

## Supplementary Material

### **Syntheses and structure investigations of 3d transition metal complexes with a flexible N<sub>4</sub>O<sub>2</sub>-donor hexadentate Schiff-base ligand**

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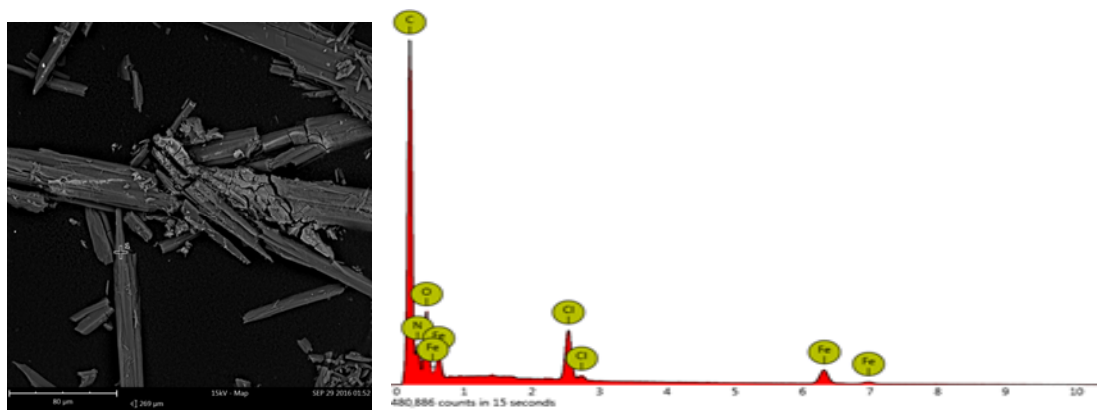
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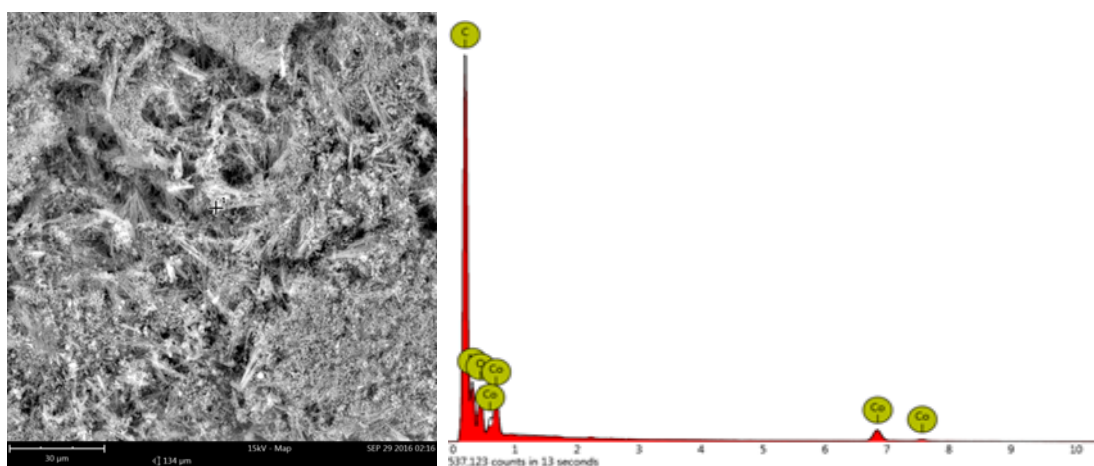
**Figure S10:** FT-IR spectra of complex **2**.

