.47
1195.203	0.4	0.7124	0.0000	0.0000	1.42
1213.257	-0.4	0.7502	0.0000	0.0000	1.21
1213.257	-0.2	0.1872	0.0007	0.0000	1.36
1213.257	0	0.0000	1.0000	0.0000	1.49
1213.257	0.2	0.1900	0.0006	0.0000	1.60
1213.257	0.4	0.7810	0.0000	0.0000	1.67
1213.896	-0.4	0.5595	0.0000	0.0000	1.49
1213.896	-0.2	0.1385	0.0046	0.0000	1.49
1213.896	0	0.0000	1.0000	0.0000	1.49
1213.896	0.2	0.1385	0.0046	0.0000	1.49

1213.896	0.4	0.5595	0.0000	0.0000	1.49
1257.828	-0.2	0.7717	0.0000	0.0000	1.47
1257.828	0	0.0000	1.0000	0.0000	1.49
1257.828	0.2	0.7717	0.0000	0.0000	1.47
1273.883	-0.2	0.2977	0.0000	0.0000	1.46
1273.883	0	0.0000	1.0000	0.0000	1.49
1273.883	0.2	0.2977	0.0000	0.0000	1.46
1290.322	-0.2	0.2316	0.0001	0.0000	1.49
1290.322	0	0.0000	1.0000	0.0000	1.49
1290.322	0.2	0.2316	0.0001	0.0000	1.49
1314.191	-0.2	0.2079	0.0003	0.0000	1.49
1314.191	0	0.0000	1.0000	0.0000	1.49
1314.191	0.2	0.2079	0.0003	0.0000	1.49
1419.741	-0.2	1.1412	0.0000	0.0000	0.78
1419.741	0	0.0000	1.0000	0.0000	1.49
1419.741	0.2	1.0224	0.0000	0.0000	2.14
1422.108	-0.2	0.2497	0.0001	0.0000	1.49
1422.108	0	0.0000	1.0000	0.0000	1.49
1422.108	0.2	0.2497	0.0001	0.0000	1.49
1468.723	-0.2	0.3912	0.0000	0.0000	1.44
1468.723	0	0.0000	1.0000	0.0000	1.49
1468.723	0.2	0.3911	0.0000	0.0000	1.44
1479.073	-0.2	0.3307	0.0000	0.0000	1.49
1479.073	0	0.0000	1.0000	0.0000	1.49
1479.073	0.2	0.3307	0.0000	0.0000	1.49
1490.027	-0.2	0.4846	0.0000	0.0001	1.56
1490.027	0	0.0000	1.0000	0.0000	1.49
1490.027	0.2	0.4846	0.0000	0.0001	1.56
1499.445	-0.2	0.4701	0.0000	0.0000	1.56
1499.445	0	0.0000	1.0000	0.0000	1.49
1499.445	0.2	0.4701	0.0000	0.0000	1.56
1530.371	-0.2	0.5082	0.0000	0.0000	1.93
1530.371	0	0.0000	1.0000	0.0000	1.49
1530.371	0.2	0.5045	0.0000	0.0000	1.07
1534.105	-0.2	0.5734	0.0000	0.0000	1.49
1534.105	0	0.0000	1.0000	0.0000	1.49

1534.105	0.2	0.5734	0.0000	0.0000	1.49
1578.476	-0.2	0.8821	0.0000	0.0000	1.43
1578.476	0	0.0000	1.0000	0.0000	1.49
1578.476	0.2	0.8821	0.0000	0.0000	1.43
1603.83	-0.2	0.8074	0.0000	0.0004	1.47
1603.83	0	0.0000	1.0000	0.0000	1.49
1603.83	0.2	0.8074	0.0000	0.0004	1.47
1629.819	-0.2	1.2260	0.0000	0.0000	1.09
1629.819	0	0.0000	1.0000	0.0000	1.49
1629.819	0.2	1.0387	0.0000	0.0000	1.89
3178.95	-0.2	0.8183	0.0000	0.0000	1.49
3178.95	0	0.0000	1.0000	0.0000	1.49
3178.95	0.2	0.8183	0.0000	0.0000	1.49
3179.933	-0.2	0.8207	0.0000	0.0000	1.49
3179.933	0	0.0000	1.0000	0.0000	1.49
3179.933	0.2	0.8207	0.0000	0.0000	1.49
3180.944	-0.2	0.7983	0.0000	0.0000	1.51
3180.944	0	0.0000	1.0000	0.0000	1.49
3180.944	0.2	0.8542	0.0000	0.0000	1.48
3183.88	-0.2	0.8310	0.0000	0.0000	1.49
3183.88	0	0.0000	1.0000	0.0000	1.49
3183.88	0.2	0.8310	0.0000	0.0000	1.49
3184.606	-0.2	0.8366	0.0000	0.0000	1.49
3184.606	0	0.0000	1.0000	0.0000	1.49
3184.606	0.2	0.8366	0.0000	0.0000	1.49
3187.807	-0.2	0.6964	0.0000	0.0000	1.51
3187.807	0	0.0000	1.0000	0.0000	1.49
3187.807	0.2	0.9635	0.0000	0.0000	1.48
3196.67	-0.2	0.8329	0.0000	0.0000	1.49
3196.67	0	0.0000	1.0000	0.0000	1.49
3196.67	0.2	0.8329	0.0000	0.0000	1.49
3197.07	-0.2	0.8327	0.0000	0.0000	1.49
3197.07	0	0.0000	1.0000	0.0000	1.49
3197.07	0.2	0.8327	0.0000	0.0000	1.49
3211.726	-0.2	0.8525	0.0000	0.0000	1.49
3211.726	0	0.0000	1.0000	0.0000	1.49

3211.726	0.2	0.8525	0.0000	0.0000	1.49
3212.395	-0.2	1.0068	0.0000	0.0000	1.49
3212.395	0	0.0000	1.0000	0.0000	1.49
3212.395	0.2	0.6977	0.0000	0.0000	1.50

Table S5. Photo-physical parameters (ΔE_{Q_p}, $P_{Q_p}(\text{RT})$, $E_{\text{T}_1-\text{S}_0}$, and $\langle \text{T}_1|\hat{H}_{\text{SO}}|\text{S}_0\rangle_{Q_p}^2$) calculated for geometries allowed by normal-mode vibrations with frequency in T_1 at RT for chromophore **S2**. ω_p is the wavenumber of the p_{th} normal vibrational mode in the structure optimized at T_1. Q_p is the mass weighted normal coordinates at T_1. Calculation regarding geometries was stopped when ΔE_{Q_p} becomes larger than 0.2 eV because these geometries with $\Delta E_{Q_p}>0.2$ eV are hardly allowed below RT. $E_{\text{T}_1-\text{S}_0}$ does not largely change for Q_p with $P_{Q_p}(\text{RT})>0.01$ which corresponds to geometries much allowed at RT.

ω_p (cm^{-1})	Q_p (a.u.)	ΔE_{Q_p} (eV)	$P_{Q_p}(\text{RT})$	$\langle \text{T}_1|\hat{H}_{\text{SO}}|\text{S}_0\rangle_{Q_p}^2$ (cm^{-2})	$E_{\text{T}_1-\text{S}_0}$ (eV)
106.2747	-0.2	0.2097	0.0003	0.0000	1.98
106.2747	0	0.0000	1.0000	0.0000	1.78
106.2747	0.2	0.2097	0.0003	0.0000	1.98
139.3663	-0.4	0.7527	0.0000	0.0000	2.49
139.3663	-0.2	0.1878	0.0007	0.0000	1.96
139.3663	0	0.0000	1.0000	0.0000	1.78
139.3663	0.2	0.1878	0.0007	0.0000	1.96
139.3663	0.4	0.7527	0.0000	0.0000	2.49
207.2322	-0.2	0.2532	0.0001	0.0000	2.02
207.2322	0	0.0000	1.0000	0.0000	1.78
207.2322	0.2	0.2532	0.0001	0.0000	2.02
211.9115	-0.2	0.2018	0.0004	0.0000	1.96
211.9115	0	0.0000	1.0000	0.0000	1.78
211.9115	0.2	0.2018	0.0004	0.0000	1.96
265.3618	-0.2	0.5321	0.0000	0.0000	2.28
265.3618	0	0.0000	1.0000	0.0000	1.78

265.3618	0.2	0.5260	0.0000	0.0000	2.28
346.0714	-0.4	0.3305	0.0000	0.0080	1.93
346.0714	-0.2	0.0828	0.0399	0.0019	1.82
346.0714	0	0.0000	1.0000	0.0000	1.78
346.0714	0.2	0.0828	0.0399	0.0019	1.82
346.0714	0.4	0.3305	0.0000	0.0080	1.93
386.0777	-0.2	0.3761	0.0000	0.0001	2.10
386.0777	0	0.0000	1.0000	0.0000	1.78
386.0777	0.2	0.3761	0.0000	0.0001	2.10
410.6347	-0.4	0.2647	0.0000	0.0000	1.89
410.6347	-0.2	0.0671	0.0735	0.0000	1.87
410.6347	0	0.0000	1.0000	0.0000	1.78
410.6347	0.2	0.0663	0.0756	0.0000	1.63
410.6347	0.4	0.2682	0.0000	0.0000	1.44
452.4222	-0.4	0.2916	0.0000	0.0000	1.59
452.4222	-0.2	0.0729	0.0586	0.0000	1.73
452.4222	0	0.0000	1.0000	0.0000	1.78
452.4222	0.2	0.0729	0.0586	0.0000	1.73
452.4222	0.4	0.2916	0.0000	0.0000	1.59
463.9413	-0.2	0.3963	0.0000	0.0000	2.11
463.9413	0	0.0000	1.0000	0.0000	1.78
463.9413	0.2	0.4425	0.0000	0.0000	2.16
472.6783	-0.2	0.4377	0.0000	0.0000	2.14
472.6783	0	0.0000	1.0000	0.0000	1.78
472.6783	0.2	0.4377	0.0000	0.0000	2.14
495.9356	-0.4	0.4156	0.0000	0.0000	1.86
495.9356	-0.2	0.1040	0.0175	0.0000	1.80
495.9356	0	0.0000	1.0000	0.0000	1.78
495.9356	0.2	0.1040	0.0175	0.0000	1.80
495.9356	0.4	0.4156	0.0000	0.0000	1.86
508.8233	-0.4	0.6068	0.0000	0.0073	2.00
508.8233	-0.2	0.1521	0.0027	0.0019	1.84
508.8233	0	0.0000	1.0000	0.0000	1.78
508.8233	0.2	0.1521	0.0027	0.0019	1.84
508.8233	0.4	0.6068	0.0000	0.0073	2.00
537.4716	-0.4	0.7032	0.0000	0.0016	1.87

