

Electronic Supplementary Information for
Temperature-Dependent Dynamics of Water in Aqueous NaPF₆
Solution

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Decomposition of FTIR spectra into three contributions (OD_w, OD_c, and OD_A)

$$\begin{aligned} S(\omega) &= \alpha \cdot S_{\text{OD}_w}(\omega) + S_{\text{OD}_c}(\omega) + S_{\text{OD}_A}(\omega) \\ &= \alpha \cdot S_{\text{OD}_w}(\omega) \\ &\quad + A_1 \left\{ m_1 \frac{2}{\pi} \frac{w_1}{4(\omega - \omega_1)^2 - w_1^2} + (1 - m_1) \sqrt{\frac{4 \log 2}{\pi}} \frac{1}{w_1} \exp \left[-4 \log 2 \frac{(\omega - \omega_1)^2}{w_1^2} \right] \right\} \\ &\quad + A_2 \left\{ m_2 \frac{2}{\pi} \frac{w_2}{4(\omega - \omega_2)^2 - w_2^2} + (1 - m_2) \sqrt{\frac{4 \log 2}{\pi}} \frac{1}{w_2} \exp \left[-4 \log 2 \frac{(\omega - \omega_2)^2}{w_2^2} \right] \right\} \end{aligned}$$

where α is the scaling factor for the OD stretch band of neat water (OD_w). The second and third terms are the pseudo Voigt profiles to fit the OD_c and OD_A peaks, respectively. The results of decomposition of FTIR spectra into three contributions are shown in Figures S1.

Figure S1.

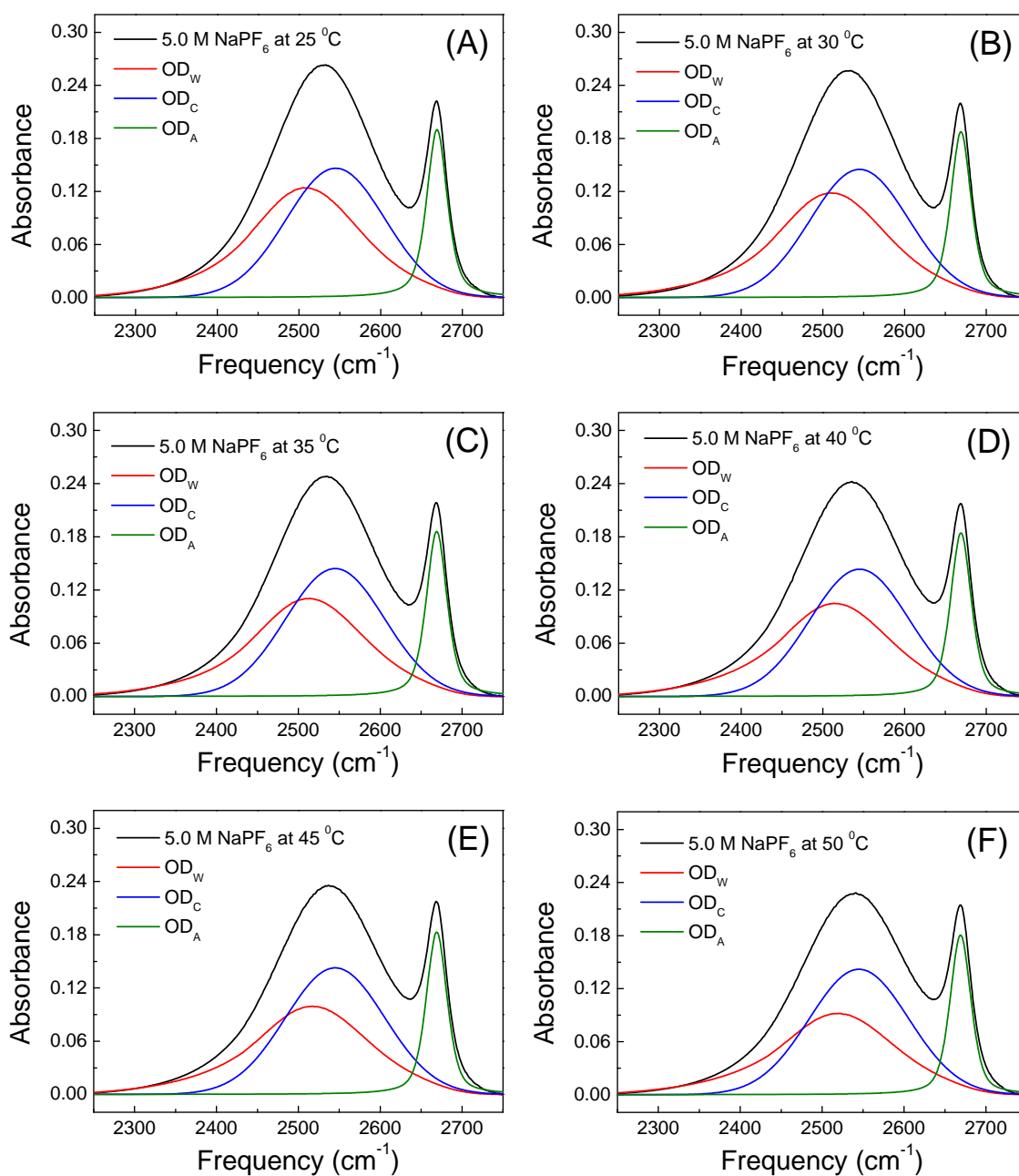


Figure S1. Decomposition of temperature-dependent FTIR spectra of aqueous 5.0 M NaPF₆ solution into three contributions (OD_W, OD_C, and OD_A).