Supporting Information

On chirality induction in the crystalline solid-containing sandwich-type [Ln(α-PW$_{11}$O$_{39)2}$]$^{11-}$ polyoxotungstate and proline

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Figure Captions

Figure S1

The IR spectra of **1-12** except for **2-L**, **2-D**, and **9-L**; (a) **1**, (b) **3**, (c) **4**, (d) **5**, (e) **6**, (f) **7**, (g) **8**, (h) **9-D**, (i) **10**, (j) **11**, (k) **12**.

Figure S2

The CD spectra of the aqueous solutions of **3**, **4**, **7**, and **8**; (a) **3**, (b) **4**, (c) **7**, (d) **8**. The concentration of $[Ln(\alpha\text{-}PW_{11}O_{39})_2]^{11-}$ (Ln = Nd for **3**, Sm for **4**, Tb for **7**, and Dy for **8**) in the solution is *c.a.* 20 mM. The f-f transitions of Ln^{3+} in $[Ln(\alpha\text{-}PW_{11}O_{39})_2]^{11-}$ are assigned according to the following three references.

i) P. Nachimuthu, R. Jagannathan, V. N. Kumar, D. N. Rao, *J. Non-Cryst. Solids*, **1997**, 217, 215.

ii) S. But, S. Lis, R. V. Deun, T. N. Parac-Vogtm C. Görller-Walrand, K. Binnemans, *Spectrochim. Acta A*, **2005**, 62, 478.

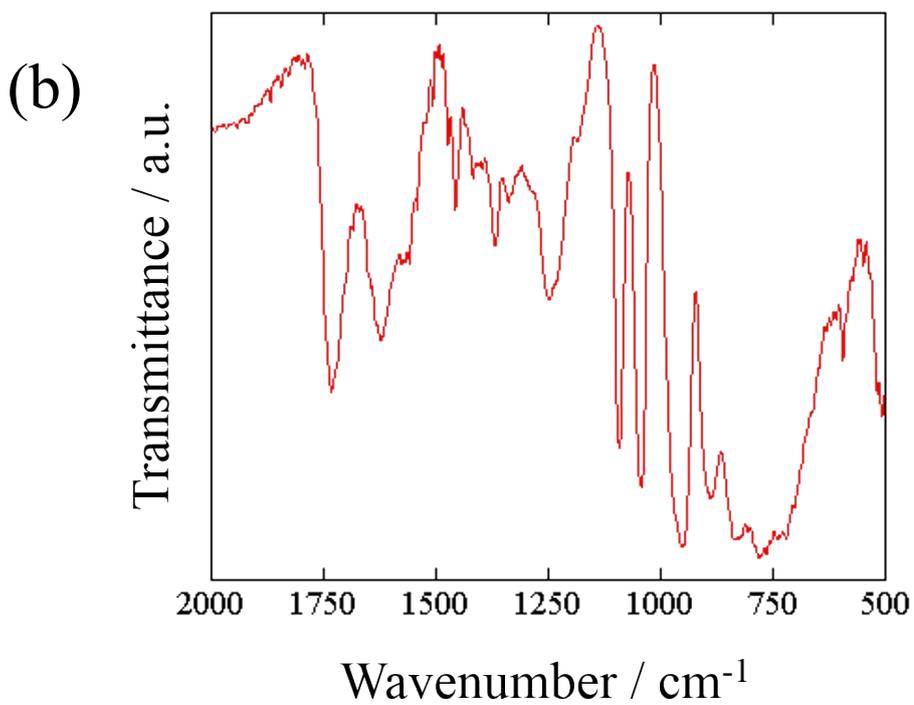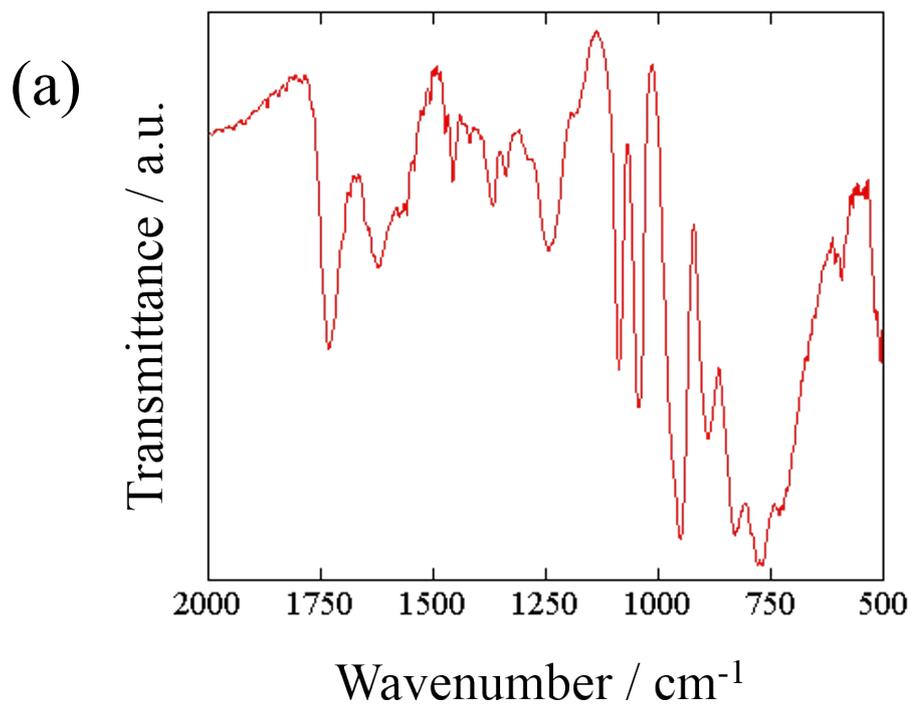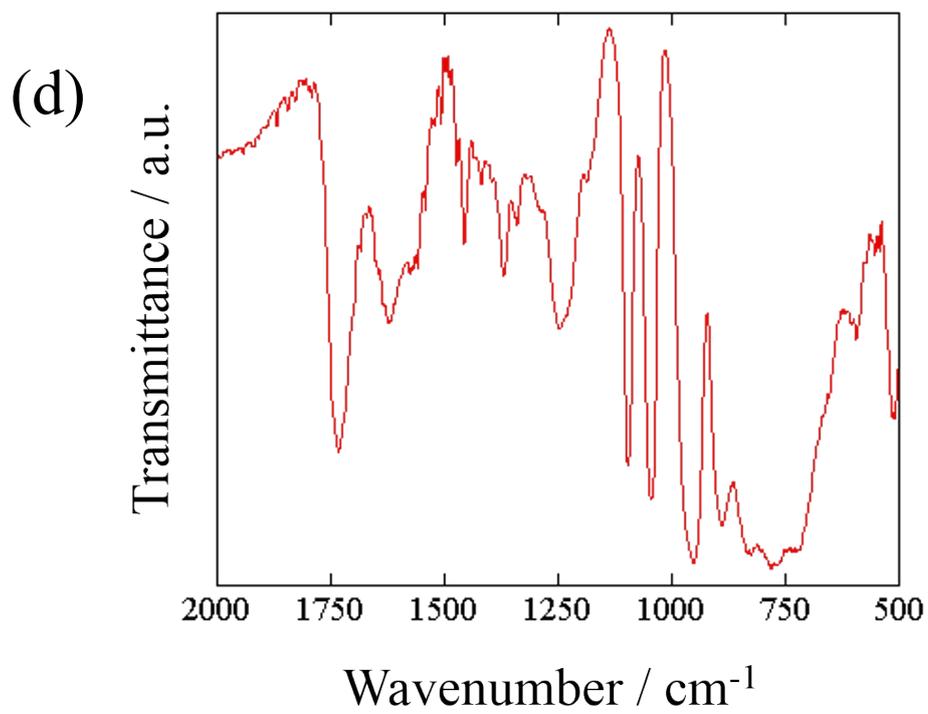iii) T. Yamase, H. Naruke, *J. Phys. Chem. B*, **1999**, 103, 8850.

Figure S1

(a)

