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## **ELECTRONIC SUPPORTING INFORMATION**

## First example of asymmetrical µ-oxo bridged dinuclear iron complex with terpyridine ligand:

## synthesis, crystal structure and electrochemical properties

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Figure S1. Short contacts in complex 1 that are vital for organization into1-dimensional zig-zag chain structure.



Figure S2. One-dimensional zig-zag chain structure in complex 1. Short contacts to molecules responsible for organization were omitted for clarity, green lines represent intra- and intermetallic distances



**Figure S3.** Linear relationship of the anode ( $\blacksquare$ ) and cathode ( $\bullet$ ) peak currents versus the square root of the scanning speed for the complex **2**.  $R^2 = 0.989$  and 0.984 for for ip<sub>a</sub> and ip<sub>c</sub> respectively.



**Figure S4.** The spectroelectrochemical properties of complex **2** in 0.1M TBAClO<sub>4</sub> solution in acetonitrile as a supporting electrolyte by applying: no potential (**•**), +100 (**•**), +200 (**▲**), +300 (**•**), +400 (**•**), +500 (**•**), and 600 (**•**) mV potentials versus Ag/AgCl gel reference electrode held for 30 s per potential. Insert: photographs of the Fe<sup>2+</sup> (left) and Fe<sup>3+</sup> (right) state of **2** by applying a potential for 1 min.



Figure S5. Changes in transmittance of complex 1 measured in anhydrous and deaerated acetonitrile with 0.1 M TBAClO<sub>4</sub> as a supporting electrolyte and monitored at 360 nm when switching between +100 mV and +600 mV potential at 60 s cycles.



Figure S6. CVs of complex 1 measured in anhydrous and deaerated acetonitrile with 0.1 M TBAClO<sub>4</sub> as a supporting electrolyte at different scan rates.



Figure S7. CVs of complex 2 measured in anhydrous and deaerated acetonitrile with 0.1 M  $TBAClO_4$  as a supporting electrolyte at different scan rates.