

## ELECTRONIC SUPPORTING INFORMATION

### Control of solid-state chiral optical properties of chiral supramolecular organic fluorophore consisting of 1-pyrenesulfonic acid and chiral amine molecules

Yoshitane Imai,<sup>a\*</sup> Katuzo Murata,<sup>a</sup> Yoko Nakano,<sup>b</sup> Takunori Harada,<sup>c</sup> Takafumi Kinuta,<sup>a</sup> Nobuo Tajima,<sup>d</sup> Tomohiro Sato,<sup>c</sup> Michiya Fujiki,<sup>b</sup> Reiko Kuroda,<sup>c,e</sup> and Yoshio Matsubara<sup>a\*</sup>

<sup>a</sup> *Department of Applied Chemistry, Faculty of Science and Engineering, Kinki University, 3-4-1 Kowakae, Higashi-Osaka, 577-8502, Japan.*

<sup>b</sup> *Graduate School of Materials Science, Nara Institute of School and Technology, Takayama, Ikoma, Nara, 630-0192, Japan.*

<sup>c</sup> *JST ERATO-SORST Kuroda Chiromorphology Team, 4-7-6, Komaba, Meguro-ku, Tokyo, 153-0041, Japan.*

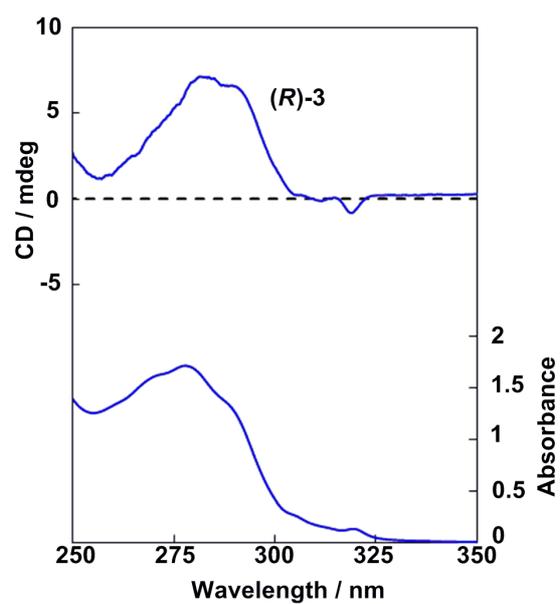
<sup>d</sup> *First-Principles Simulation Group, Computational Materials Science Center, NIMS, Sengen, Tsukuba, Ibaraki, 305-0047, Japan.*

<sup>e</sup> *Department of Life Sciences, Graduate School of Arts and Sciences, The University of Tokyo, 3-8-1 Komaba, Meguro-ku, Tokyo, 153-8902, Japan.*

\*Corresponding author. Tel.: +81 06 6730 5880x5241; fax: +81 06 6727 2024;