Transmittance / a.u.
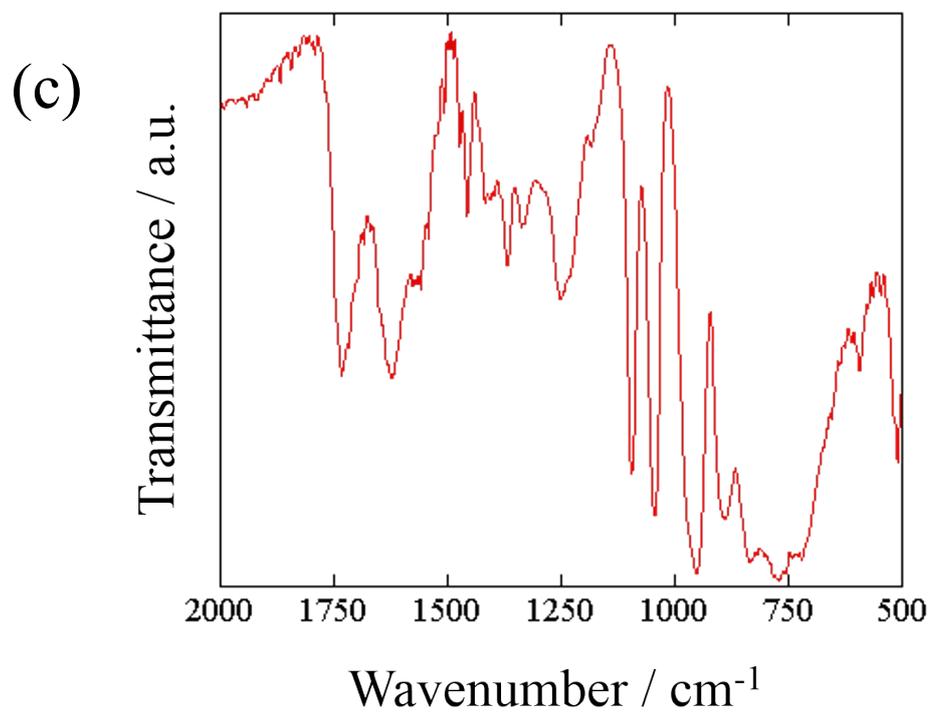
2000 1750 1500 1250 1000 750 500

Wavenumber / cm^{-1}

(b)

Transmittance / a.u.

2000 1750 1500 1250 1000 750 500

Wavenumber / cm^{-1}

(c)

Transmittance / a.u.

Wavenumber / cm⁻¹

(d)

Transmittance / a.u.

Wavenumber / cm⁻¹

Figure S1 (Continued)

(e)

(f)
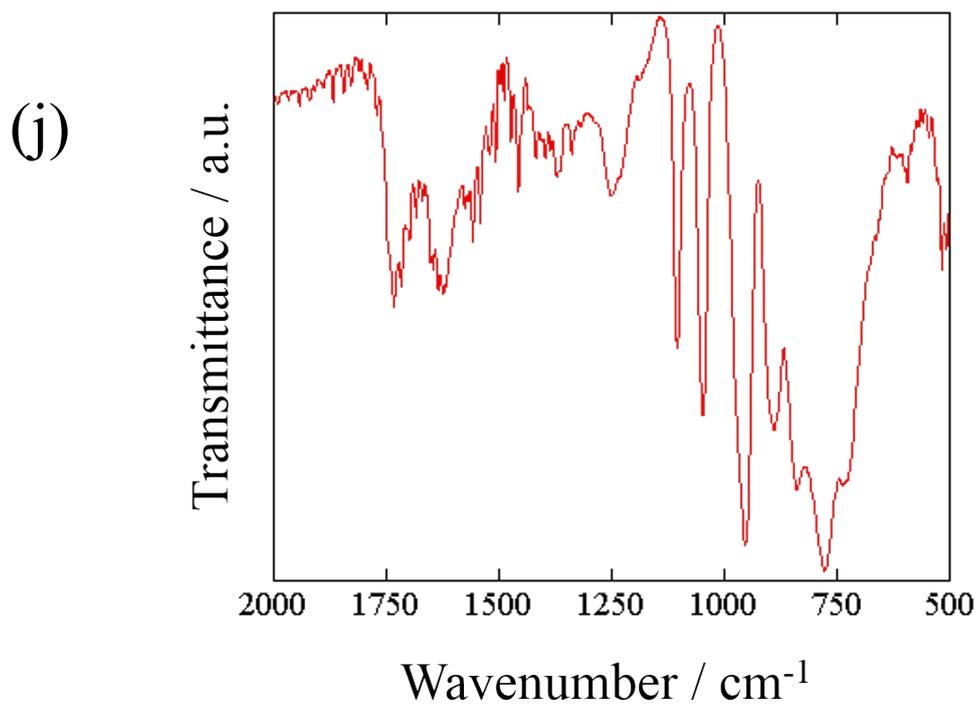
Figure S1 (Continued)

(g)

