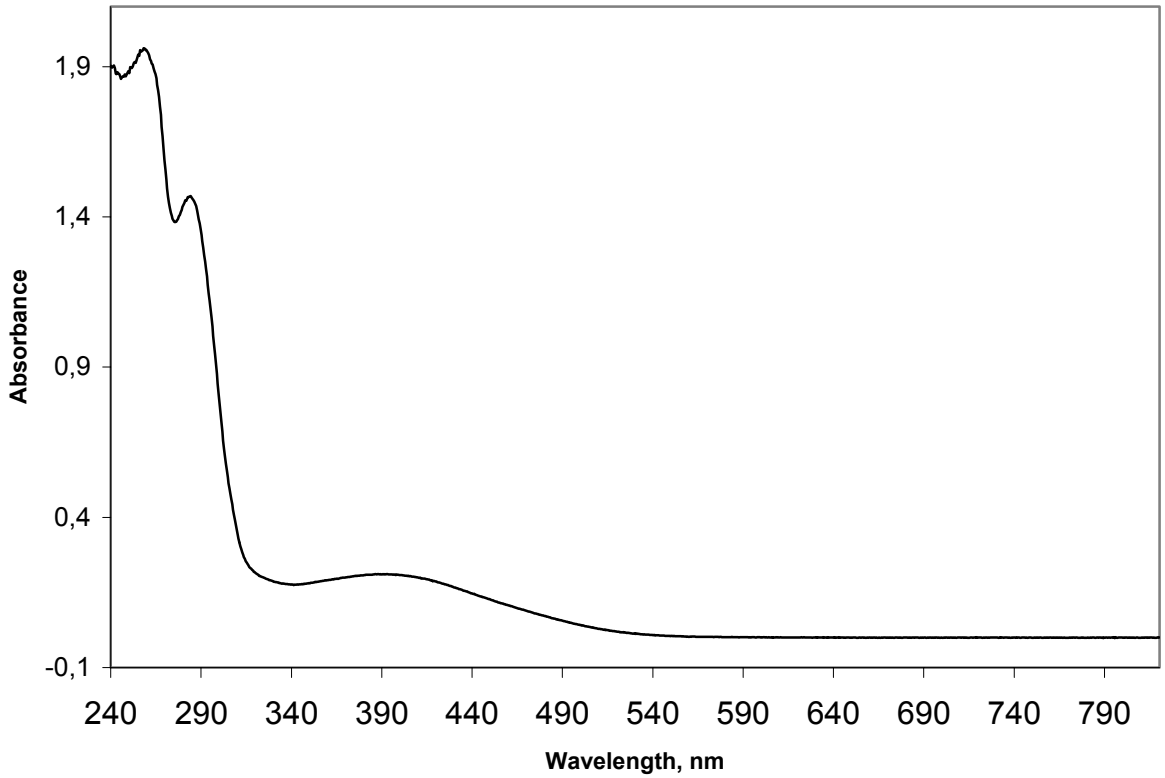
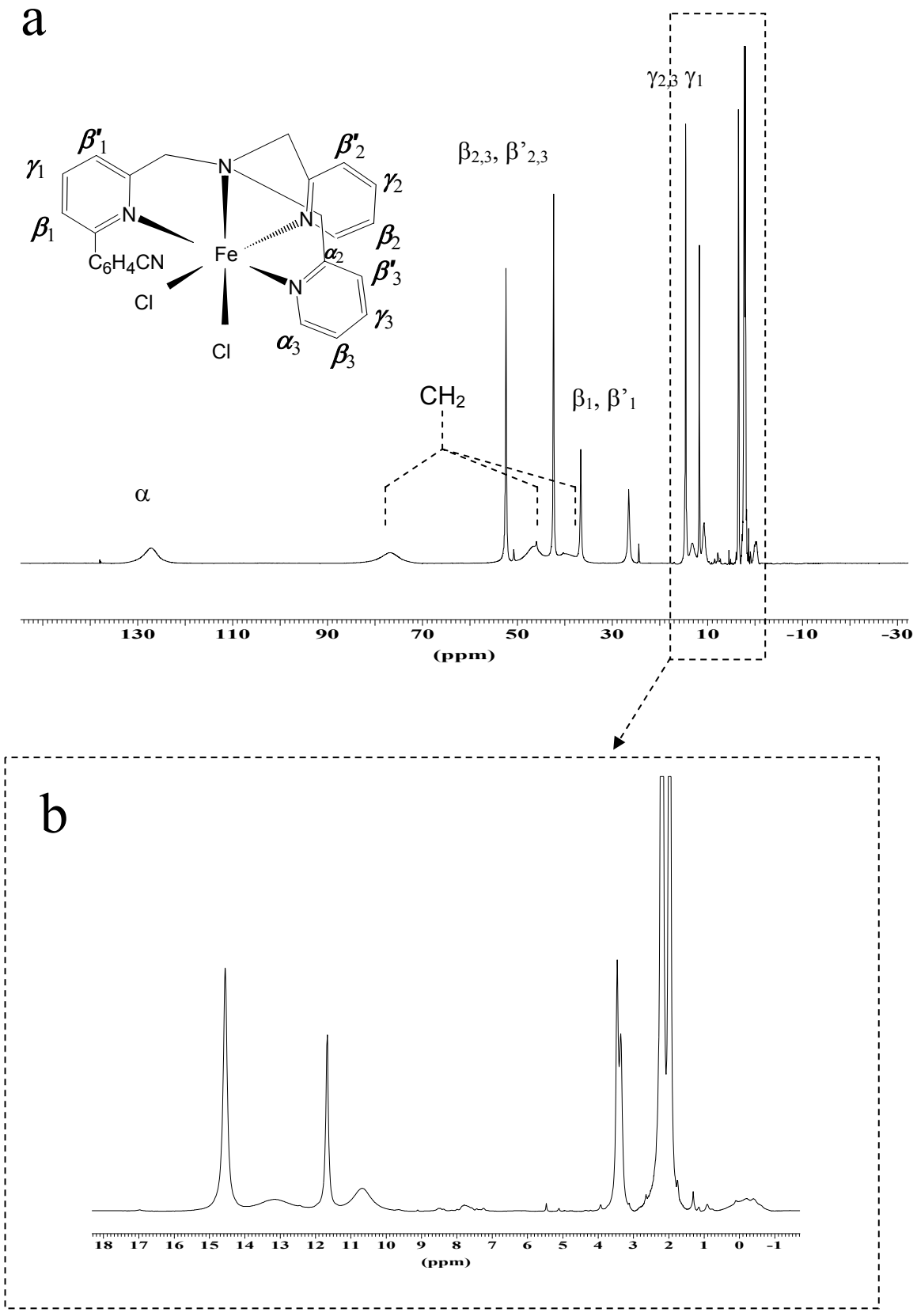
Supplementary Material for New Journal of Chemistry