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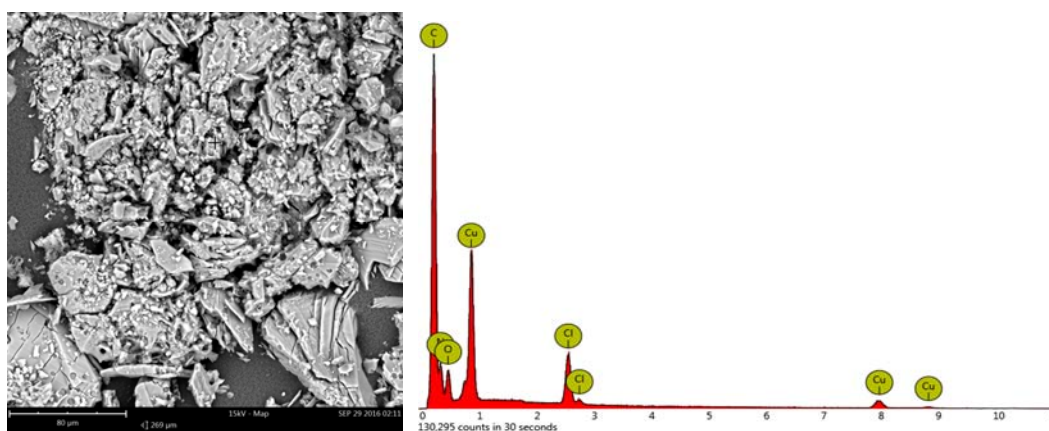
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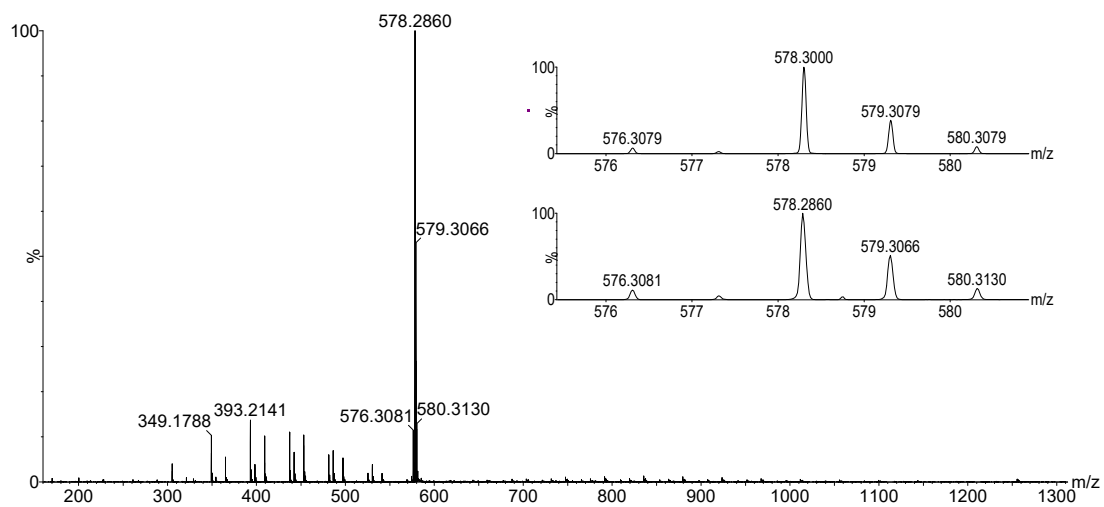
**Figure S1.** A backscattered SEM image (left) and an EDS spectrum (right) of complex 1.



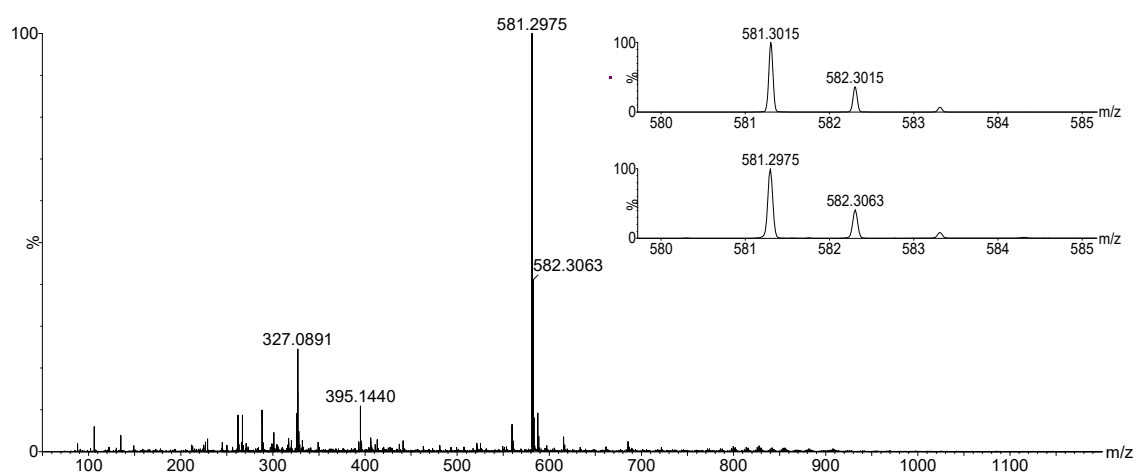
**Figure S2.** A backscattered SEM image (left) and an EDS spectrum (right) of complex 2.