537.4716	-0.2	0.1762	0.0010	0.0004	1.80
537.4716	0	0.0000	1.0000	0.0000	1.78
537.4716	0.2	0.1762	0.0010	0.0004	1.80
537.4716	0.4	0.7032	0.0000	0.0016	1.87
541.6187	-0.2	0.3802	0.0000	0.0000	2.08
541.6187	0	0.0000	1.0000	0.0000	1.78
541.6187	0.2	0.3785	0.0000	0.0000	2.08
542.7819	-0.2	0.4527	0.0000	0.0000	2.16
542.7819	0	0.0000	1.0000	0.0000	1.78
542.7819	0.2	0.4527	0.0000	0.0000	2.16
600.5809	-0.4	0.6141	0.0000	0.0000	1.74
600.5809	-0.2	0.1469	0.0033	0.0000	1.79
600.5809	0	0.0000	1.0000	0.0000	1.78
600.5809	0.2	0.1375	0.0047	0.0000	1.71
600.5809	0.4	0.5270	0.0000	0.0000	1.59
657.8882	-0.2	0.4731	0.0000	0.0000	2.13
657.8882	0	0.0000	1.0000	0.0000	1.78
657.8882	0.2	0.4731	0.0000	0.0000	2.13
671.0282	-0.4	0.2766	0.0000	0.0001	1.03
671.0282	-0.2	0.0692	0.0678	0.0000	1.59
671.0282	0	0.0000	1.0000	0.0000	1.78
671.0282	0.2	0.0692	0.0678	0.0000	1.59
671.0282	0.4	0.2766	0.0000	0.0001	1.03
671.7679	-0.2	0.4227	0.0000	0.0000	2.14
671.7679	0	0.0000	1.0000	0.0000	1.78
671.7679	0.2	0.4227	0.0000	0.0000	2.14
705.2312	-0.2	0.5270	0.0000	0.0000	2.24
705.2312	0	0.0000	1.0000	0.0000	1.78
705.2312	0.2	0.4690	0.0000	0.0000	2.19
735.0926	-0.4	0.4943	0.0000	0.0000	1.46
735.0926	-0.2	0.1236	0.0081	0.0000	1.70
735.0926	0	0.0000	1.0000	0.0000	1.78
735.0926	0.2	0.1236	0.0081	0.0000	1.70
735.0926	0.4	0.4943	0.0000	0.0000	1.46
749.2936	-0.2	0.4907	0.0000	0.0000	2.18
749.2936	0	0.0000	1.0000	0.0000	1.78

749.2936	0.2	0.4907	0.0000	0.0000	2.18
772.99	-0.2	0.3485	0.0000	0.0000	2.06
772.99	0	0.0000	1.0000	0.0000	1.78
772.99	0.2	0.3485	0.0000	0.0000	2.06
799.9448	-0.2	0.3818	0.0000	0.0000	2.08
799.9448	0	0.0000	1.0000	0.0000	1.78
799.9448	0.2	0.3818	0.0000	0.0000	2.08
814.4161	-0.2	0.2920	0.0000	0.0000	1.81
814.4161	0	0.0000	1.0000	0.0000	1.78
814.4161	0.2	0.2907	0.0000	0.0000	1.78
827.0289	-0.2	0.2510	0.0001	0.0030	1.77
827.0289	0	0.0000	1.0000	0.0000	1.78
827.0289	0.2	0.2510	0.0001	0.0030	1.77
832.8122	-0.2	1.3368	0.0000	0.0000	2.76
832.8122	0	0.0000	1.0000	0.0000	1.78
832.8122	0.2	1.1132	0.0000	0.0000	2.54
834.2455	-0.2	0.4308	0.0000	0.0000	2.12
834.2455	0	0.0000	1.0000	0.0000	1.78
834.2455	0.2	0.4308	0.0000	0.0000	2.12
837.5518	-0.2	0.4062	0.0000	0.0000	2.10
837.5518	0	0.0000	1.0000	0.0000	1.78
837.5518	0.2	0.4062	0.0000	0.0000	2.10
909.0039	-0.2	0.3863	0.0000	0.0000	2.07
909.0039	0	0.0000	1.0000	0.0000	1.78
909.0039	0.2	0.3863	0.0000	0.0000	2.07
914.851	-0.2	0.4293	0.0000	0.0000	2.11
914.851	0	0.0000	1.0000	0.0000	1.78
914.851	0.2	0.4241	0.0000	0.0000	2.11
950.5543	-0.2	0.8429	0.0000	0.0000	2.53
950.5543	0	0.0000	1.0000	0.0000	1.78
950.5543	0.2	0.8429	0.0000	0.0000	2.53
950.868	-0.2	1.0361	0.0000	0.0000	2.73
950.868	0	0.0000	1.0000	0.0000	1.78
950.868	0.2	0.6339	0.0000	0.0000	2.32
968.2605	-0.2	0.2744	0.0000	0.0007	1.58
968.2605	0	0.0000	1.0000	0.0000	1.78

968.2605	0.2	0.2744	0.0000	0.0007	1.58
973.5712	-0.2	0.2767	0.0000	0.0027	1.78
973.5712	0	0.0000	1.0000	0.0000	1.78
973.5712	0.2	0.2767	0.0000	0.0027	1.78
1094.269	-0.2	0.2066	0.0003	0.0000	1.73
1094.269	0	0.0000	1.0000	0.0000	1.78
1094.269	0.2	0.2079	0.0003	0.0000	1.81
1095.802	-0.4	0.4147	0.0000	0.0277	0.98
1095.802	-0.2	0.1031	0.0181	0.0069	1.59
1095.802	0	0.0000	1.0000	0.0000	1.78
1095.802	0.2	0.1031	0.0181	0.0069	1.59
1095.802	0.4	0.4147	0.0000	0.0277	0.98
1121.572	-0.4	0.6161	0.0000	0.0316	1.78
1121.572	-0.2	0.1569	0.0022	0.0079	1.78
1121.572	0	0.0000	1.0000	0.0000	1.78
1121.572	0.2	0.1569	0.0022	0.0079	1.78
1121.572	0.4	0.6161	0.0000	0.0316	1.78
1126.038	-0.4	0.6539	0.0000	0.0000	1.72
1126.038	-0.2	0.1616	0.0019	0.0000	1.77
1126.038	0	0.0000	1.0000	0.0000	1.78
1126.038	0.2	0.1616	0.0019	0.0000	1.77
1126.038	0.4	0.6539	0.0000	0.0000	1.73
1146.614	-0.4	0.4903	0.0000	0.0000	1.52
1146.614	-0.2	0.1312	0.0061	0.0000	1.67
1146.614	0	0.0000	1.0000	0.0000	1.78
1146.614	0.2	0.1410	0.0041	0.0000	1.88
1146.614	0.4	0.5736	0.0000	0.0000	1.96
1191.564	-0.4	0.5436	0.0000	0.0130	1.78
1191.564	-0.2	0.1366	0.0049	0.0033	1.78
1191.564	0	0.0000	1.0000	0.0000	1.78
1191.564	0.2	0.1366	0.0049	0.0033	1.78
1191.564	0.4	0.5436	0.0000	0.0130	1.78
1192.66	-0.2	0.2787	0.0000	0.0000	1.73
1192.66	0	0.0000	1.0000	0.0000	1.78
1192.66	0.2	0.2787	0.0000	0.0000	1.73
1227.317	-0.4	0.6264	0.0000	0.0000	1.61

1227.317	-0.2	0.1590	0.0021	0.0000	1.74
1227.317	0	0.0000	1.0000	0.0000	1.78
1227.317	0.2	0.1590	0.0021	0.0000	1.74
1227.317	0.4	0.6264	0.0000	0.0000	1.61
1233.728	-0.4	0.6181	0.0000	0.0000	1.72
1233.728	-0.2	0.1516	0.0027	0.0000	1.87
1233.728	0	0.0000	1.0000	0.0000	1.78
1233.728	0.2	0.1420	0.0040	0.0000	1.48
1233.728	0.4	0.5358	0.0000	0.0000	0.96
1241.541	-0.2	0.2125	0.0003	0.0151	1.81
1241.541	0	0.0000	1.0000	0.0000	1.78
1241.541	0.2	0.2125	0.0003	0.0151	1.81
1244.182	-0.4	0.7805	0.0000	0.0809	1.56
1244.182	-0.2	0.1990	0.0004	0.0202	1.73
1244.182	0	0.0000	1.0000	0.0000	1.78
1244.182	0.2	0.1990	0.0004	0.0202	1.73
1244.182	0.4	0.7805	0.0000	0.0809	1.56
1267.251	-0.2	0.4763	0.0000	0.0108	1.66
1267.251	0	0.0000	1.0000	0.0000	1.78
1267.251	0.2	0.4763	0.0000	0.0108	1.66
1335.645	-0.2	0.3552	0.0000	0.0000	1.79
1335.645	0	0.0000	1.0000	0.0000	1.78
1335.645	0.2	0.3552	0.0000	0.0000	1.79
1381.674	-0.2	0.4063	0.0000	0.0000	1.74
1381.674	0	0.0000	1.0000	0.0000	1.78
1381.674	0.2	0.3981	0.0000	0.0000	1.71
1406.899	-0.2	0.8189	0.0000	0.0000	0.09
1406.899	0	0.0000	1.0000	0.0000	1.78
1406.899	0.2	0.7522	0.0000	0.0000	1.62
1440.944	-0.2	0.3083	0.0000	0.0004	1.64
1440.944	0	0.0000	1.0000	0.0000	1.78
1440.944	0.2	0.3083	0.0000	0.0004	1.64
1447.854	-0.2	0.2484	0.0001	0.0000	1.77
1447.854	0	0.0000	1.0000	0.0000	1.78
1447.854	0.2	0.2484	0.0001	0.0000	1.77
1448.042	-0.2	0.2606	0.0000	0.0127	1.76

1448.042	0	0.0000	1.0000	0.0000	1.78
1448.042	0.2	0.2606	0.0000	0.0127	1.76
1476.773	-0.2	0.6451	0.0000	0.0257	1.71
1476.773	0	0.0000	1.0000	0.0000	1.78
1476.773	0.2	0.6451	0.0000	0.0257	1.71
1511.998	-0.2	0.4111	0.0000	0.0000	1.67
1511.998	0	0.0000	1.0000	0.0000	1.78
1511.998	0.2	0.4111	0.0000	0.0000	1.67
1518.967	-0.2	0.3066	0.0000	0.0121	1.62
1518.967	0	0.0000	1.0000	0.0000	1.78
1518.967	0.2	0.3066	0.0000	0.0121	1.62
1544.171	-0.2	0.5031	0.0000	0.0059	1.55
1544.171	0	0.0000	1.0000	0.0000	1.78
1544.171	0.2	0.5031	0.0000	0.0059	1.55
1544.99	-0.2	0.3448	0.0000	0.0000	1.53
1544.99	0	0.0000	1.0000	0.0000	1.78
1544.99	0.2	0.3214	0.0000	0.0000	1.68
1566.303	-0.2	0.6836	0.0000	0.0191	1.64
1566.303	0	0.0000	1.0000	0.0000	1.78
1566.303	0.2	0.6836	0.0000	0.0191	1.64
1595.906	-0.2	1.1071	0.0000	0.0000	1.63
1595.906	0	0.0000	1.0000	0.0000	1.78
1595.906	0.2	1.1071	0.0000	0.0000	1.63
1658.427	-0.2	0.5747	0.0000	0.0000	1.77
1658.427	0	0.0000	1.0000	0.0000	1.78
1658.427	0.2	0.5888	0.0000	0.0000	0.09
3179.196	-0.2	0.4749	0.0000	0.0000	1.43
3179.196	0	0.0000	1.0000	0.0000	1.78
3179.196	0.2	0.4749	0.0000	0.0000	1.43
3180.145	-0.2	0.5084	0.0000	0.0000	1.46
3180.145	0	0.0000	1.0000	0.0000	1.78
3180.145	0.2	0.5084	0.0000	0.0000	1.46
3183.316	-0.2	0.2327	0.0001	0.0000	1.13
3183.316	0	0.0000	1.0000	0.0000	1.78
3183.316	0.2	0.2589	0.0000	0.0000	1.27
3183.942	-0.2	0.2721	0.0000	0.0133	1.23

