Supporting Information for

Low Frequency Mode Activity of Heme: Femtosecond Coherence Spectroscopy of Iron Porphine Halides and Nitrophorin

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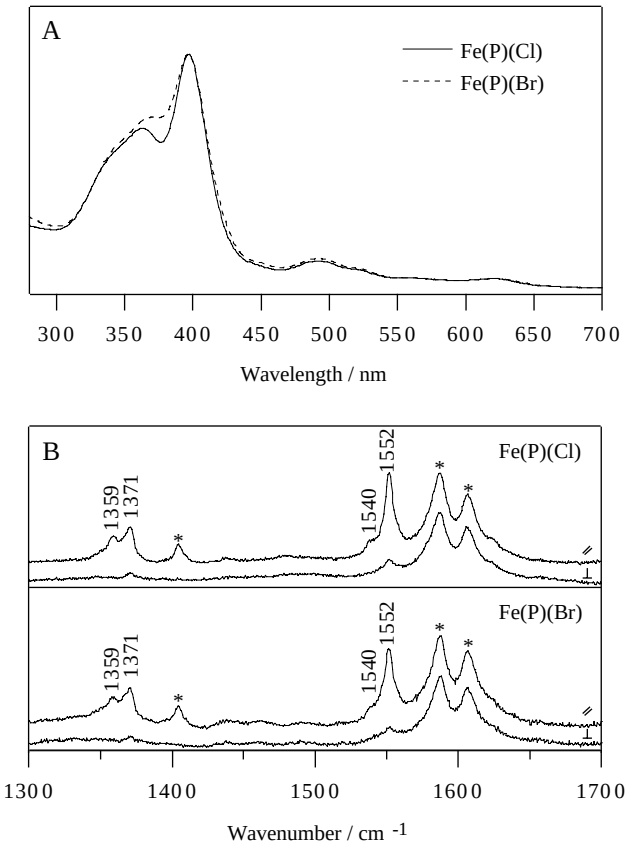

Fig. S1. (A) Absorption spectra and (B) high-frequency polarized Raman spectra of Fe(P)(X). The Raman spectra were measured with excitation at 413.1 nm. Asterisks indicate benzene bands.

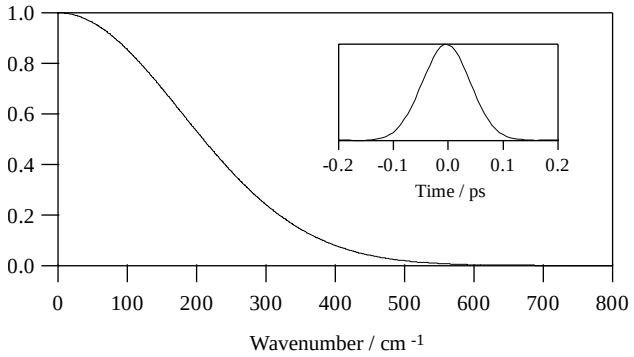

Fig. S2. Fourier transform spectrum of the pulse with a FWHM (full width at half-maximum) of 70 fs. The inset shows a typical autocorrelation trace in the present FCS experiments.

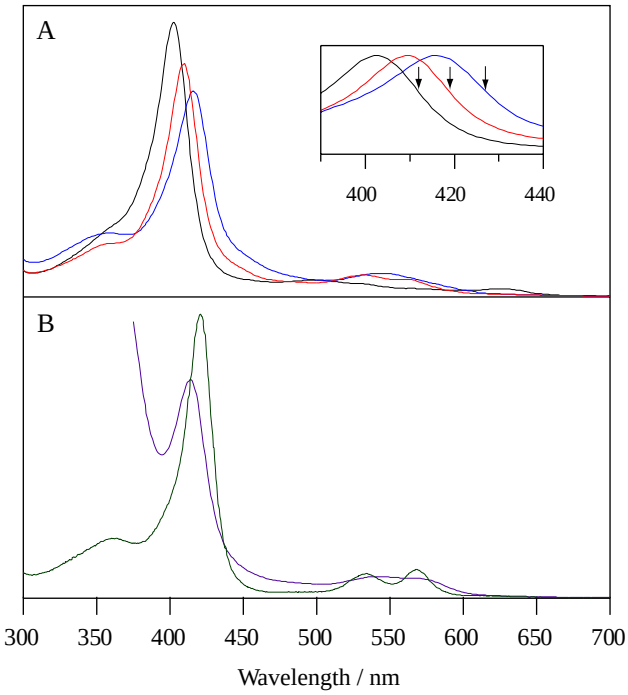

Fig. S3. (A) Absorption spectra of NP4(Fe^{3+})-H_2O (black), NP4(Fe^{3+})-4IPzH (red), and NP4(Fe^{3+})-CN (blue). The Soret region of each spectrum, normalized at the Soret maximum, is shown in the inset. Arrows indicate the excitation wavelengths used for the FCS measurements. (B) Absorption spectra of NP4(Fe^{3+})-NO (green) and NP4(Fe^{2+})-NO (purple).

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