

Supporting Information for

**Influences on the Rotated Structure of the Diiron Dithiolate Complexes:
Electronic Asymmetry vs. Secondary Coordination Sphere Interaction**

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	[4](TFA) ₂	[5](OTf) ₂
Empirical formula	C ₇₈ H ₈₀ F ₆ Fe ₄ N ₂ O ₁₂ P ₄ S ₄	C ₇₈ H ₈₄ F ₆ Fe ₄ N ₂ O ₁₄ P ₄ S ₆
Formula weight	1826.96	1927.11
<i>T</i> , K	150(2)	150(2)
Crystal system	Monoclinic	Triclinic
Space group	<i>P</i> 2 ₁ / <i>n</i>	<i>P</i> -1
<i>a</i> , Å	17.133(3)	16.4839(5)
<i>b</i> , Å	13.281(2)	17.0452(5)
<i>c</i> , Å	23.904(4)	21.2654(4)
<i>α</i> , °	90	94.2320(2)
<i>β</i> , °	107.252(8)	108.7318(14)
<i>γ</i> , °	90	113.5410(11)
<i>V</i> , Å ³	5194.5(15)	5045.1(2)
<i>Z</i>	2	2
<i>ρ</i> _{calcd} , Mg m ⁻³	1.168	1.269
<i>μ</i> , mm ⁻¹	0.747	0.814
<i>F</i> (000)	1880	1984
Reflections collected	20998	63604
Independent reflections	9021	17651
<i>R</i> _{int}	0.0900	0.0826
Goodness-of-fit on <i>F</i> ²	1.006	1.064
R1 [<i>I</i> > 2σ(<i>I</i>)] (all data) ^a	0.0759 (0.1371)	0.0791 (0.1309)
wR2 [<i>I</i> > 2σ(<i>I</i>)] (all data) ^b	0.1645 (0.1808)	0.2196 (0.2346)

^a R1 = (Σ||*F*_o|-|*F*_c||)/(Σ|*F*_o|). ^b wR2 = [Σw(*F*_o²-*F*_c²)²/Σw(*F*_o²)²]^{1/2}.