Wavenumber / cm^{-1}
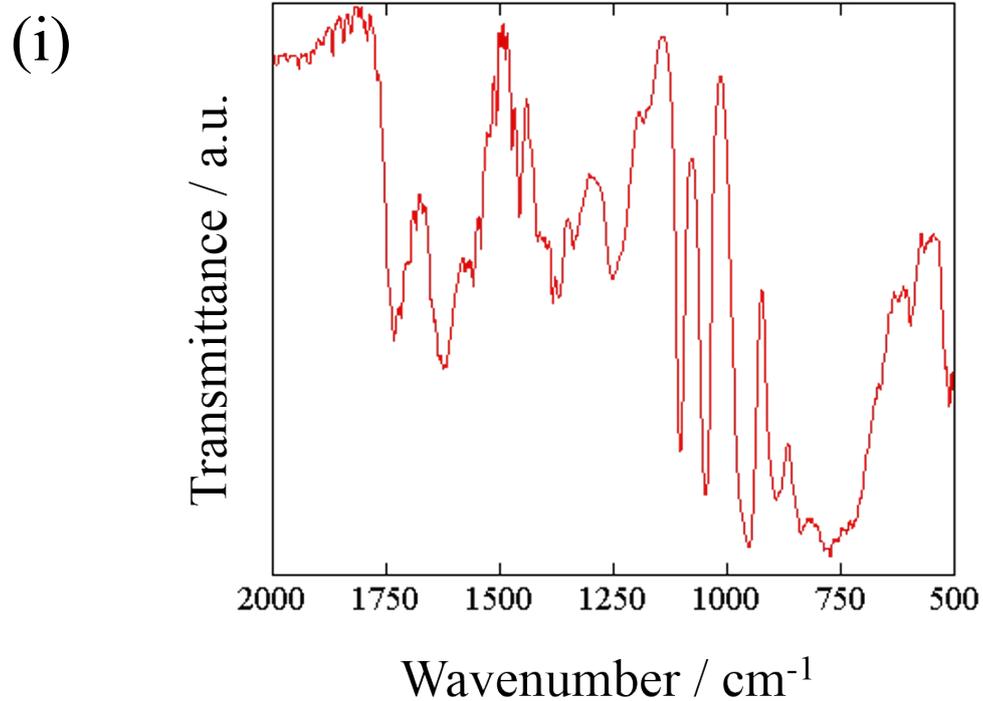
(h)

Wavenumber / cm^{-1}

(i)

(j)
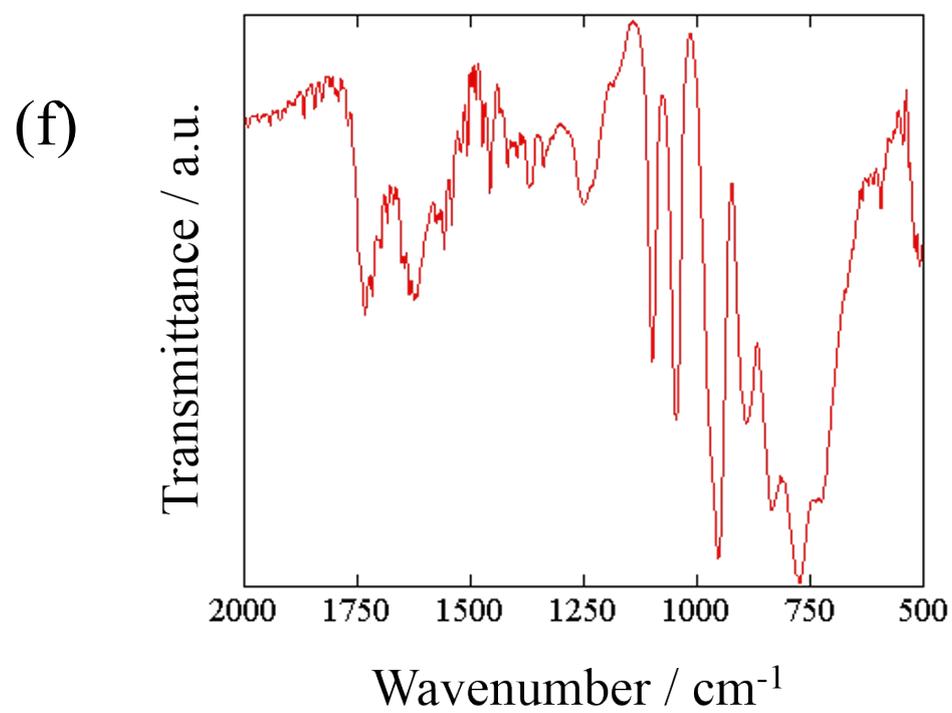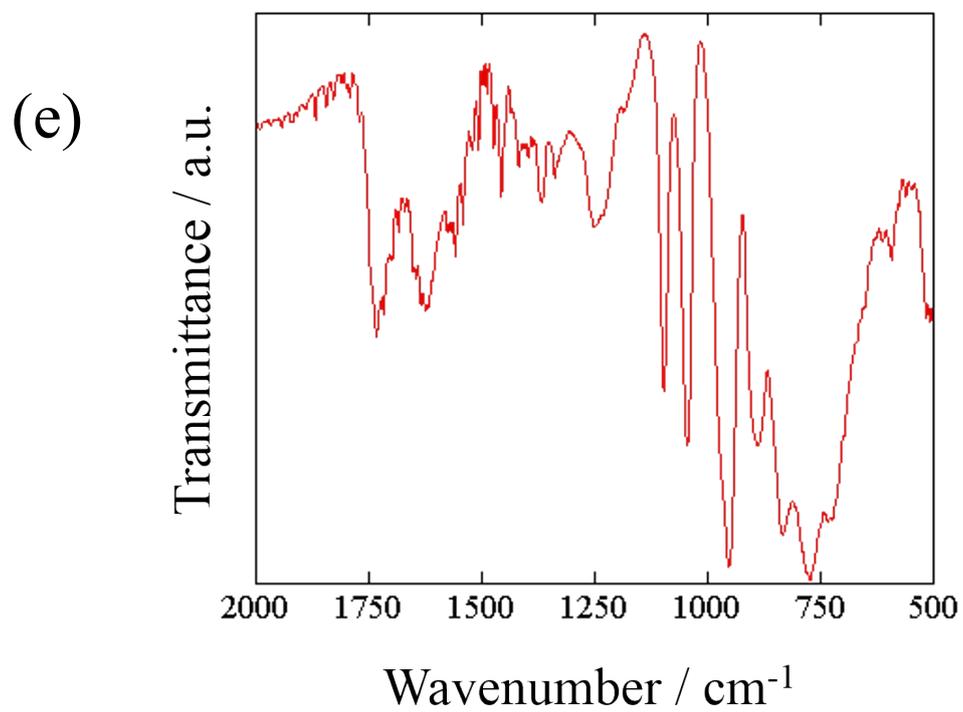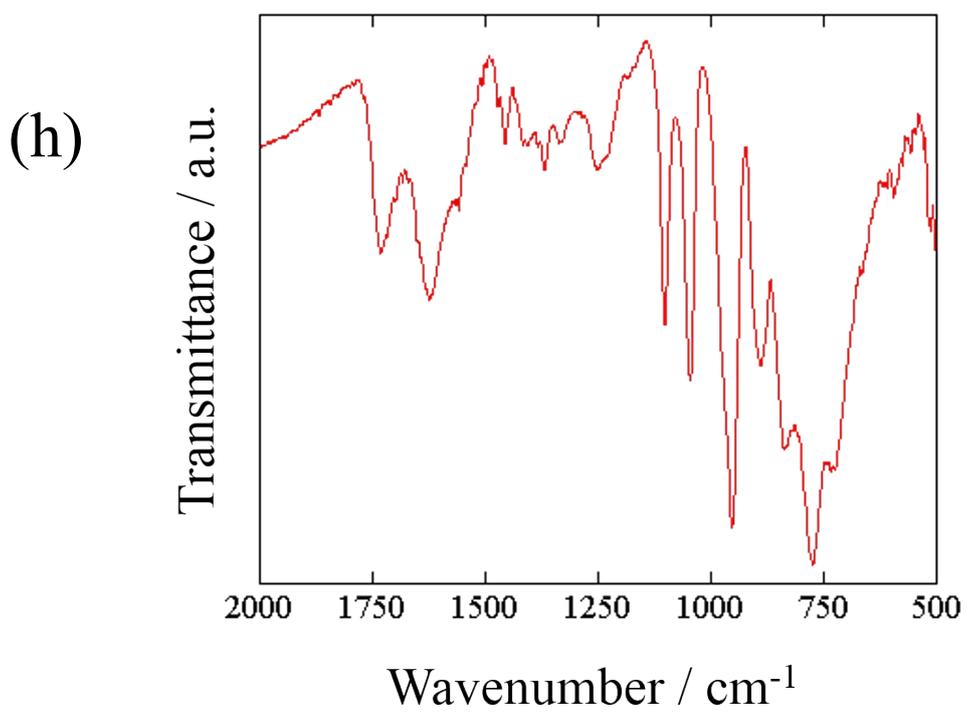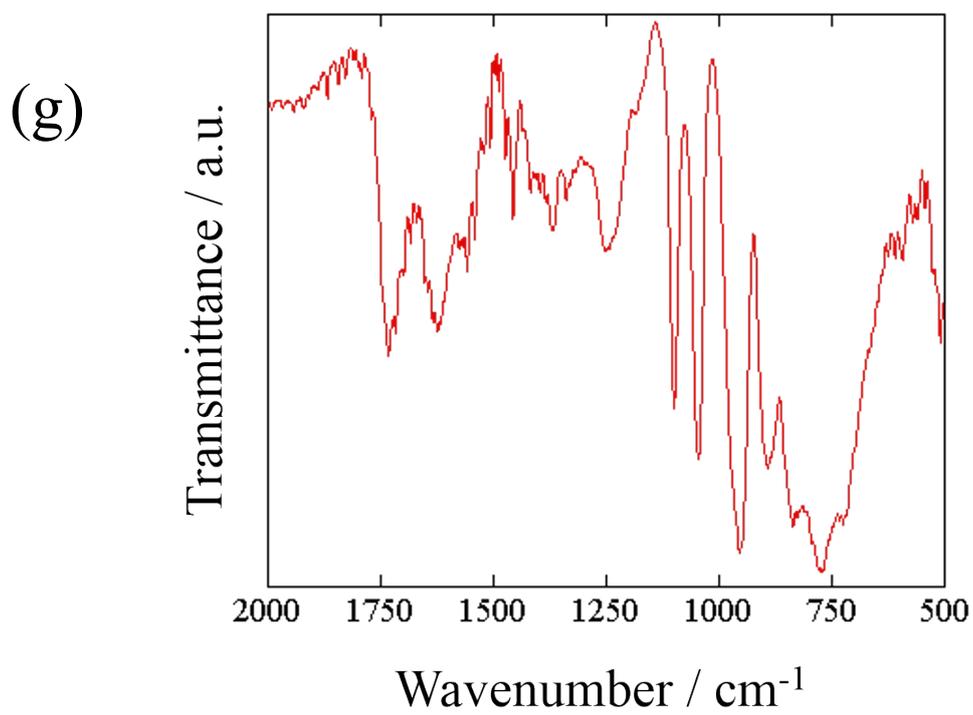
Figure S1 (Continued)

(k)

Figure S2

(a)

Figure S2 (Continued)

(b)
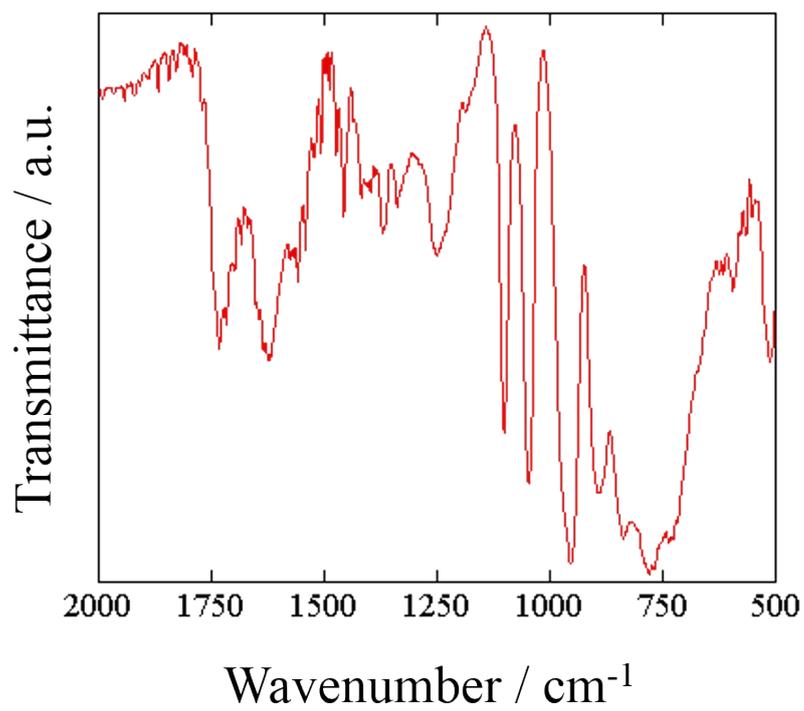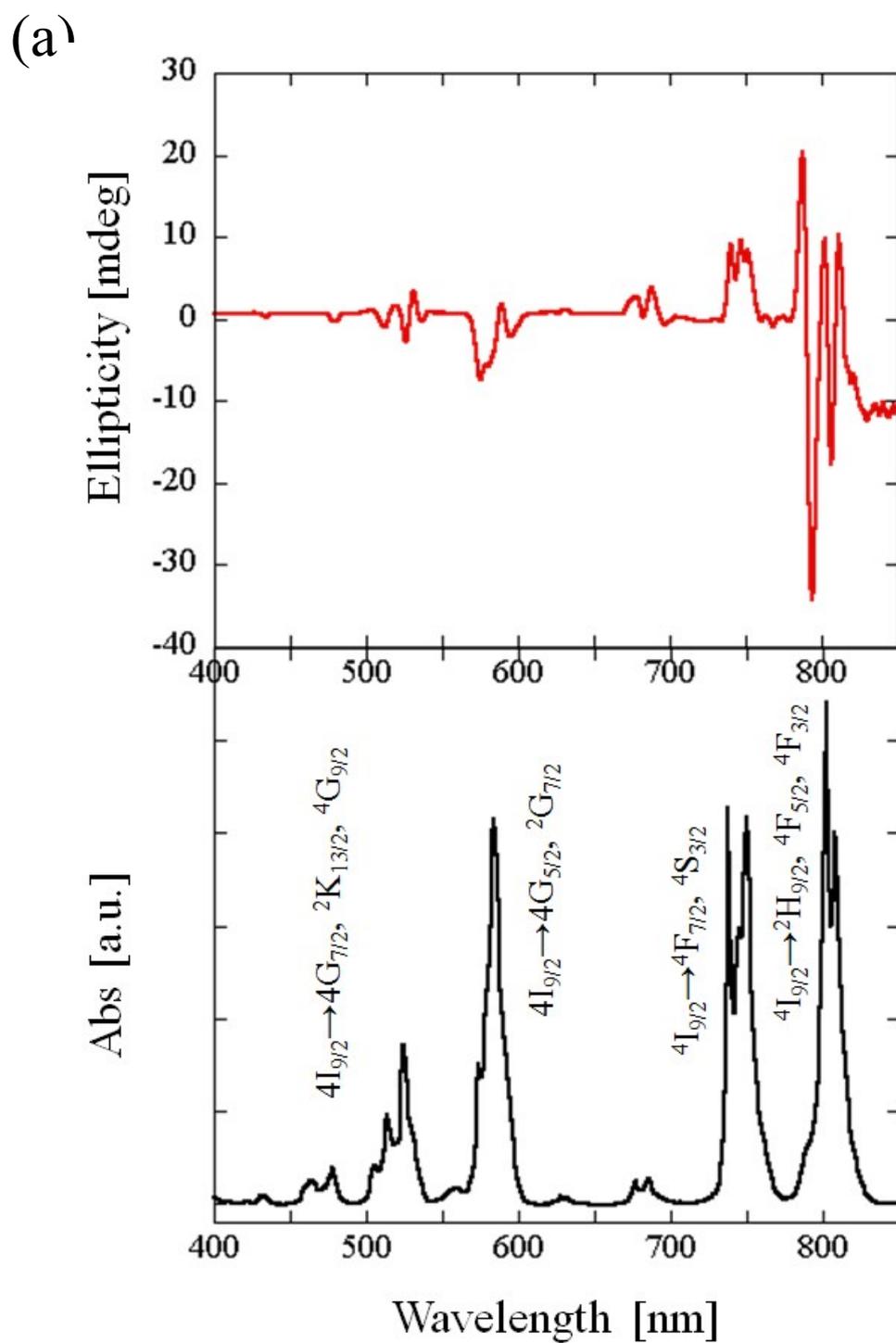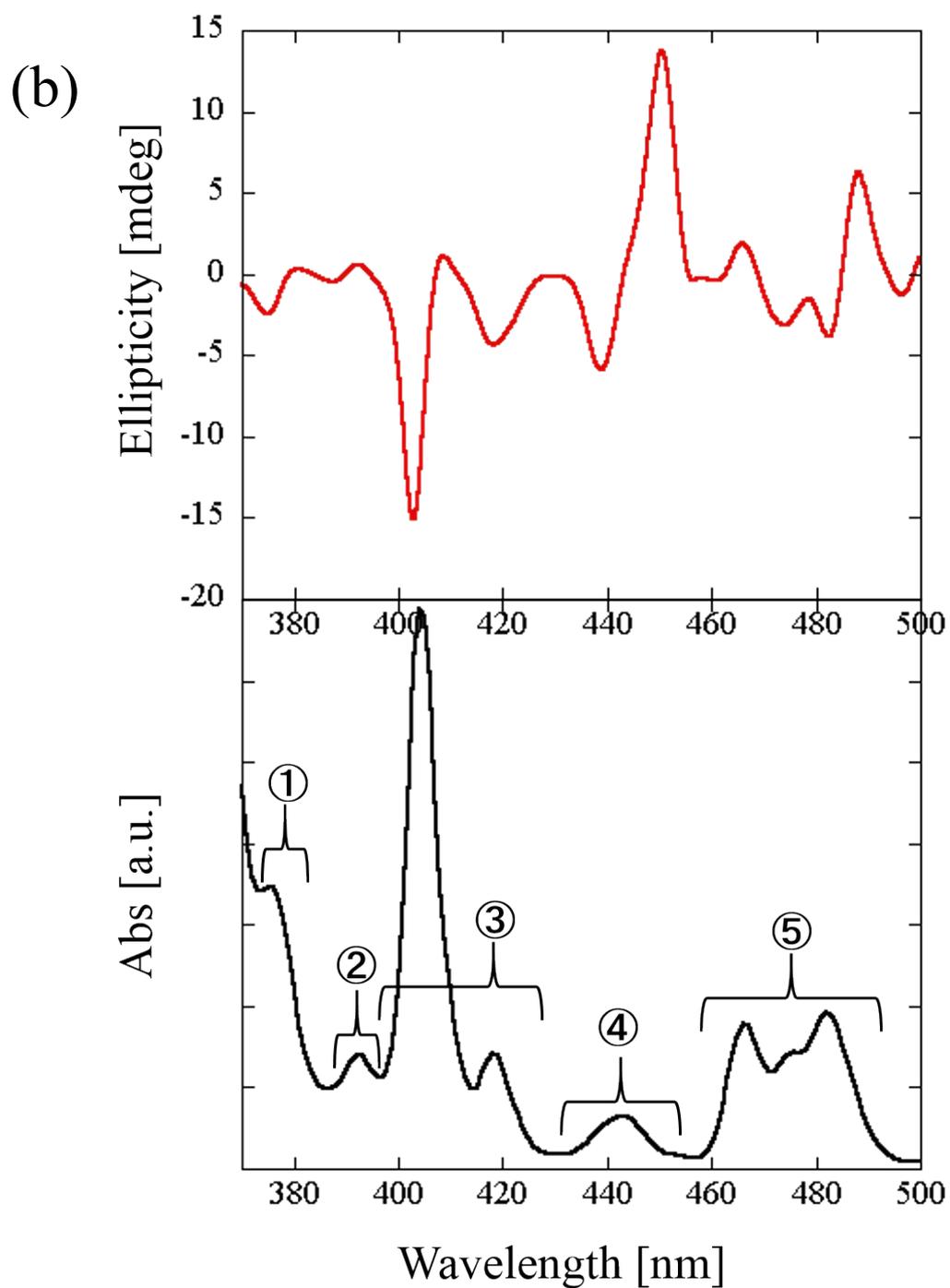
① $^6H_{5/2} \rightarrow {}^4D_{3/2}, ({}^4D, {}^6P)_{5/2}, {}^4H_{7/2}$
② $^6H_{5/2} \rightarrow {}^4D_{1/2}, {}^6P_{7/2}, {}^4F_{9/2}, {}^4L_{17/2}, {}^4K_{13/2}$
③ $^6H_{5/2} \rightarrow ({}^6P, {}^4P)_{5/2}, {}^4L_{13/2}, {}^4F_{7/2}, {}^6P_{3/2}, {}^4K_{11/2}, {}^4L_{15/2}, {}^4G_{11/2}$
④ $^6H_{5/2} \rightarrow {}^4F_{5/2}, {}^4M_{17/2}, {}^4G_{9/2}, {}^4I_{15/2}$
⑤ $^6H_{5/2} \rightarrow {}^4G_{7/2}, {}^4I_{9/2}, {}^4M_{15/2}, {}^4I_{11/2}, {}^4I_{13/2}$

(c)

Figure S2 (Continued)

(d)

$^6H_{15/2} \rightarrow {}^4M_{19/2}$

$^6H_{15/2} \rightarrow {}^4I_{13/2}$

$^6H_{15/2} \rightarrow {}^4G_{11/2}$

$^6H_{15/2} \rightarrow {}^4I_{15/2}$

$^6H_{15/2} \rightarrow {}^4F_{9/2}$

Wavelength [nm]