ω_p	Q_p	ΔE_{Q_p}	P_{Q_p}(RT)	$\langle \mathrm{T_1}|\hat{H}_{\mathrm{SO}}|\mathrm{S_0}\rangle_{Q_\mathrm{p}}^{2}$	$E_{\mathrm{T_1-S_0}}$
3183.942	0	0.0000	1.0000	0.0000	1.78
3183.942	0.2	0.2721	0.0000	0.0133	1.23
3193.919	-0.2	0.5028	0.0000	0.0001	1.45
3193.919	0	0.0000	1.0000	0.0000	1.78
3193.919	0.2	0.5028	0.0000	0.0001	1.45
3196.267	-0.2	0.5368	0.0000	0.0000	1.31
3196.267	0	0.0000	1.0000	0.0000	1.78
3196.267	0.2	0.4377	0.0000	0.0000	1.54
3196.574	-0.2	0.4971	0.0000	0.0000	1.43
3196.574	0	0.0000	1.0000	0.0000	1.78
3196.574	0.2	0.4971	0.0000	0.0000	1.43
3198.147	-0.2	0.5018	0.0000	0.0112	1.45
3198.147	0	0.0000	1.0000	0.0000	1.78
3198.147	0.2	0.5018	0.0000	0.0112	1.45
3207.58	-0.2	0.3315	0.0000	0.0003	1.27
3207.58	0	0.0000	1.0000	0.0000	1.78
3207.58	0.2	0.3315	0.0000	0.0003	1.27
3208.641	-0.2	0.3702	0.0000	0.0000	1.14
3208.641	0	0.0000	1.0000	0.0000	1.78
3208.641	0.2	0.3183	0.0000	0.0000	1.41

Table S6. Photo-physical parameters (ΔE_{Q_p}, P_{Q_p}(RT), $E_{\mathrm{T_1-S_0}}$, and $\langle \mathrm{T_1}|\hat{H}_{\mathrm{SO}}|\mathrm{S_0}\rangle_{Q_\mathrm{p}}^{2}$) calculated for geometries allowed by normal-mode vibrations with frequency in $\mathrm{T_1}$ at RT for chromophore **S3**. ω_p is the wavenumber of the p_th normal vibrational mode in the structure optimized at $\mathrm{T_1}$. Q_p is the mass weighted normal coordinates at $\mathrm{T_1}$. Calculation regarding geometries was stopped when ΔE_{Q_p} becomes larger than 0.2 eV because these geometries with $\Delta E_{Q_\mathrm{p}}>0.2$ eV are hardly allowed below RT. $E_{\mathrm{T_1-S_0}}$ does not largely change for Q_p with P_{Q_p}(RT)>0.01 which corresponds to geometries much allowed at RT.

ω_p	Q_p	ΔE_{Q_p}	P_{Q_p}(RT)	$\langle \mathrm{T_1}|\hat{H}_{\mathrm{SO}}|\mathrm{S_0}\rangle_{Q_\mathrm{p}}^{2}$	$E_{\mathrm{T_1-S_0}}$
(cm⁻¹)	(a.u.)	(eV)		(cm⁻²)	(eV)
6.693186	-1	0.0082	0.7282	0.0003	2.17

6.693186	-0.8	0.0034	0.8750	0.0002	2.17
6.693186	-0.6	0.0011	0.9565	0.0001	2.17
6.693186	-0.4	0.0003	0.9899	0.0001	2.17
6.693186	-0.2	0.0000	0.9985	0.0000	2.17
6.693186	0	0.0000	1.0000	0.0000	2.17
6.693186	0.2	0.0000	0.9986	0.0000	2.17
6.693186	0.4	0.0003	0.9893	0.0001	2.17
6.693186	0.6	0.0012	0.9549	0.0001	2.17
6.693186	0.8	0.0035	0.8728	0.0002	2.17
6.693186	1	0.0083	0.7247	0.0003	2.17
7.168487	-1	0.0045	0.8401	0.0025	2.17
7.168487	-0.8	0.0019	0.9271	0.0016	2.17
7.168487	-0.6	0.0007	0.9734	0.0009	2.17
7.168487	-0.4	0.0002	0.9929	0.0004	2.17
7.168487	-0.2	0.0000	0.9987	0.0001	2.17
7.168487	0	0.0000	1.0000	0.0000	2.17
7.168487	0.2	0.0000	0.9987	0.0001	2.17
7.168487	0.4	0.0002	0.9925	0.0004	2.17
7.168487	0.6	0.0007	0.9722	0.0009	2.17
7.168487	0.8	0.0020	0.9248	0.0016	2.17
7.168487	1	0.0046	0.8360	0.0025	2.17
19.21232	-1	0.0109	0.6535	0.0002	2.16
19.21232	-0.8	0.0053	0.8139	0.0002	2.16
19.21232	-0.6	0.0022	0.9168	0.0001	2.17
19.21232	-0.4	0.0008	0.9710	0.0000	2.17
19.21232	-0.2	0.0002	0.9938	0.0000	2.17
19.21232	0	0.0000	1.0000	0.0000	2.17
19.21232	0.2	0.0002	0.9939	0.0000	2.17
19.21232	0.4	0.0008	0.9711	0.0000	2.17
19.21232	0.6	0.0022	0.9171	0.0001	2.17
19.21232	0.8	0.0053	0.8142	0.0002	2.16
19.21232	1	0.0109	0.6542	0.0002	2.16
27.37843	-0.4	0.6269	0.0000	0.0000	1.73
27.37843	-0.2	0.1522	0.0027	0.0000	2.06
27.37843	0	0.0000	1.0000	0.0000	2.17
27.37843	0.2	0.1522	0.0027	0.0000	2.06

27.37843	0.4	0.6271	0.0000	0.0000	1.73
85.32074	-1	0.0902	0.0299	0.0071	2.14
85.32074	-0.8	0.0555	0.1154	0.0047	2.15
85.32074	-0.6	0.0302	0.3083	0.0026	2.16
85.32074	-0.4	0.0131	0.5998	0.0012	2.16
85.32074	-0.2	0.0032	0.8815	0.0003	2.17
85.32074	0	0.0000	1.0000	0.0000	2.17
85.32074	0.2	0.0032	0.8815	0.0003	2.17
85.32074	0.4	0.0131	0.5998	0.0012	2.16
85.32074	0.6	0.0302	0.3083	0.0027	2.16
85.32074	0.8	0.0555	0.1153	0.0047	2.15
85.32074	1	0.0902	0.0299	0.0072	2.14
88.5739	-1	0.1602	0.0020	0.0894	2.12
88.5739	-0.8	0.0791	0.0459	0.0580	2.14
88.5739	-0.6	0.0336	0.2702	0.0329	2.15
88.5739	-0.4	0.0113	0.6442	0.0147	2.16
88.5739	-0.2	0.0023	0.9157	0.0037	2.17
88.5739	0	0.0000	1.0000	0.0000	2.17
88.5739	0.2	0.0023	0.9159	0.0037	2.17
88.5739	0.4	0.0113	0.6446	0.0148	2.16
88.5739	0.6	0.0336	0.2707	0.0330	2.15
88.5739	0.8	0.0791	0.0461	0.0581	2.14
88.5739	1	0.1601	0.0020	0.0895	2.12
108.981	-1	0.1274	0.0070	0.0211	2.14
108.981	-0.8	0.0717	0.0614	0.0134	2.15
108.981	-0.6	0.0359	0.2471	0.0075	2.16
108.981	-0.4	0.0145	0.5679	0.0034	2.16
108.981	-0.2	0.0034	0.8753	0.0008	2.17
108.981	0	0.0000	1.0000	0.0000	2.17
108.981	0.2	0.0034	0.8751	0.0008	2.17
108.981	0.4	0.0145	0.5679	0.0033	2.16
108.981	0.6	0.0359	0.2472	0.0075	2.16
108.981	0.8	0.0717	0.0614	0.0134	2.15
108.981	1	0.1273	0.0070	0.0210	2.14
111.1957	-1	0.1445	0.0036	0.0026	2.16
111.1957	-0.8	0.0823	0.0407	0.0017	2.16

111.1957	-0.6	0.0417	0.1969	0.0009	2.17
111.1957	-0.4	0.0171	0.5140	0.0004	2.17
111.1957	-0.2	0.0041	0.8538	0.0001	2.17
111.1957	0	0.0000	1.0000	0.0000	2.17
111.1957	0.2	0.0041	0.8538	0.0001	2.17
111.1957	0.4	0.0171	0.5138	0.0004	2.17
111.1957	0.6	0.0418	0.1967	0.0009	2.17
111.1957	0.8	0.0824	0.0405	0.0017	2.16
111.1957	1	0.1446	0.0036	0.0027	2.16
113.574	-1	0.1348	0.0053	0.0199	2.15
113.574	-0.8	0.0777	0.0486	0.0127	2.16
113.574	-0.6	0.0399	0.2119	0.0071	2.16
113.574	-0.4	0.0165	0.5262	0.0032	2.17
113.574	-0.2	0.0039	0.8578	0.0008	2.17
113.574	0	0.0000	1.0000	0.0000	2.17
113.574	0.2	0.0039	0.8577	0.0008	2.17
113.574	0.4	0.0165	0.5263	0.0032	2.17
113.574	0.6	0.0398	0.2120	0.0071	2.16
113.574	0.8	0.0776	0.0488	0.0128	2.16
113.574	1	0.1347	0.0053	0.0199	2.15
113.8822	-1	0.1300	0.0063	0.0028	2.14
113.8822	-0.8	0.0740	0.0562	0.0018	2.15
113.8822	-0.6	0.0374	0.2330	0.0011	2.16
113.8822	-0.4	0.0153	0.5516	0.0005	2.16
113.8822	-0.2	0.0036	0.8686	0.0001	2.17
113.8822	0	0.0000	1.0000	0.0000	2.17
113.8822	0.2	0.0036	0.8687	0.0001	2.17
113.8822	0.4	0.0153	0.5520	0.0005	2.16
113.8822	0.6	0.0374	0.2334	0.0010	2.16
113.8822	0.8	0.0738	0.0565	0.0018	2.15
113.8822	1	0.1298	0.0064	0.0027	2.14
150.6288	-1	0.1804	0.0009	0.0029	2.13
150.6288	-0.8	0.1047	0.0170	0.0020	2.14
150.6288	-0.6	0.0540	0.1220	0.0012	2.16
150.6288	-0.4	0.0225	0.4173	0.0005	2.16
150.6288	-0.2	0.0054	0.8110	0.0001	2.17

150.6288	0	0.0000	1.0000	0.0000	2.17
150.6288	0.2	0.0054	0.8110	0.0001	2.17
150.6288	0.4	0.0225	0.4171	0.0005	2.16
150.6288	0.6	0.0541	0.1218	0.0012	2.16
150.6288	0.8	0.1048	0.0169	0.0020	2.14
150.6288	1	0.1807	0.0009	0.0029	2.13
203.4017	-0.8	0.2306	0.0001	0.0020	2.15
203.4017	-0.6	0.1251	0.0077	0.0011	2.16
203.4017	-0.4	0.0541	0.1217	0.0005	2.16
203.4017	-0.2	0.0133	0.5957	0.0001	2.17
203.4017	0	0.0000	1.0000	0.0000	2.17
203.4017	0.2	0.0133	0.5958	0.0001	2.17
203.4017	0.4	0.0541	0.1217	0.0005	2.16
203.4017	0.6	0.1251	0.0077	0.0011	2.16
203.4017	0.8	0.2307	0.0001	0.0020	2.15
206.1301	-0.8	0.2363	0.0001	0.0072	2.12
206.1301	-0.6	0.1292	0.0065	0.0040	2.14
206.1301	-0.4	0.0562	0.1120	0.0018	2.16
206.1301	-0.2	0.0139	0.5824	0.0005	2.17
206.1301	0	0.0000	1.0000	0.0000	2.17
206.1301	0.2	0.0139	0.5825	0.0004	2.17
206.1301	0.4	0.0562	0.1120	0.0018	2.16
206.1301	0.6	0.1292	0.0065	0.0041	2.14
206.1301	0.8	0.2363	0.0001	0.0071	2.12
269.3316	-0.4	0.5093	0.0000	0.0000	2.54
269.3316	-0.2	0.1269	0.0071	0.0000	2.26
269.3316	0	0.0000	1.0000	0.0000	2.17
269.3316	0.2	0.1270	0.0071	0.0000	2.26
269.3316	0.4	0.5095	0.0000	0.0000	2.55
269.3754	-0.4	0.5809	0.0000	0.0000	2.62
269.3754	-0.2	0.1468	0.0033	0.0000	2.29
269.3754	0	0.0000	1.0000	0.0000	2.17
269.3754	0.2	0.1492	0.0030	0.0000	2.27
269.3754	0.4	0.6013	0.0000	0.0000	2.61
277.9128	-0.4	0.5034	0.0000	0.0000	2.39
277.9128	-0.2	0.1276	0.0070	0.0000	2.20

277.9128	0	0.0000	1.0000	0.0000	2.17
277.9128	0.2	0.1313	0.0060	0.0000	2.30
277.9128	0.4	0.5328	0.0000	0.0000	2.62
278.6469	-0.6	0.3349	0.0000	0.0040	2.14
278.6469	-0.4	0.1467	0.0033	0.0017	2.15
278.6469	-0.2	0.0363	0.2430	0.0004	2.17
278.6469	0	0.0000	1.0000	0.0000	2.17
278.6469	0.2	0.0364	0.2429	0.0004	2.17
278.6469	0.4	0.1467	0.0033	0.0017	2.15
278.6469	0.6	0.3349	0.0000	0.0040	2.14
293.286	-0.6	0.3221	0.0000	0.0001	2.12
293.286	-0.4	0.1414	0.0041	0.0000	2.15
293.286	-0.2	0.0351	0.2552	0.0000	2.16
293.286	0	0.0000	1.0000	0.0000	2.17
293.286	0.2	0.0351	0.2552	0.0000	2.16
293.286	0.4	0.1414	0.0041	0.0000	2.15
293.286	0.6	0.3221	0.0000	0.0001	2.12
298.3709	-0.6	0.3522	0.0000	0.0029	2.17
298.3709	-0.4	0.1550	0.0024	0.0012	2.17
298.3709	-0.2	0.0385	0.2233	0.0003	2.17
298.3709	0	0.0000	1.0000	0.0000	2.17
298.3709	0.2	0.0385	0.2233	0.0003	2.17
298.3709	0.4	0.1550	0.0024	0.0012	2.17
298.3709	0.6	0.3522	0.0000	0.0029	2.17
338.5203	-0.4	0.7215	0.0000	0.0000	2.67
338.5203	-0.2	0.1801	0.0009	0.0000	2.29
338.5203	0	0.0000	1.0000	0.0000	2.17
338.5203	0.2	0.1801	0.0009	0.0000	2.29
338.5203	0.4	0.7215	0.0000	0.0000	2.67
349.2156	-0.4	0.7958	0.0000	0.0000	2.80
349.2156	-0.2	0.1945	0.0005	0.0000	2.33
349.2156	0	0.0000	1.0000	0.0000	2.17
349.2156	0.2	0.1862	0.0007	0.0000	2.28
349.2156	0.4	0.7294	0.0000	0.0000	2.66
352.2559	-0.4	0.3269	0.0000	0.0000	2.22
352.2559	-0.2	0.0826	0.0402	0.0000	2.18

352.2559	0	0.0000	1.0000	0.0000	2.17
352.2559	0.2	0.0845	0.0374	0.0000	2.19
352.2559	0.4	0.3417	0.0000	0.0000	2.25
359.1462	-0.2	0.2669	0.0000	0.0000	2.39
359.1462	0	0.0000	1.0000	0.0000	2.17
359.1462	0.2	0.2669	0.0000	0.0000	2.39
359.6806	-0.4	0.2309	0.0001	0.0021	2.16
359.6806	-0.2	0.0574	0.1072	0.0005	2.17
359.6806	0	0.0000	1.0000	0.0000	2.17
359.6806	0.2	0.0574	0.1072	0.0005	2.17
359.6806	0.4	0.2309	0.0001	0.0021	2.16
382.7521	-0.4	0.2642	0.0000	0.0026	2.15
382.7521	-0.2	0.0658	0.0773	0.0007	2.17
382.7521	0	0.0000	1.0000	0.0000	2.17
382.7521	0.2	0.0658	0.0773	0.0007	2.17
382.7521	0.4	0.2643	0.0000	0.0026	2.15
387.7332	-0.4	0.2672	0.0000	0.0014	2.16
387.7332	-0.2	0.0665	0.0752	0.0004	2.17
387.7332	0	0.0000	1.0000	0.0000	2.17
387.7332	0.2	0.0665	0.0752	0.0004	2.17
387.7332	0.4	0.2672	0.0000	0.0014	2.16
395.6062	-0.4	0.5016	0.0000	0.0000	2.36
395.6062	-0.2	0.1248	0.0078	0.0000	2.23
395.6062	0	0.0000	1.0000	0.0000	2.17
395.6062	0.2	0.1240	0.0080	0.0000	2.17
395.6062	0.4	0.4951	0.0000	0.0000	2.22
440.8003	-0.4	0.7738	0.0000	0.0000	2.43
440.8003	-0.2	0.1932	0.0005	0.0000	2.23
440.8003	0	0.0000	1.0000	0.0000	2.17
440.8003	0.2	0.1932	0.0005	0.0000	2.23
440.8003	0.4	0.7737	0.0000	0.0000	2.43
446.6768	-0.4	0.2476	0.0001	0.0013	2.13
446.6768	-0.2	0.0614	0.0915	0.0004	2.16
446.6768	0	0.0000	1.0000	0.0000	2.17
446.6768	0.2	0.0614	0.0915	0.0004	2.16
446.6768	0.4	0.2476	0.0001	0.0014	2.13

470.6066	-0.4	0.2156	0.0002	0.0054	2.16
470.6066	-0.2	0.0531	0.1264	0.0014	2.17
470.6066	0	0.0000	1.0000	0.0000	2.17
470.6066	0.2	0.0531	0.1264	0.0014	2.17
470.6066	0.4	0.2156	0.0002	0.0054	2.16
475.0292	-0.4	0.3100	0.0000	0.0031	2.16
475.0292	-0.2	0.0771	0.0497	0.0008	2.17
475.0292	0	0.0000	1.0000	0.0000	2.17
475.0292	0.2	0.0771	0.0497	0.0008	2.17
475.0292	0.4	0.3100	0.0000	0.0031	2.16
479.1152	-0.2	0.3343	0.0000	0.0000	2.31
479.1152	0	0.0000	1.0000	0.0000	2.17
479.1152	0.2	0.3342	0.0000	0.0000	2.31
486.3848	-0.4	0.2134	0.0002	0.0004	2.14
486.3848	-0.2	0.0530	0.1272	0.0001	2.16
486.3848	0	0.0000	1.0000	0.0000	2.17
486.3848	0.2	0.0530	0.1272	0.0001	2.16
486.3848	0.4	0.2134	0.0002	0.0004	2.14
505.5759	-0.2	0.4020	0.0000	0.0000	2.42
505.5759	0	0.0000	1.0000	0.0000	2.17
505.5759	0.2	0.4036	0.0000	0.0000	2.45
513.4655	-0.2	0.4179	0.0000	0.0000	2.47
513.4655	0	0.0000	1.0000	0.0000	2.17
513.4655	0.2	0.4180	0.0000	0.0000	2.47
520.6985	-0.4	0.2919	0.0000	0.0092	2.14
520.6985	-0.2	0.0725	0.0596	0.0023	2.16
520.6985	0	0.0000	1.0000	0.0000	2.17
520.6985	0.2	0.0725	0.0596	0.0023	2.16
520.6985	0.4	0.2919	0.0000	0.0092	2.14
541.9896	-0.4	0.3919	0.0000	0.0002	2.15
541.9896	-0.2	0.0976	0.0224	0.0001	2.16
541.9896	0	0.0000	1.0000	0.0000	2.17
541.9896	0.2	0.0976	0.0224	0.0001	2.16
541.9896	0.4	0.3919	0.0000	0.0002	2.15
545.3867	-0.4	0.4156	0.0000	0.0014	2.14
545.3867	-0.2	0.1036	0.0177	0.0003	2.16

545.3867	0	0.0000	1.0000	0.0000	2.17
545.3867	0.2	0.1036	0.0177	0.0004	2.16
545.3867	0.4	0.4156	0.0000	0.0014	2.14
548.8204	-0.2	0.4258	0.0000	0.0000	2.47
548.8204	0	0.0000	1.0000	0.0000	2.17
548.8204	0.2	0.4155	0.0000	0.0000	2.34
549.3185	-0.2	0.2850	0.0000	0.0000	2.25
549.3185	0	0.0000	1.0000	0.0000	2.17
549.3185	0.2	0.2850	0.0000	0.0000	2.25
550.0177	-0.4	0.3332	0.0000	0.0045	2.16
550.0177	-0.2	0.0824	0.0404	0.0012	2.17
550.0177	0	0.0000	1.0000	0.0000	2.17
550.0177	0.2	0.0824	0.0404	0.0012	2.17
550.0177	0.4	0.3332	0.0000	0.0045	2.16
558.2586	-0.4	0.3789	0.0000	0.0014	2.16
558.2586	-0.2	0.0940	0.0258	0.0003	2.17
558.2586	0	0.0000	1.0000	0.0000	2.17
558.2586	0.2	0.0940	0.0258	0.0003	2.17
558.2586	0.4	0.3789	0.0000	0.0013	2.16
584.1068	-0.2	0.4814	0.0000	0.0000	2.43
584.1068	0	0.0000	1.0000	0.0000	2.17
584.1068	0.2	0.4814	0.0000	0.0000	2.43
589.1288	-0.2	0.4982	0.0000	0.0013	2.15
589.1288	0	0.0000	1.0000	0.0000	2.17
589.1288	0.2	0.4981	0.0000	0.0013	2.15
600.0343	-0.2	0.4242	0.0000	0.0000	2.39
600.0343	0	0.0000	1.0000	0.0000	2.17
600.0343	0.2	0.4248	0.0000	0.0000	2.49
608.7484	-0.4	0.2367	0.0001	0.0635	2.12
608.7484	-0.2	0.0526	0.1288	0.0154	2.16
608.7484	0	0.0000	1.0000	0.0000	2.17
608.7484	0.2	0.0526	0.1288	0.0154	2.16
608.7484	0.4	0.2367	0.0001	0.0633	2.12
614.457	-0.2	0.4087	0.0000	0.0000	2.35
614.457	0	0.0000	1.0000	0.0000	2.17
614.457	0.2	0.4088	0.0000	0.0000	2.35

616.4867	-0.2	0.8099	0.0000	0.0000	2.70
616.4867	0	0.0000	1.0000	0.0000	2.17
616.4867	0.2	0.8238	0.0000	0.0000	2.77
617.8598	-0.4	0.4152	0.0000	0.0038	2.14
617.8598	-0.2	0.1017	0.0191	0.0010	2.16
617.8598	0	0.0000	1.0000	0.0000	2.17
617.8598	0.2	0.1017	0.0191	0.0010	2.16
617.8598	0.4	0.4151	0.0000	0.0039	2.14
619.5483	-0.2	0.7489	0.0000	0.0000	2.66
619.5483	0	0.0000	1.0000	0.0000	2.17
619.5483	0.2	0.7489	0.0000	0.0000	2.66
628.4357	-0.4	0.5133	0.0000	0.0420	2.13
628.4357	-0.2	0.1226	0.0085	0.0096	2.16
628.4357	0	0.0000	1.0000	0.0000	2.17
628.4357	0.2	0.1226	0.0085	0.0097	2.16
628.4357	0.4	0.5133	0.0000	0.0422	2.13
629.6633	-0.4	0.5853	0.0000	0.0016	2.15
629.6633	-0.2	0.1458	0.0034	0.0004	2.16
629.6633	0	0.0000	1.0000	0.0000	2.17
629.6633	0.2	0.1458	0.0034	0.0005	2.16
629.6633	0.4	0.5853	0.0000	0.0016	2.15
636.899	-0.2	0.4983	0.0000	0.0000	2.24
636.899	0	0.0000	1.0000	0.0000	2.17
636.899	0.2	0.4981	0.0000	0.0000	2.24
657.8741	-0.4	0.6679	0.0000	0.0086	2.13
657.8741	-0.2	0.1564	0.0023	0.0022	2.16
657.8741	0	0.0000	1.0000	0.0000	2.17
657.8741	0.2	0.1564	0.0023	0.0022	2.16
657.8741	0.4	0.6679	0.0000	0.0086	2.13
671.8449	-0.4	0.4757	0.0000	0.0069	2.14
671.8449	-0.2	0.1170	0.0105	0.0017	2.16
671.8449	0	0.0000	1.0000	0.0000	2.17
671.8449	0.2	0.1170	0.0105	0.0017	2.16
671.8449	0.4	0.4758	0.0000	0.0069	2.14
673.7647	-0.2	0.6854	0.0000	0.0000	2.58
673.7647	0	0.0000	1.0000	0.0000	2.17

673.7647	0.2	0.6808	0.0000	0.0000	2.64
682.5581	-0.2	0.5833	0.0000	0.0000	2.58
682.5581	0	0.0000	1.0000	0.0000	2.17
682.5581	0.2	0.5940	0.0000	0.0000	2.39
701.8259	-0.4	0.2673	0.0000	0.0015	2.15
701.8259	-0.2	0.0643	0.0818	0.0004	2.17
701.8259	0	0.0000	1.0000	0.0000	2.17
701.8259	0.2	0.0643	0.0818	0.0004	2.17
701.8259	0.4	0.2673	0.0000	0.0015	2.15
704.4075	-0.4	0.3893	0.0000	0.0446	2.14
704.4075	-0.2	0.0910	0.0290	0.0109	2.16
704.4075	0	0.0000	1.0000	0.0000	2.17
704.4075	0.2	0.0910	0.0290	0.0110	2.16
704.4075	0.4	0.3893	0.0000	0.0446	2.14
719.8843	-0.4	0.3769	0.0000	0.0017	2.16
719.8843	-0.2	0.0894	0.0308	0.0004	2.17
719.8843	0	0.0000	1.0000	0.0000	2.17
719.8843	0.2	0.0894	0.0308	0.0004	2.17
719.8843	0.4	0.3770	0.0000	0.0017	2.16
729.3221	-0.4	0.3747	0.0000	0.0190	2.11
729.3221	-0.2	0.0869	0.0339	0.0040	2.15
729.3221	0	0.0000	1.0000	0.0000	2.17
729.3221	0.2	0.0869	0.0340	0.0040	2.15
729.3221	0.4	0.3743	0.0000	0.0192	2.11
730.1069	-0.2	0.4954	0.0000	0.0000	2.32
730.1069	0	0.0000	1.0000	0.0000	2.17
730.1069	0.2	0.4862	0.0000	0.0000	2.38
732.2048	-0.2	0.6689	0.0000	0.0000	2.24
732.2048	0	0.0000	1.0000	0.0000	2.17
732.2048	0.2	0.6690	0.0000	0.0000	2.24
736.4454	-0.4	0.7856	0.0000	0.0001	2.14
736.4454	-0.2	0.1917	0.0006	0.0000	2.16
736.4454	0	0.0000	1.0000	0.0000	2.17
736.4454	0.2	0.1917	0.0006	0.0000	2.16
736.4454	0.4	0.7856	0.0000	0.0001	2.14
740.6618	-0.4	0.3746	0.0000	0.0114	2.12

740.6618	-0.2	0.0896	0.0306	0.0026	2.16
740.6618	0	0.0000	1.0000	0.0000	2.17
740.6618	0.2	0.0896	0.0306	0.0026	2.16
740.6618	0.4	0.3746	0.0000	0.0114	2.12
748.7383	-0.4	0.5804	0.0000	0.0007	2.14
748.7383	-0.2	0.1403	0.0042	0.0001	2.16
748.7383	0	0.0000	1.0000	0.0000	2.17
748.7383	0.2	0.1403	0.0042	0.0001	2.16
748.7383	0.4	0.5804	0.0000	0.0007	2.14
778.7561	-0.4	0.4736	0.0000	0.0020	2.15
778.7561	-0.2	0.1138	0.0119	0.0004	2.16
778.7561	0	0.0000	1.0000	0.0000	2.17
778.7561	0.2	0.1138	0.0119	0.0004	2.16
778.7561	0.4	0.4738	0.0000	0.0020	2.15
779.9458	-0.4	0.4010	0.0000	0.0007	2.15
779.9458	-0.2	0.0970	0.0230	0.0002	2.16
779.9458	0	0.0000	1.0000	0.0000	2.17
779.9458	0.2	0.0970	0.0230	0.0002	2.17
779.9458	0.4	0.4010	0.0000	0.0007	2.15
783.8576	-0.2	0.6447	0.0000	0.0000	2.50
783.8576	0	0.0000	1.0000	0.0000	2.17
783.8576	0.2	0.6448	0.0000	0.0000	2.50
794.0373	-0.4	0.4072	0.0000	0.0001	2.16
794.0373	-0.2	0.0974	0.0226	0.0000	2.17
794.0373	0	0.0000	1.0000	0.0000	2.17
794.0373	0.2	0.0974	0.0226	0.0000	2.17
794.0373	0.4	0.4074	0.0000	0.0001	2.16
804.04	-0.4	0.5034	0.0000	0.0050	2.16
804.04	-0.2	0.1213	0.0089	0.0012	2.17
804.04	0	0.0000	1.0000	0.0000	2.17
804.04	0.2	0.1212	0.0089	0.0012	2.17
804.04	0.4	0.5033	0.0000	0.0049	2.16
816.5392	-0.4	0.6432	0.0000	0.0000	2.16
816.5392	-0.2	0.1568	0.0022	0.0000	2.17
816.5392	0	0.0000	1.0000	0.0000	2.17
816.5392	0.2	0.1568	0.0022	0.0000	2.17

816.5392	0.4	0.6431	0.0000	0.0000	2.16
822.2244	-0.2	0.6555	0.0000	0.0000	2.32
822.2244	0	0.0000	1.0000	0.0000	2.17
822.2244	0.2	0.6483	0.0000	0.0000	2.50
831.5109	-0.2	0.6632	0.0000	0.0000	2.53
831.5109	0	0.0000	1.0000	0.0000	2.17
831.5109	0.2	0.6609	0.0000	0.0000	2.47
831.9304	-0.2	0.5580	0.0000	0.0000	2.38
831.9304	0	0.0000	1.0000	0.0000	2.17
831.9304	0.2	0.5579	0.0000	0.0000	2.38
837.4686	-0.4	0.3906	0.0000	0.0297	2.14
837.4686	-0.2	0.0902	0.0298	0.0069	2.16
837.4686	0	0.0000	1.0000	0.0000	2.17
837.4686	0.2	0.0902	0.0298	0.0069	2.16
837.4686	0.4	0.3905	0.0000	0.0297	2.14
838.1342	-0.4	0.3744	0.0000	0.0327	2.14
838.1342	-0.2	0.0866	0.0344	0.0079	2.16
838.1342	0	0.0000	1.0000	0.0000	2.17
838.1342	0.2	0.0866	0.0344	0.0079	2.16
838.1342	0.4	0.3746	0.0000	0.0327	2.14
862.8917	-0.2	0.4308	0.0000	0.0000	2.11
862.8917	0	0.0000	1.0000	0.0000	2.17
862.8917	0.2	0.4308	0.0000	0.0000	2.11
869.4674	-0.4	0.3793	0.0000	0.0037	2.17
869.4674	-0.2	0.0882	0.0323	0.0008	2.17
869.4674	0	0.0000	1.0000	0.0000	2.17
869.4674	0.2	0.0882	0.0324	0.0008	2.17
869.4674	0.4	0.3792	0.0000	0.0037	2.17
885.1453	-0.4	0.3525	0.0000	0.0288	2.17
885.1453	-0.2	0.0827	0.0399	0.0068	2.17
885.1453	0	0.0000	1.0000	0.0000	2.17
885.1453	0.2	0.0827	0.0399	0.0069	2.17
885.1453	0.4	0.3525	0.0000	0.0287	2.17
885.4654	-0.2	0.8220	0.0000	0.0000	2.62
885.4654	0	0.0000	1.0000	0.0000	2.17
885.4654	0.2	0.8739	0.0000	0.0000	2.64

888.0639	-0.2	0.5557	0.0000	0.0000	2.33
888.0639	0	0.0000	1.0000	0.0000	2.17
888.0639	0.2	0.5558	0.0000	0.0000	2.33
897.4888	-0.4	0.3419	0.0000	0.0083	2.17
897.4888	-0.2	0.0815	0.0419	0.0019	2.17
897.4888	0	0.0000	1.0000	0.0000	2.17
897.4888	0.2	0.0815	0.0420	0.0019	2.17
897.4888	0.4	0.3417	0.0000	0.0082	2.17
934.8007	-0.4	0.3820	0.0000	0.0736	2.16
934.8007	-0.2	0.0857	0.0356	0.0177	2.17
934.8007	0	0.0000	1.0000	0.0000	2.17
934.8007	0.2	0.0857	0.0355	0.0177	2.17
934.8007	0.4	0.3820	0.0000	0.0736	2.16
947.2447	-0.4	0.3612	0.0000	0.0065	2.17
947.2447	-0.2	0.0873	0.0335	0.0016	2.17
947.2447	0	0.0000	1.0000	0.0000	2.17
947.2447	0.2	0.0873	0.0335	0.0016	2.17
947.2447	0.4	0.3612	0.0000	0.0065	2.17
947.9452	-0.4	0.3684	0.0000	0.0477	2.17
947.9452	-0.2	0.0872	0.0336	0.0115	2.17
947.9452	0	0.0000	1.0000	0.0000	2.17
947.9452	0.2	0.0872	0.0336	0.0116	2.17
947.9452	0.4	0.3685	0.0000	0.0478	2.17
952.7171	-0.4	0.3592	0.0000	0.0054	2.16
952.7171	-0.2	0.0866	0.0344	0.0013	2.17
952.7171	0	0.0000	1.0000	0.0000	2.17
952.7171	0.2	0.0866	0.0344	0.0013	2.17
952.7171	0.4	0.3592	0.0000	0.0054	2.16
956.6845	-0.4	0.3680	0.0000	0.0002	2.17
956.6845	-0.2	0.0880	0.0326	0.0000	2.17
956.6845	0	0.0000	1.0000	0.0000	2.17
956.6845	0.2	0.0880	0.0326	0.0000	2.17
956.6845	0.4	0.3680	0.0000	0.0002	2.17
958.8011	-0.2	0.5040	0.0000	0.0000	2.34
958.8011	0	0.0000	1.0000	0.0000	2.17
958.8011	0.2	0.5051	0.0000	0.0000	2.34

958.9239	-0.2	0.6498	0.0000	0.0000	2.06
958.9239	0	0.0000	1.0000	0.0000	2.17
958.9239	0.2	0.6450	0.0000	0.0000	2.36
964.1914	-0.4	0.3724	0.0000	0.0000	2.17
964.1914	-0.2	0.0887	0.0317	0.0000	2.17
964.1914	0	0.0000	1.0000	0.0000	2.17
964.1914	0.2	0.0887	0.0317	0.0000	2.17
964.1914	0.4	0.3725	0.0000	0.0000	2.17
998.7034	-0.2	0.7370	0.0000	0.0000	2.34
998.7034	0	0.0000	1.0000	0.0000	2.17
998.7034	0.2	0.7470	0.0000	0.0000	2.30
1014.965	-0.2	0.8273	0.0000	0.0000	2.28
1014.965	0	0.0000	1.0000	0.0000	2.17
1014.965	0.2	0.8471	0.0000	0.0000	2.33
1076.7	-0.2	0.4900	0.0000	0.0000	2.30
1076.7	0	0.0000	1.0000	0.0000	2.17
1076.7	0.2	0.4899	0.0000	0.0000	2.30
1087.53	-0.2	0.6578	0.0000	0.0000	2.39
1087.53	0	0.0000	1.0000	0.0000	2.17
1087.53	0.2	0.6411	0.0000	0.0000	2.13
1098.438	-0.2	0.5899	0.0000	0.0000	2.28
1098.438	0	0.0000	1.0000	0.0000	2.17
1098.438	0.2	0.5571	0.0000	0.0000	2.42
1118.063	-0.2	0.4454	0.0000	0.0000	2.33
1118.063	0	0.0000	1.0000	0.0000	2.17
1118.063	0.2	0.4455	0.0000	0.0000	2.33
1129.154	-0.2	0.3605	0.0000	0.0000	2.36
1129.154	0	0.0000	1.0000	0.0000	2.17
1129.154	0.2	0.3877	0.0000	0.0000	2.39
1130.935	-0.2	0.4327	0.0000	0.0000	2.35
1130.935	0	0.0000	1.0000	0.0000	2.17
1130.935	0.2	0.4326	0.0000	0.0000	2.35
1131.611	-0.2	0.3267	0.0000	0.0000	2.35
1131.611	0	0.0000	1.0000	0.0000	2.17
1131.611	0.2	0.3714	0.0000	0.0000	2.35
1144.797	-0.2	0.3855	0.0000	0.0000	2.31

1144.797	0	0.0000	1.0000	0.0000	2.17
1144.797	0.2	0.3855	0.0000	0.0000	2.31
1159.64	-0.2	0.5197	0.0000	0.0000	2.42
1159.64	0	0.0000	1.0000	0.0000	2.17
1159.64	0.2	0.5107	0.0000	0.0000	2.42
1170.122	-0.2	0.4526	0.0000	0.0000	2.41
1170.122	0	0.0000	1.0000	0.0000	2.17
1170.122	0.2	0.4468	0.0000	0.0000	2.45
1177.698	-0.2	0.2637	0.0000	0.0000	2.29
1177.698	0	0.0000	1.0000	0.0000	2.17
1177.698	0.2	0.2637	0.0000	0.0000	2.29
1180.991	-0.2	0.4174	0.0000	0.0000	2.21
1180.991	0	0.0000	1.0000	0.0000	2.17
1180.991	0.2	0.4181	0.0000	0.0000	2.33
1193.556	-0.2	0.3193	0.0000	0.0000	2.34
1193.556	0	0.0000	1.0000	0.0000	2.17
1193.556	0.2	0.3194	0.0000	0.0000	2.35
1212.029	-0.2	0.5143	0.0000	0.0000	2.39
1212.029	0	0.0000	1.0000	0.0000	2.17
1212.029	0.2	0.5447	0.0000	0.0000	2.50
1226.651	-0.2	0.4555	0.0000	0.0000	2.40
1226.651	0	0.0000	1.0000	0.0000	2.17
1226.651	0.2	0.4555	0.0000	0.0000	2.40
1239.162	-0.2	0.4274	0.0000	0.0000	2.43
1239.162	0	0.0000	1.0000	0.0000	2.17
1239.162	0.2	0.4962	0.0000	0.0000	2.48
1244.12	-0.2	0.4741	0.0000	0.0000	2.41
1244.12	0	0.0000	1.0000	0.0000	2.17
1244.12	0.2	0.4744	0.0000	0.0000	2.41
1247.327	-0.2	0.3085	0.0000	0.0000	2.31
1247.327	0	0.0000	1.0000	0.0000	2.17
1247.327	0.2	0.3085	0.0000	0.0000	2.31
1262.451	-0.2	0.5224	0.0000	0.0000	2.46
1262.451	0	0.0000	1.0000	0.0000	2.17
1262.451	0.2	0.5225	0.0000	0.0000	2.46
1263.439	-0.2	0.4537	0.0000	0.0000	2.54

1263.439	0	0.0000	1.0000	0.0000	2.17
1263.439	0.2	0.4176	0.0000	0.0000	2.18
1271.182	-0.2	0.4996	0.0000	0.0000	2.32
1271.182	0	0.0000	1.0000	0.0000	2.17
1271.182	0.2	0.5367	0.0000	0.0000	2.38
1278.928	-0.2	0.7513	0.0000	0.0000	2.51
1278.928	0	0.0000	1.0000	0.0000	2.17
1278.928	0.2	0.7513	0.0000	0.0000	2.51
1302.092	-0.2	0.5100	0.0000	0.0000	2.23
1302.092	0	0.0000	1.0000	0.0000	2.17
1302.092	0.2	0.5101	0.0000	0.0000	2.23
1314.37	-0.2	0.6825	0.0000	0.0000	2.44
1314.37	0	0.0000	1.0000	0.0000	2.17
1314.37	0.2	0.6288	0.0000	0.0000	2.41
1320.251	-0.2	0.5608	0.0000	0.0000	2.35
1320.251	0	0.0000	1.0000	0.0000	2.17
1320.251	0.2	0.5610	0.0000	0.0000	2.35
1333.082	-0.2	0.4519	0.0000	0.0000	2.46
1333.082	0	0.0000	1.0000	0.0000	2.17
1333.082	0.2	0.4643	0.0000	0.0000	2.09
1334.966	-0.2	0.6542	0.0000	0.0000	2.46
1334.966	0	0.0000	1.0000	0.0000	2.17
1334.966	0.2	0.6554	0.0000	0.0000	2.46
1349.468	-0.2	0.5778	0.0000	0.0000	2.21
1349.468	0	0.0000	1.0000	0.0000	2.17
1349.468	0.2	0.5777	0.0000	0.0000	2.21
1353.085	-0.2	1.0016	0.0000	0.0000	2.53
1353.085	0	0.0000	1.0000	0.0000	2.17
1353.085	0.2	0.9917	0.0000	0.0000	2.26
1374.956	-0.2	1.4151	0.0000	0.0000	2.42
1374.956	0	0.0000	1.0000	0.0000	2.17
1374.956	0.2	1.4152	0.0000	0.0000	2.42
1379.962	-0.2	1.1179	0.0000	0.0000	2.38
1379.962	0	0.0000	1.0000	0.0000	2.17
1379.962	0.2	0.9876	0.0000	0.0000	2.50
1387.776	-0.2	1.1499	0.0000	0.0000	2.50

1387.776	0	0.0000	1.0000	0.0000	2.17
1387.776	0.2	1.1501	0.0000	0.0000	2.50
1392.965	-0.2	0.9783	0.0000	0.0000	2.54
1392.965	0	0.0000	1.0000	0.0000	2.17
1392.965	0.2	1.0016	0.0000	0.0000	2.05
1398.092	-0.2	0.6244	0.0000	0.0000	2.40
1398.092	0	0.0000	1.0000	0.0000	2.17
1398.092	0.2	0.6242	0.0000	0.0000	2.40
1400.363	-0.2	0.7322	0.0000	0.0000	2.50
1400.363	0	0.0000	1.0000	0.0000	2.17
1400.363	0.2	0.7389	0.0000	0.0000	2.38
1413.582	-0.2	0.8917	0.0000	0.0000	2.50
1413.582	0	0.0000	1.0000	0.0000	2.17
1413.582	0.2	0.8917	0.0000	0.0000	2.50
1417.365	-0.2	1.0035	0.0000	0.0000	2.48
1417.365	0	0.0000	1.0000	0.0000	2.17
1417.365	0.2	0.9591	0.0000	0.0000	2.27
1433.511	-0.2	0.6049	0.0000	0.0000	2.38
1433.511	0	0.0000	1.0000	0.0000	2.17
1433.511	0.2	0.6200	0.0000	0.0000	2.21
1441.32	-0.2	0.9623	0.0000	0.0000	2.55
1441.32	0	0.0000	1.0000	0.0000	2.17
1441.32	0.2	0.9624	0.0000	0.0000	2.55
1442.096	-0.2	1.0422	0.0000	0.0000	2.27
1442.096	0	0.0000	1.0000	0.0000	2.17
1442.096	0.2	1.1192	0.0000	0.0000	2.47
1446.504	-0.2	1.0434	0.0000	0.0000	2.59
1446.504	0	0.0000	1.0000	0.0000	2.17
1446.504	0.2	1.0436	0.0000	0.0000	2.59
1465.238	-0.2	0.6114	0.0000	0.0000	2.28
1465.238	0	0.0000	1.0000	0.0000	2.17
1465.238	0.2	0.6117	0.0000	0.0000	2.28
1469.413	-0.2	0.5596	0.0000	0.0000	2.34
1469.413	0	0.0000	1.0000	0.0000	2.17
1469.413	0.2	0.5406	0.0000	0.0000	2.26
1474.716	-0.2	0.5754	0.0000	0.0000	2.28

1474.716	0	0.0000	1.0000	0.0000	2.17
1474.716	0.2	0.5753	0.0000	0.0000	2.28
1491.616	-0.2	0.8496	0.0000	0.0000	2.46
1491.616	0	0.0000	1.0000	0.0000	2.17
1491.616	0.2	0.8497	0.0000	0.0000	2.46
1500.039	-0.2	1.1287	0.0000	0.0000	2.49
1500.039	0	0.0000	1.0000	0.0000	2.17
1500.039	0.2	1.2470	0.0000	0.0000	2.71
1515.998	-0.2	0.5833	0.0000	0.0000	2.22
1515.998	0	0.0000	1.0000	0.0000	2.17
1515.998	0.2	0.5834	0.0000	0.0000	2.22
1523.474	-0.2	0.6713	0.0000	0.0000	2.38
1523.474	0	0.0000	1.0000	0.0000	2.17
1523.474	0.2	0.6713	0.0000	0.0000	2.38
1526.435	-0.2	0.9327	0.0000	0.0000	2.48
1526.435	0	0.0000	1.0000	0.0000	2.17
1526.435	0.2	0.8254	0.0000	0.0000	2.32
1538.013	-0.2	0.9461	0.0000	0.0000	2.52
1538.013	0	0.0000	1.0000	0.0000	2.17
1538.013	0.2	0.8464	0.0000	0.0000	2.59
1540.413	-0.2	0.8248	0.0000	0.0000	2.41
1540.413	0	0.0000	1.0000	0.0000	2.17
1540.413	0.2	0.8243	0.0000	0.0000	2.41
1555.19	-0.2	1.0828	0.0000	0.0000	2.30
1555.19	0	0.0000	1.0000	0.0000	2.17
1555.19	0.2	1.0500	0.0000	0.0000	2.52
1560.927	-0.2	1.0783	0.0000	0.0000	2.38
1560.927	0	0.0000	1.0000	0.0000	2.17
1560.927	0.2	1.2138	0.0000	0.0000	2.39
1574.906	-0.2	1.0987	0.0000	0.0000	2.31
1574.906	0	0.0000	1.0000	0.0000	2.17
1574.906	0.2	1.0982	0.0000	0.0000	2.31
1588.903	-0.2	1.0531	0.0000	0.0000	2.70
1588.903	0	0.0000	1.0000	0.0000	2.17
1588.903	0.2	1.2496	0.0000	0.0000	2.30
1600.603	-0.2	1.3452	0.0000	0.0000	2.44

1600.603	0	0.0000	1.0000	0.0000	2.17
1600.603	0.2	1.3451	0.0000	0.0000	2.45
1620.955	-0.2	1.5007	0.0000	0.0000	2.45
1620.955	0	0.0000	1.0000	0.0000	2.17
1620.955	0.2	1.6148	0.0000	0.0000	2.66
1622.342	-0.2	1.0684	0.0000	0.0000	2.33
1622.342	0	0.0000	1.0000	0.0000	2.17
1622.342	0.2	1.0681	0.0000	0.0000	2.33
1637.633	-0.2	1.2627	0.0000	0.0000	2.18
1637.633	0	0.0000	1.0000	0.0000	2.17
1637.633	0.2	1.2633	0.0000	0.0000	2.18
1642.559	-0.2	1.2775	0.0000	0.0000	2.70
1642.559	0	0.0000	1.0000	0.0000	2.17
1642.559	0.2	1.1385	0.0000	0.0000	1.98
1645.085	-0.2	1.1578	0.0000	0.0000	2.33
1645.085	0	0.0000	1.0000	0.0000	2.17
1645.085	0.2	1.1578	0.0000	0.0000	2.33
1646.611	-0.2	1.1627	0.0000	0.0000	2.44
1646.611	0	0.0000	1.0000	0.0000	2.17
1646.611	0.2	1.3743	0.0000	0.0000	2.76
1659.531	-0.2	1.3431	0.0000	0.0000	2.66
1659.531	0	0.0000	1.0000	0.0000	2.17
1659.531	0.2	1.3813	0.0000	0.0000	1.72
3189.305	-0.2	1.1950	0.0000	0.0000	2.14
3189.305	0	0.0000	1.0000	0.0000	2.17
3189.305	0.2	0.5440	0.0000	0.0000	2.13
3192.045	-0.2	0.3384	0.0000	0.0000	1.66
3192.045	0	0.0000	1.0000	0.0000	2.17
3192.045	0.2	0.3383	0.0000	0.0000	1.65
3192.295	-0.2	0.3834	0.0000	0.0000	1.58
3192.295	0	0.0000	1.0000	0.0000	2.17
3192.295	0.2	0.3771	0.0000	0.0000	1.84
3192.988	-0.2	0.4901	0.0000	0.0000	1.90
3192.988	0	0.0000	1.0000	0.0000	2.17
3192.988	0.2	0.7453	0.0000	0.0000	1.99
3194.203	-0.2	0.3465	0.0000	0.0000	1.66

3194.203	0	0.0000	1.0000	0.0000	2.17
3194.203	0.2	0.3463	0.0000	0.0000	1.67
3195.133	-0.2	0.4437	0.0000	0.0000	1.94
3195.133	0	0.0000	1.0000	0.0000	2.17
3195.133	0.2	0.5849	0.0000	0.0000	1.73
3222.281	-0.2	0.5412	0.0000	0.0000	1.86
3222.281	0	0.0000	1.0000	0.0000	2.17
3222.281	0.2	0.5413	0.0000	0.0000	1.86
3224.917	-0.2	0.5144	0.0000	0.0000	1.86
3224.917	0	0.0000	1.0000	0.0000	2.17
3224.917	0.2	0.6398	0.0000	0.0000	1.94
3227.993	-0.2	0.3467	0.0000	0.0000	1.66
3227.993	0	0.0000	1.0000	0.0000	2.17
3227.993	0.2	0.3468	0.0000	0.0000	1.66
3228.589	-0.2	0.3877	0.0000	0.0000	1.71
3228.589	0	0.0000	1.0000	0.0000	2.17
3228.589	0.2	0.4031	0.0000	0.0000	1.72
3237.745	-0.2	0.6230	0.0000	0.0000	1.93
3237.745	0	0.0000	1.0000	0.0000	2.17
3237.745	0.2	0.6212	0.0000	0.0000	1.93
3239.842	-0.2	0.7898	0.0000	0.0000	2.02
3239.842	0	0.0000	1.0000	0.0000	2.17
3239.842	0.2	0.5512	0.0000	0.0000	1.92
3245.335	-0.2	0.5656	0.0000	0.0000	1.87
3245.335	0	0.0000	1.0000	0.0000	2.17
3245.335	0.2	0.5656	0.0000	0.0000	1.87
3246.713	-0.2	0.4630	0.0000	0.0000	1.90
3246.713	0	0.0000	1.0000	0.0000	2.17
3246.713	0.2	0.5773	0.0000	0.0000	1.76
3248.156	-0.2	0.3564	0.0000	0.0000	1.66
3248.156	0	0.0000	1.0000	0.0000	2.17
3248.156	0.2	0.3564	0.0000	0.0000	1.66
3248.64	-0.2	0.3751	0.0000	0.0000	1.83
3248.64	0	0.0000	1.0000	0.0000	2.17
3248.64	0.2	0.3750	0.0000	0.0000	1.54
3263.676	-0.2	0.5273	0.0000	0.0000	1.82

3263.676	0	0.0000	1.0000	0.0000	2.17
3263.676	0.2	0.5259	0.0000	0.0000	1.82
3265.796	-0.2	0.4528	0.0000	0.0000	1.95
3265.796	0	0.0000	1.0000	0.0000	2.17
3265.796	0.2	0.5605	0.0000	0.0000	1.64

Table S7. Photo-physical parameters (ΔE_{Q_p}, $P_{Q_p}(RT)$, $E_{T_1-S_0}$, and $\langle T_1 | \hat{H}_{SO} | S_0 \rangle_{Q_p}^2$) calculated for geometries allowed by normal-mode vibrations with frequency in T_1 at RT for chromophore **S4**. ω_p is the wavenumber of the p_{th} normal vibrational mode in the structure optimized at T_1. Q_p is the mass weighted normal coordinates at T_1. Calculation regarding geometries was stopped when ΔE_{Q_p} becomes larger than 0.2 eV because these geometries with $\Delta E_{Q_p} > 0.2$ eV are hardly allowed below RT. $E_{T_1-S_0}$ does not largely change for Q_p with $P_{Q_p}(RT) > 0.01$ which corresponds to geometries much allowed at RT.

ω_p	Q_p	ΔE_{Q_p}	$P_{Q_p}(RT)$	$\langle T_1 | \hat{H}_{SO} | S_0 \rangle_{Q_p}^2$	$E_{T_1-S_0}$
(cm^{-1})	(a.u.)	(eV)		(cm^{-2})	(eV)
168.35	-0.2	0.2104	0.0003	0.0000	2.50
168.35	0	0.0000	1.0000	0.0000	2.29
168.35	0.2	0.2104	0.0003	0.0000	2.50
169.4125	-0.2	0.3043	0.0000	0.0002	2.58
169.4125	0	0.0000	1.0000	0.0000	2.29
169.4125	0.2	0.3043	0.0000	0.0002	2.58
289.5391	-0.2	0.3899	0.0000	0.0000	2.64
289.5391	0	0.0000	1.0000	0.0000	2.29
289.5391	0.2	0.4160	0.0000	0.0000	2.67
359.661	-0.4	0.7721	0.0000	0.0048	2.90
359.661	-0.2	0.1914	0.0006	0.0013	2.45
359.661	0	0.0000	1.0000	0.0000	2.29
359.661	0.2	0.1914	0.0006	0.0013	2.45
359.661	0.4	0.7721	0.0000	0.0048	2.90
397.8611	-0.2	0.2706	0.0000	0.0001	2.52
397.8611	0	0.0000	1.0000	0.0000	2.29
397.8611	0.2	0.2706	0.0000	0.0001	2.52

478.8733	-0.2	0.3493	0.0000	0.0000	2.58
478.8733	0	0.0000	1.0000	0.0000	2.29
478.8733	0.2	0.3493	0.0000	0.0000	2.58
483.3368	-0.2	0.4919	0.0000	0.0000	2.64
483.3368	0	0.0000	1.0000	0.0000	2.29
483.3368	0.2	0.4068	0.0000	0.0000	2.55
507.1765	-0.4	0.2548	0.0000	0.0000	2.33
507.1765	-0.2	0.0635	0.0845	0.0000	2.39
507.1765	0	0.0000	1.0000	0.0000	2.29
507.1765	0.2	0.0635	0.0845	0.0000	2.07
507.1765	0.4	0.2548	0.0000	0.0000	1.72
520.4343	-0.2	0.2320	0.0001	0.0000	2.45
520.4343	0	0.0000	1.0000	0.0000	2.29
520.4343	0.2	0.2320	0.0001	0.0000	2.45
598.3671	-0.4	0.6662	0.0000	0.1211	2.12
598.3671	-0.2	0.1674	0.0015	0.0308	2.25
598.3671	0	0.0000	1.0000	0.0000	2.29
598.3671	0.2	0.1674	0.0015	0.0308	2.25
598.3671	0.4	0.6662	0.0000	0.1211	2.12
701.9404	-0.2	0.4510	0.0000	0.0000	2.70
701.9404	0	0.0000	1.0000	0.0000	2.29
701.9404	0.2	0.3758	0.0000	0.0000	2.63
702.3578	-0.2	0.5507	0.0000	0.0000	2.79
702.3578	0	0.0000	1.0000	0.0000	2.29
702.3578	0.2	0.5507	0.0000	0.0000	2.79
724.8859	-0.2	0.2190	0.0002	0.0000	2.42
724.8859	0	0.0000	1.0000	0.0000	2.29
724.8859	0.2	0.2190	0.0002	0.0000	2.42
739.4618	-0.2	0.2383	0.0001	0.0000	2.45
739.4618	0	0.0000	1.0000	0.0000	2.29
739.4618	0.2	0.2383	0.0001	0.0000	2.45
756.7988	-0.4	0.4743	0.0000	0.0000	1.91
756.7988	-0.2	0.1182	0.0101	0.0000	2.25
756.7988	0	0.0000	1.0000	0.0000	2.29
756.7988	0.2	0.1182	0.0101	0.0000	2.16
756.7988	0.4	0.4743	0.0000	0.0000	1.90

800.8335	-0.2	0.4178	0.0000	0.0000	2.63
800.8335	0	0.0000	1.0000	0.0000	2.29
800.8335	0.2	0.4861	0.0000	0.0000	2.70
806.1955	-0.2	0.6219	0.0000	0.0016	2.70
806.1955	0	0.0000	1.0000	0.0000	2.29
806.1955	0.2	0.6219	0.0000	0.0016	2.70
821.5424	-0.2	0.4429	0.0000	0.0001	2.63
821.5424	0	0.0000	1.0000	0.0000	2.29
821.5424	0.2	0.4429	0.0000	0.0001	2.63
824.9834	-0.2	0.3289	0.0000	0.0000	2.49
824.9834	0	0.0000	1.0000	0.0000	2.29
824.9834	0.2	0.3289	0.0000	0.0000	2.49
857.9654	-0.4	0.7612	0.0000	0.0236	0.56
857.9654	-0.2	0.1913	0.0006	0.0058	1.88
857.9654	0	0.0000	1.0000	0.0000	2.29
857.9654	0.2	0.1913	0.0006	0.0058	1.88
857.9654	0.4	0.7612	0.0000	0.0236	0.56
918.0738	-0.2	0.4894	0.0000	0.0000	2.44
918.0738	0	0.0000	1.0000	0.0000	2.29
918.0738	0.2	0.4538	0.0000	0.0000	2.41
942.3764	-0.2	0.7283	0.0000	0.0000	2.94
942.3764	0	0.0000	1.0000	0.0000	2.29
942.3764	0.2	0.7283	0.0000	0.0000	2.94
943.5364	-0.2	0.7168	0.0000	0.0000	2.92
943.5364	0	0.0000	1.0000	0.0000	2.29
943.5364	0.2	0.7168	0.0000	0.0000	2.92
952.5406	-0.2	0.2419	0.0001	0.0000	2.28
952.5406	0	0.0000	1.0000	0.0000	2.29
952.5406	0.2	0.2452	0.0001	0.0000	2.29
1060.205	-0.4	0.7919	0.0000	0.0012	2.30
1060.205	-0.2	0.1959	0.0005	0.0003	2.30
1060.205	0	0.0000	1.0000	0.0000	2.29
1060.205	0.2	0.1959	0.0005	0.0003	2.30
1060.205	0.4	0.7919	0.0000	0.0012	2.30
1064.15	-0.2	0.4518	0.0000	0.0000	2.42
1064.15	0	0.0000	1.0000	0.0000	2.29

