Supporting Information

Normal Mode Analysis of the Spectral Density of the Fenna-Matthews-Olson Light-Harvesting Protein: How the Protein Dissipates the Excess Energy of Excitons

Thomas Renger,[*,†] Alexander Klinger,[†] Florian Steinecker,[†] Marcel Schmidt am Busch,[†] Jorge Numata,[‡] and Frank Müh[†]

Institut für Theoretische Physik, Johannes Kepler Universität Linz, Altenberger Str. 69, 4040 Linz, Austria, and Institut für Chemie und Biochemie, Freie Universität Berlin, Fabeckstr. 36A, D-14195 Berlin
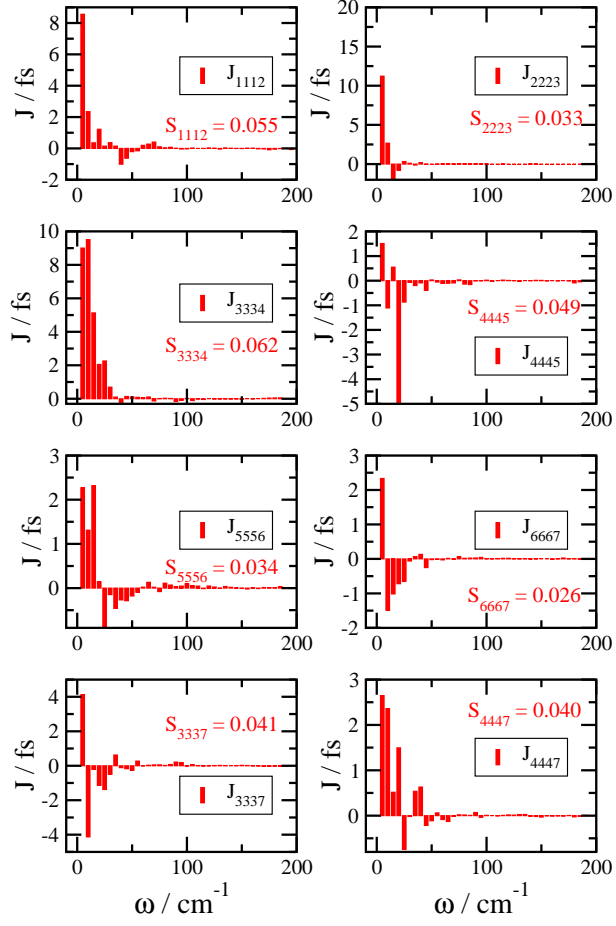
E-mail: thomas.renger@jku.at

[*]To whom correspondence should be addressed
[†]Institut für Theoretische Physik, Johannes Kepler Universität Linz, Altenberger Str. 69, 4040 Linz, Austria
[‡]Institut für Chemie und Biochemie, Freie Universität Berlin, Fabeckstr. 36A, D-14195 Berlin

Figure S1: Spectral densities $J_{mmkl}(\omega)$ characterizing the correlation in fluctuations of site energies of pigment m with fluctuations of excitonic couplings between pigments k and l. The $J_{mmkl}(\omega)$ with the largest generalized Huang-Rhys factors S_{mmkl} (eq 39) are shown.
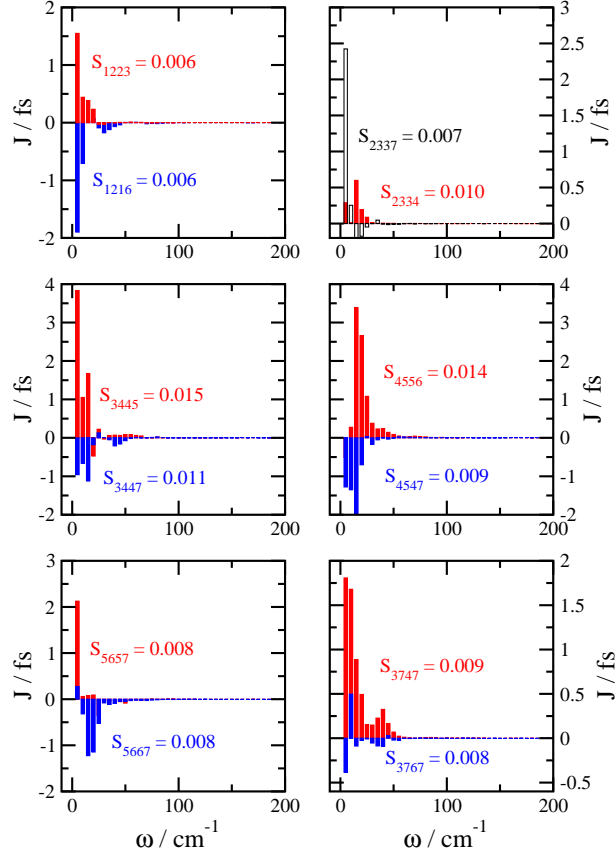
Figure S2: Spectral densities $J_{mnkl}(\omega)$ characterizing the correlations of excitonic couplings between pigments m and n with those of pigments k and l are shown for those with the largest generalized Huang Rhys factors S_{mnkl} (eq 39).