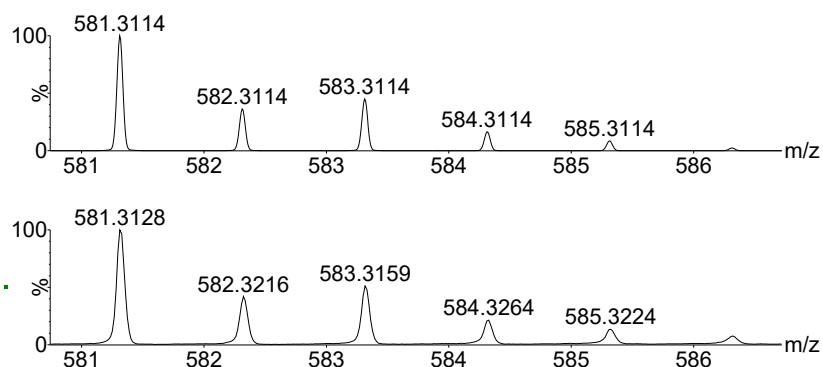
**Figure S3.** A backscattered SEM image (left) and an EDS spectrum (right) of complex 4.



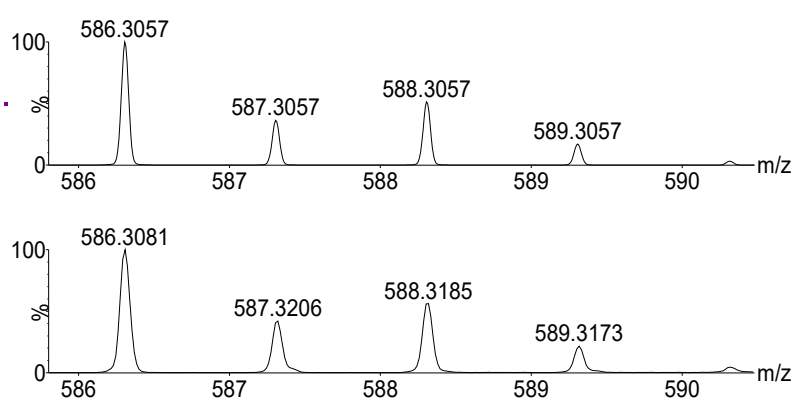
**Figure S4** ESI-HRMS spectrum of **1**. The inset shows the isotope pattern for  $[\text{Fe}+\text{L}]^+$  (top calculated; bottom found).



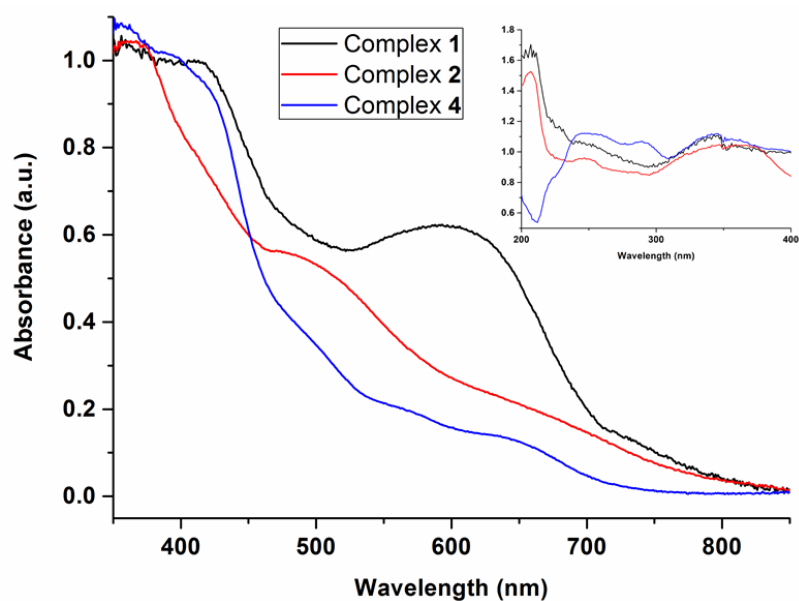
**Figure S5** ESI-HRMS spectrum of **2**. The inset shows the isotope pattern for  $[\text{Co}+\text{L}]^+$  (top calculated; bottom found).