1064.15	0.2	0.4518	0.0000	0.0000	2.75
1136.71	-0.2	0.3521	0.0000	0.0044	2.48
1136.71	0	0.0000	1.0000	0.0000	2.29
1136.71	0.2	0.3521	0.0000	0.0044	2.48
1192.132	-0.4	0.6522	0.0000	0.0000	2.35
1192.132	-0.2	0.1635	0.0017	0.0000	2.28
1192.132	0	0.0000	1.0000	0.0000	2.29
1192.132	0.2	0.1635	0.0017	0.0000	2.41
1192.132	0.4	0.6522	0.0000	0.0000	2.61
1209.731	-0.2	0.3457	0.0000	0.0085	2.53
1209.731	0	0.0000	1.0000	0.0000	2.29
1209.731	0.2	0.3457	0.0000	0.0085	2.53
1216.186	-0.2	0.6734	0.0000	0.0000	2.62
1216.186	0	0.0000	1.0000	0.0000	2.29
1216.186	0.2	0.7209	0.0000	0.0000	2.67
1295.12	-0.2	0.5402	0.0000	0.0000	2.57
1295.12	0	0.0000	1.0000	0.0000	2.29
1295.12	0.2	0.5402	0.0000	0.0000	2.57
1373.518	-0.2	0.6555	0.0000	0.0000	2.70
1373.518	0	0.0000	1.0000	0.0000	2.29
1373.518	0.2	0.9365	0.0000	0.0000	2.98
1409.915	-0.2	1.0123	0.0000	0.0000	1.46
1409.915	0	0.0000	1.0000	0.0000	2.29
1409.915	0.2	1.0123	0.0000	0.0000	3.13
1425.944	-0.2	0.3167	0.0000	0.0029	2.37
1425.944	0	0.0000	1.0000	0.0000	2.29
1425.944	0.2	0.3167	0.0000	0.0029	2.37
1443.001	-0.2	0.3356	0.0000	0.0000	2.35
1443.001	0	0.0000	1.0000	0.0000	2.29
1443.001	0.2	0.3384	0.0000	0.0000	2.36
1470.613	-0.2	0.9195	0.0000	0.0010	2.79
1470.613	0	0.0000	1.0000	0.0000	2.29
1470.613	0.2	0.9195	0.0000	0.0010	2.79
1492.87	-0.2	0.8849	0.0000	0.0000	2.92
1492.87	0	0.0000	1.0000	0.0000	2.29
1492.87	0.2	0.8849	0.0000	0.0000	2.74

|					
1494.425	-0.2	1.2525	0.0000	0.0007	3.07
1494.425	0	0.0000	1.0000	0.0000	2.29
1494.425	0.2	1.2525	0.0000	0.0007	3.07
1554.02	-0.2	0.3713	0.0000	0.0424	1.94
1554.02	0	0.0000	1.0000	0.0000	2.29
1554.02	0.2	0.3713	0.0000	0.0424	1.94
1663.608	-0.2	0.3702	0.0000	0.0000	2.38
1663.608	0	0.0000	1.0000	0.0000	2.29
1663.608	0.2	0.3702	0.0000	0.0000	2.38
3183.618	-0.2	0.1453	0.0035	0.0000	1.62
3183.618	0	0.0000	1.0000	0.0000	2.29
3183.618	0.2	0.1413	0.0041	0.0000	1.61
3186.633	-0.2	0.0605	0.0950	0.0022	1.52
3186.633	0	0.0000	1.0000	0.0000	2.29
3186.633	0.2	0.0605	0.0950	0.0022	1.52
3186.914	-0.2	0.1676	0.0015	0.0871	1.64
3186.914	0	0.0000	1.0000	0.0000	2.29
3186.914	0.2	0.1676	0.0015	0.0871	1.64
3193.241	-0.2	0.0863	0.0348	0.0000	1.69
3193.241	0	0.0000	1.0000	0.0000	2.29
3193.241	0.2	0.0863	0.0348	0.0000	1.40
3197.959	-0.2	0.1466	0.0033	0.0000	1.61
3197.959	0	0.0000	1.0000	0.0000	2.29
3197.959	0.2	0.1521	0.0027	0.0000	1.62
3200.079	-0.2	0.1216	0.0088	0.1617	1.58
3200.079	0	0.0000	1.0000	0.0000	2.29
3200.079	0.2	0.1216	0.0088	0.1617	1.58
3213.049	-0.2	0.2338	0.0001	0.0079	1.67
3213.049	0	0.0000	1.0000	0.0000	2.29
3213.049	0.2	0.2338	0.0001	0.0079	1.67
3215.206	-0.2	0.2164	0.0002	0.0000	1.49
3215.206	0	0.0000	1.0000	0.0000	2.29
3215.206	0.2	0.2164	0.0002	0.0000	1.83
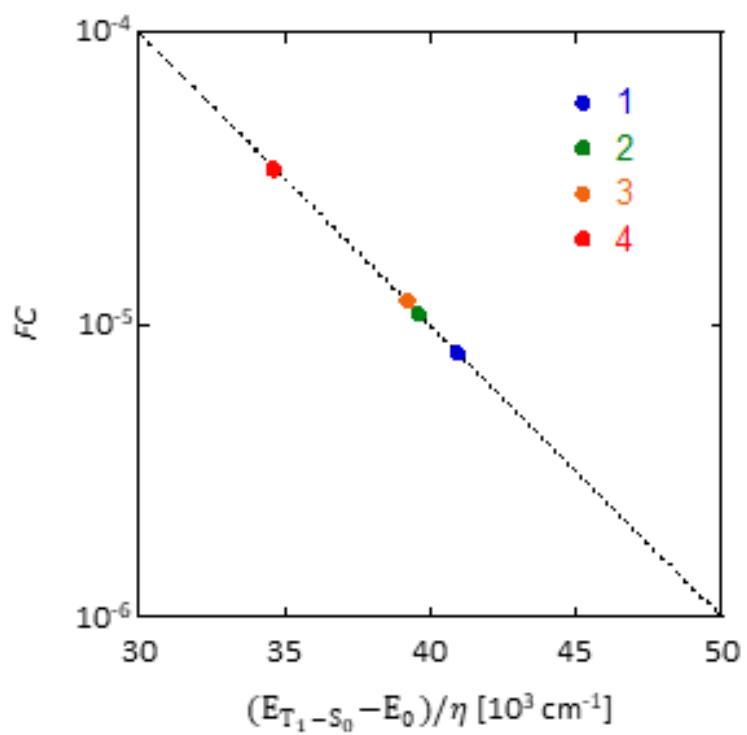
Figure S25. Relationship between *FC* and $(E_{T_1-S_0} - E_0)/\eta$ to convert from $E_{T_1-S_0}$ and η to *FC* for protonated chromophores.
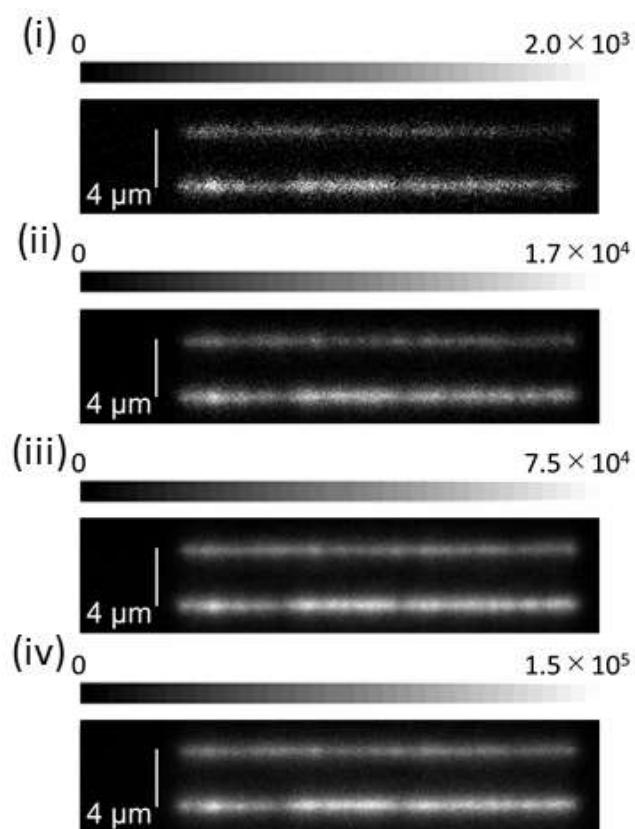
Figure S26. Steady state emission images of sample 3D under 445 nm-excitation with difference in irradiance. Excitation power at 445 nm: (i) 2.6×10^{-1} mW/cm^2, (ii) 3.5×10^0 mW/cm^2, (iii) 4.4×10^1 mW/cm^2 and (iv) 1.6×10^2 mW/cm^2.
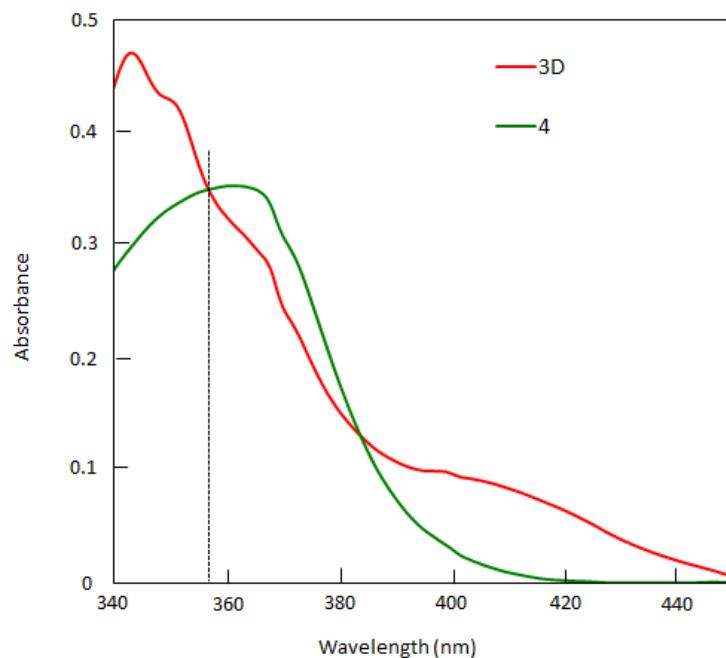
Figure S27. Absorption spectra of sample 3D and sample 4 used for demonstration in Figure 6f.

Supporting Movies (S1−S3)

In Movies S1−S3, a camera (1200D, Canon, India) was used to record the videos. All movie backgrounds and camera conditions remained unchanged. The following provides detailed information.

Movies S1. Video of pRTP emission from **2** under room light. Excitation power density at 360 nm was 3.94 mW cm^{-2}. Power density of the room light was 0.05 mW cm^{-2} calculated by photons of 532 nm. Faint-yellow pRTP emission detected immediately after ceasing the excitation source and almost vanished after 3 s.

Movies S2. Video of pRTP emission from **4** under room light. Excitation power density at 360 nm was 3.94 mW cm^{-2}. Power density of the room light was 0.05 mW cm^{-2} calculated by photons of 532 nm. Faint-yellow pRTP emission detected immediately after ceasing the excitation source and almost vanished after 3 s.

Movies S3. Video of pRTP emission from **3D** under room light. Excitation power density at 360 nm was 3.94 mW cm^{-2}. Power density of the room light was 0.05 mW cm^{-2} calculated by photons of 532 nm. Bright-yellow pRTP emission detected immediately after ceasing the excitation source and it remained after 3 s.

S7. Supporting Reference

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