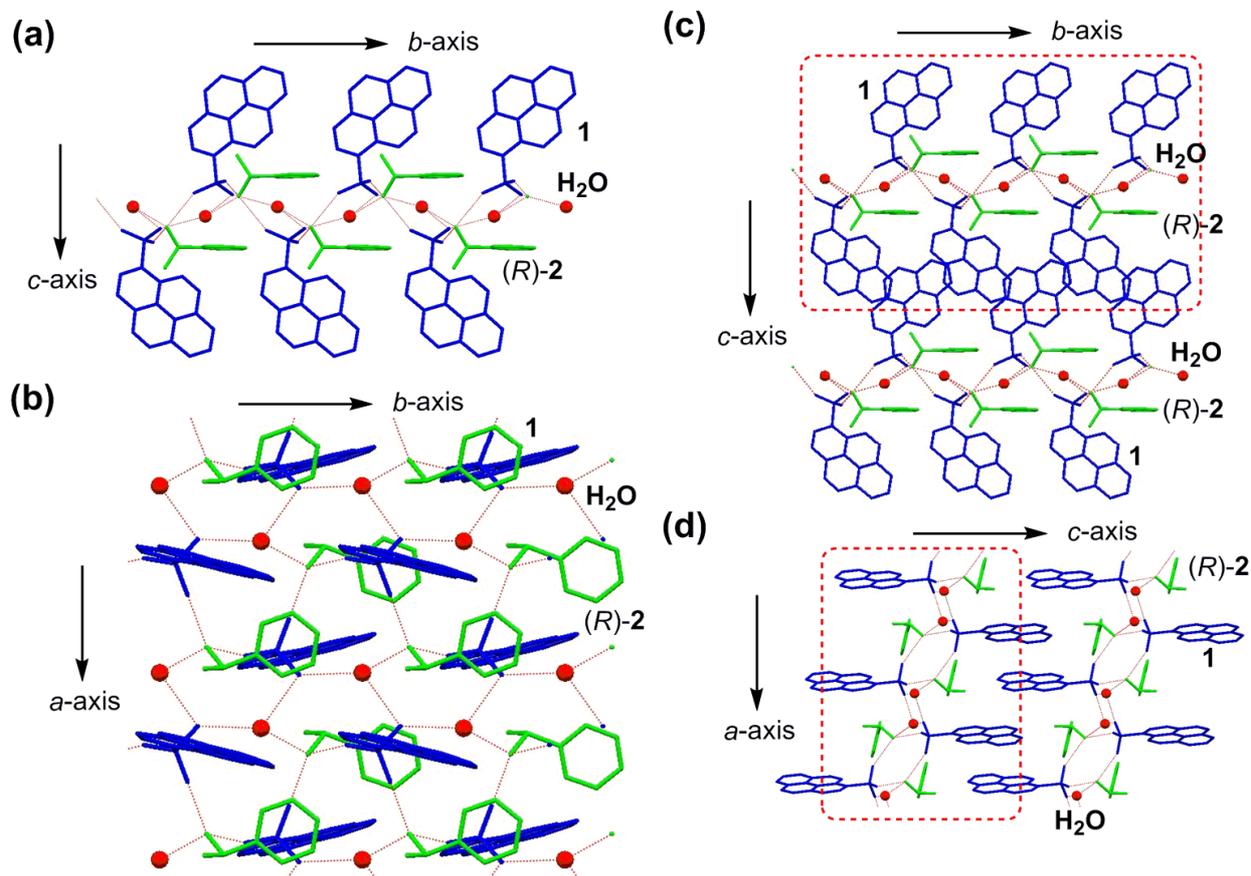
e-mail: (Y.I.) [y-imai@apch.kindai.ac.jp](mailto:y-imai@apch.kindai.ac.jp), (Y.M.) [y-matsu@apch.kindai.ac.jp](mailto:y-matsu@apch.kindai.ac.jp)

Fig. S1



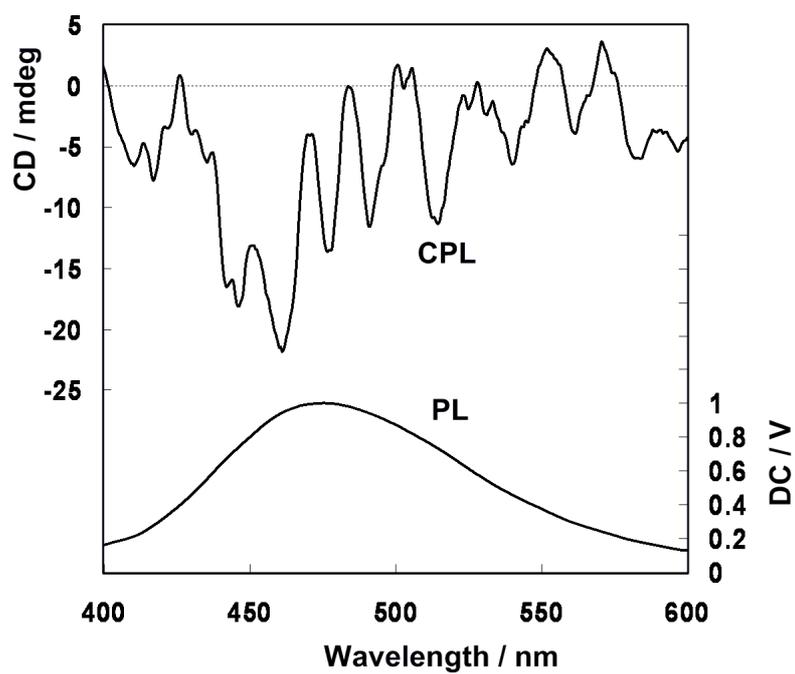
**Fig. S1.** Solid-state CD and absorption spectra of (*R*)-**3** (measured using KBr pellet).

Fig. S2



**Fig. S2.** Crystal structure of chiral complex **I**. Molecules of **1** and *(R)*-**2** are shown in blue and green, respectively. Water molecules are shown in red balls. The dotted borders indicate the 2D layered network structure. (a) Extracted 2D layered network structural unit observed along the *a*-axis. (b) View along the *c*-axis. (c) Packing structure comprising 2D layered network structure observed along the *a*-axis. (d) Packing structure observed along the *b*-axis.

Fig. S3



**Fig. S3.** Solid-state CPL and photoluminescence (PL) spectra of complex **I** (measured using a KBr pellet).