**Figure S6** ESI-HRMS spectrum of the isotope pattern for  $\{[\text{Ni}+\text{HL}]^+\}$  (top calculated; bottom found).



**Figure S7** ESI-HRMS spectrum of the isotope pattern for  $\{[\text{Cu}+\text{L}^2]^+\}$  (top calculated; bottom found).



**Figure S8.** Solid state UV-vis absorption spectra of **1-2** and **4** in nujol. The inset shows the relatively high intensity transition in region 200-400 nm.

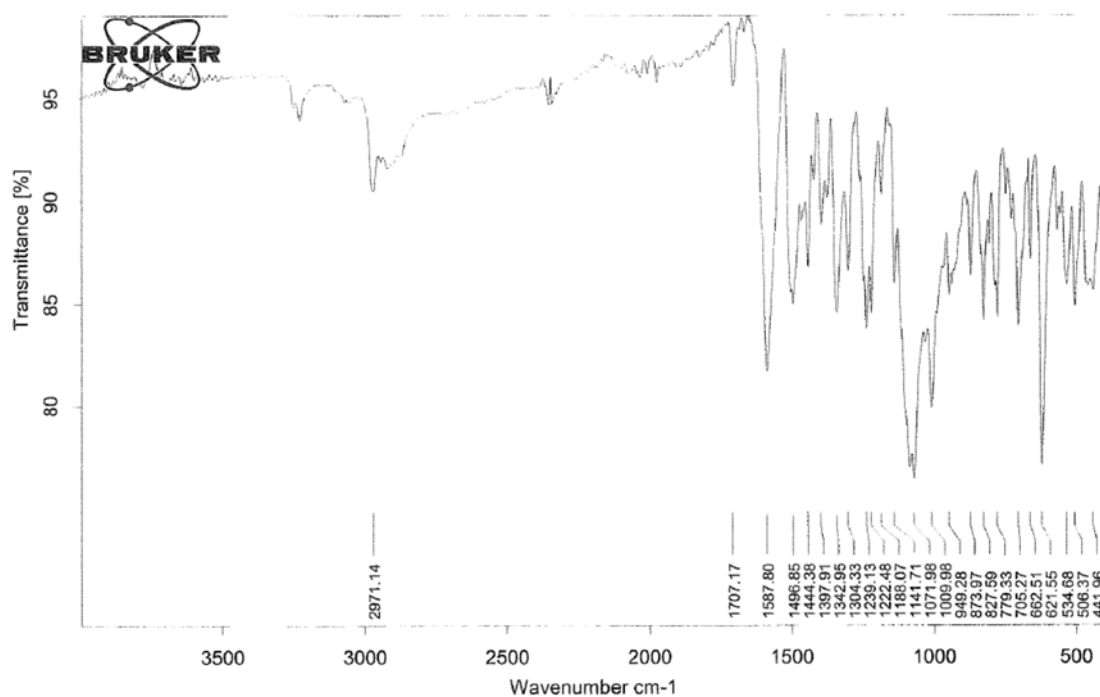


Figure S9: FT-IR spectra of complex 1.