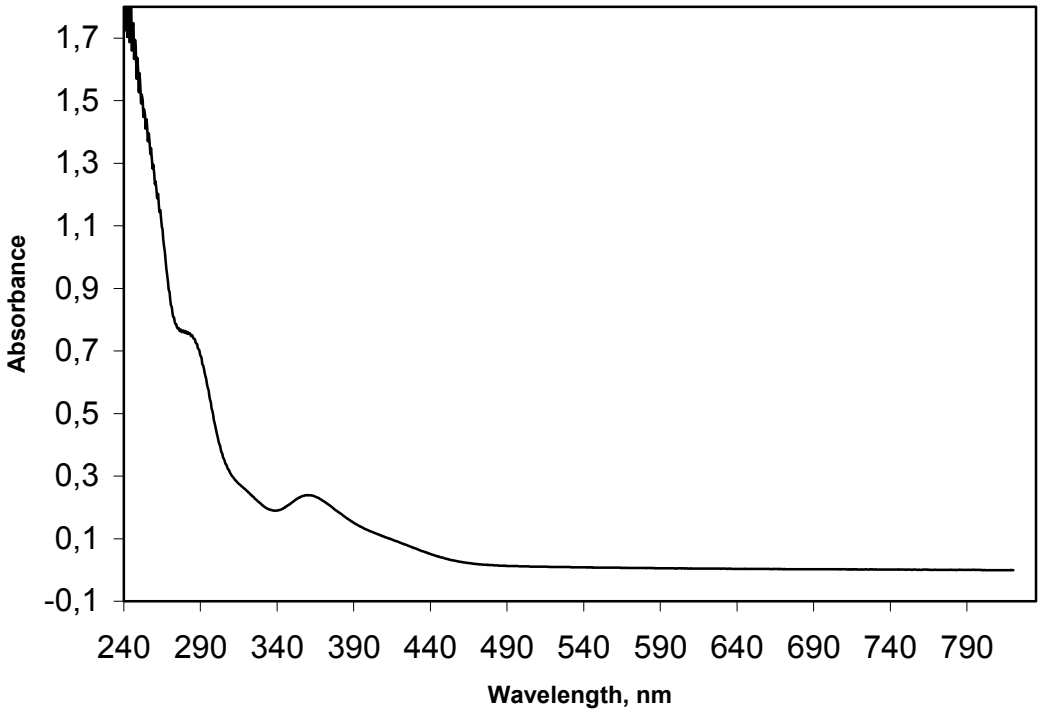
Supplementary data



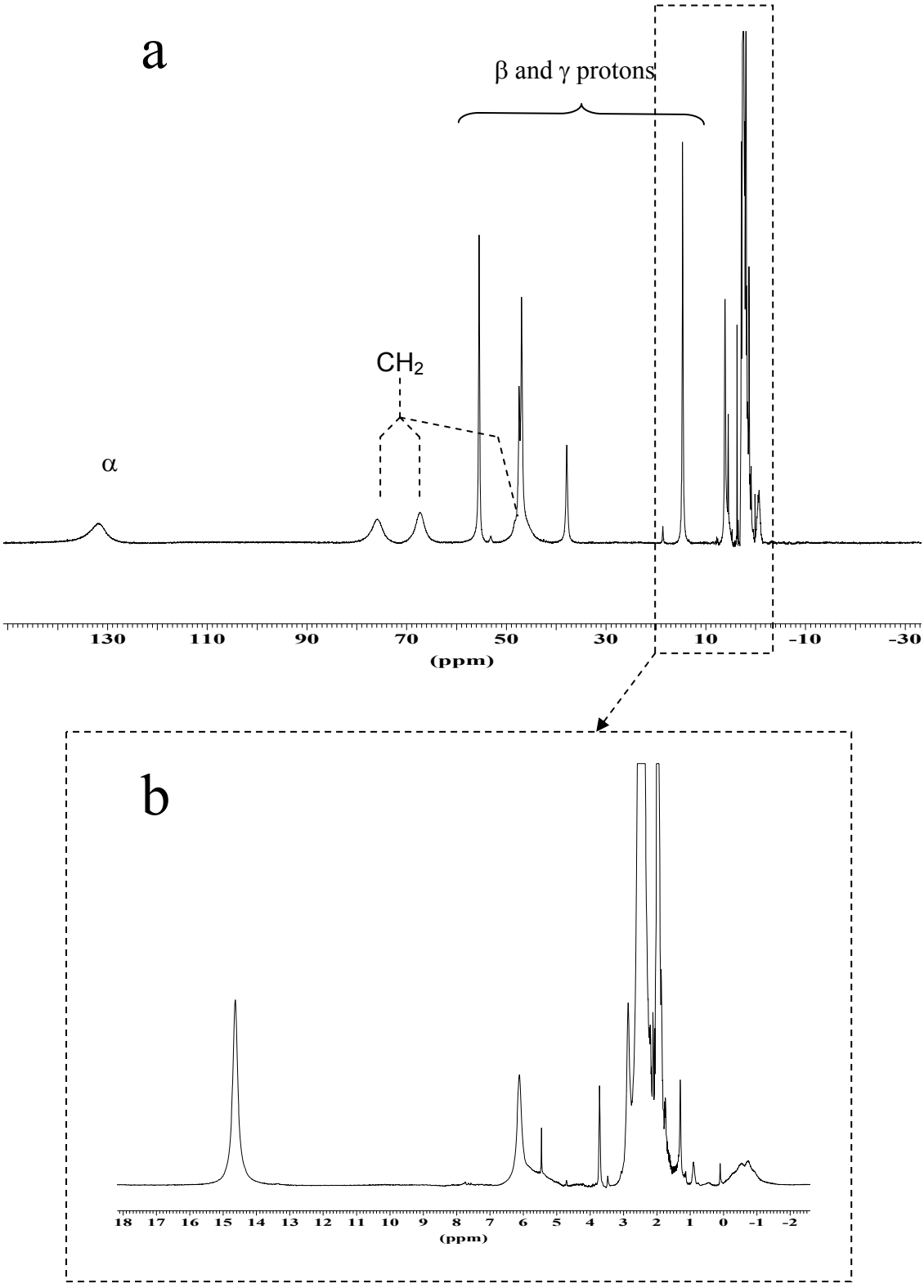
Supp. Mat.Graph. 1: UV-visible spectrum of $LFeCl_2$, CH_3CN, R.T.



Supp. Mat.Graph. 2: ^{1}H NMR spectrum of $LFeCl_2$, CD_3CN, R.T. a): complete spectrum; b): zoom on the diamagnetic area. Assignments are made by comparison with the spectrum of 2-BrTPAFe$^{(II)}Cl_2$ given in reference 5.



Supp. Mat.Graph. 3: UV-visible spectrum of $[LFeCl]_2[FeCl_4]$, CH_3CN, R.T.



Supp. Mat.Graph. 4: ^{1}H NMR spectrum of of $[LFeCl]_2$ $[FeCl_4]$, CD_3CN, R.T. a): complete spectrum; b): zoom on the diamagnetic area.

Crystallographic information:

Selected single crystal of $LFe^{(II)}Cl_2$ and $[LFe(Cl)2FeL]FeCl_4^{2-}$ were mounted on a Nonius Kappa-CCD area detector diffractometer (Mo Kα λ = 0.71073 Å). Details of data collection (Denzo software [1x]) and structure refinements are given in ref.4 and 5. The cell parameters were determined from reflections taken from one set of 10 frames (1.0° steps in phi angle), each at 20 s exposure. The structures were solved using direct methods (SHELXS97) and refined against *F*2 using the SHELXL97 software [2x]. The absorption was non corrected. All non-hydrogen atoms were refined anisotropically. Hydrogen atoms were generated according to stereochemistry and refined using a riding model in SHELXL97.

(1x) *Kappa CCD Operation Manual*; Nonius B.V.: Delft, The Netherlands, 1997.
(2x) Sheldrick, G. M. *SHELXL97*, Program for the refinement of crystal structures; University of Gottingen: Germany, 1997.

ORTEP Views with complete labelling of atoms: