Supporting Information

Near-IR MCD of the Non-Heme Ferrous Active Site in Naphthalene 1,2-Dioxygenase: Correlation to Crystallography and Structural Insight into the Mechanism of Rieske Dioxygenases

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Figure S1. The overlay plot of the MCD specta of NDOox-Naph (navy) and NDOred-Naph (aqua)



Figure S2. Deconvolution of the MCD spectrum of NDOred-Naph: **1** and **2** are 8890 and 10010 cm⁻¹, respectively.



Figure S3. Deconvolution of the MCD spectrum of NDOox located two bands at 7950 cm⁻¹ and 10700 cm⁻¹ : **1** and **2** are 7810 and 10200 cm⁻¹, respectively.



Figure S4. Deconvolution of the MCD spectrum of NDOox located two bands at 8060 cm⁻¹ and 10350 cm⁻¹: **1** and **2** are 8810 and 10010 cm⁻¹, respectively. At 8810 cm⁻¹, the contribution from the 8060 cm⁻¹ and 10010 cm⁻¹ bands are 75 % and 25%, respectively.



Figure S5. 3-fold expanded Figure 2B-1



Figure S6. 3-fold expanded Figure 2B-2



Figure S7. 3-fold expanded Figure 3B



Figure S8. 3-fold expanded Figure 4B-1



Figure S9. 3-fold expanded Figure 4B-2



Figure S10. 3-fold expanded Figure 5B-1



Figure S11. 3-fold expanded Figure 5B-2

Normalized Int.



Figure S12. 3-fold expanded Figure 5C