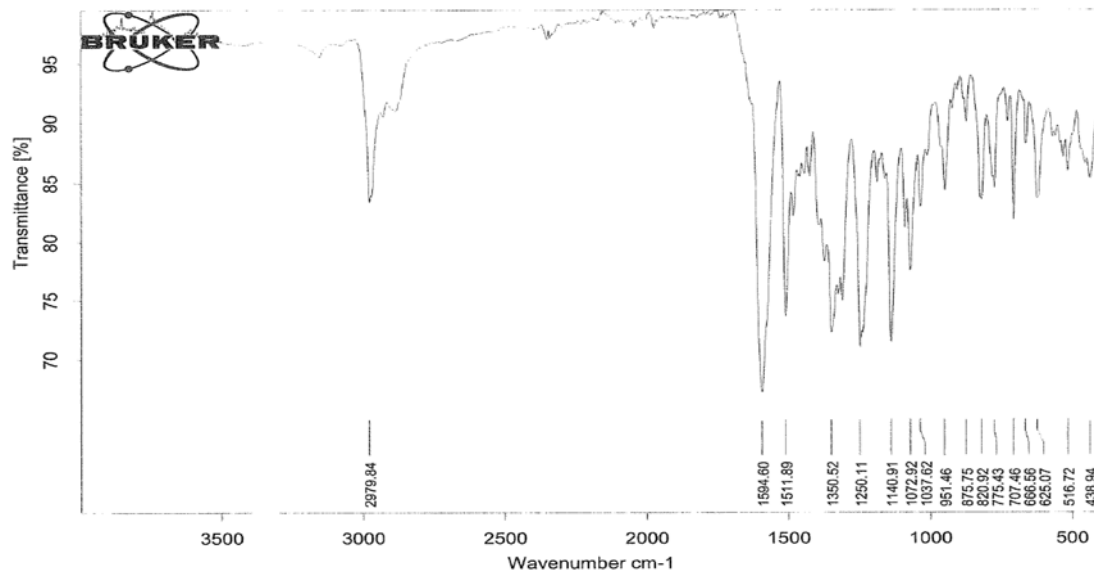
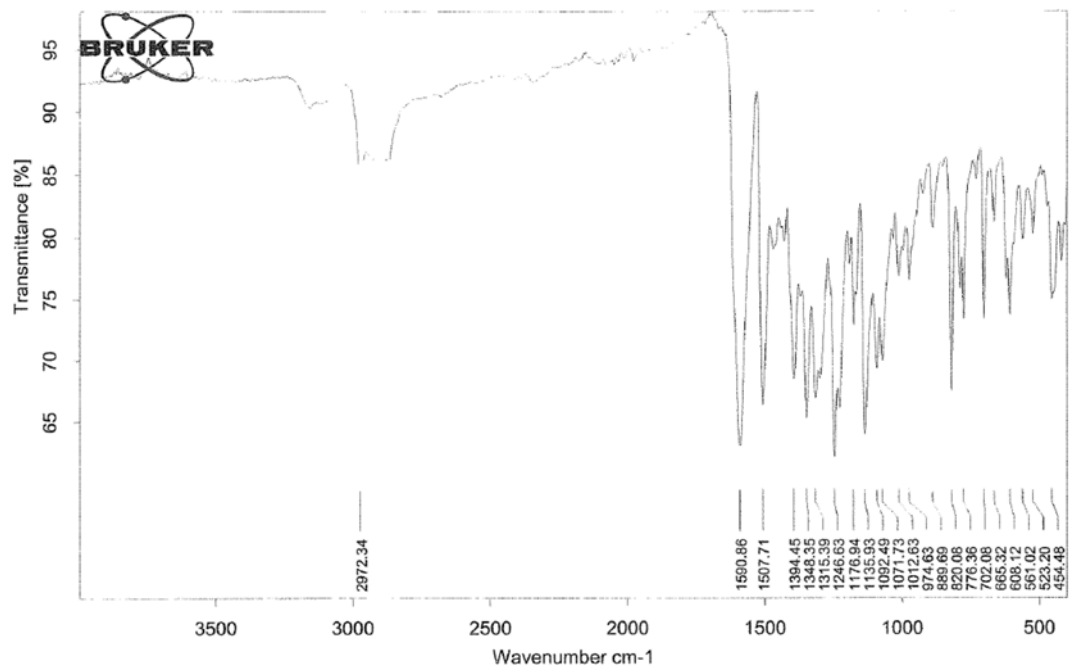


Figure S10: FT-IR spectra of complex 2.



**Figure S11:** FT-IR spectra of complex 4.