Supporting Information for

A simple chalcone based fluorescent chemosensor for the detection and removal of Fe^{3+}-ion using membrane separation method

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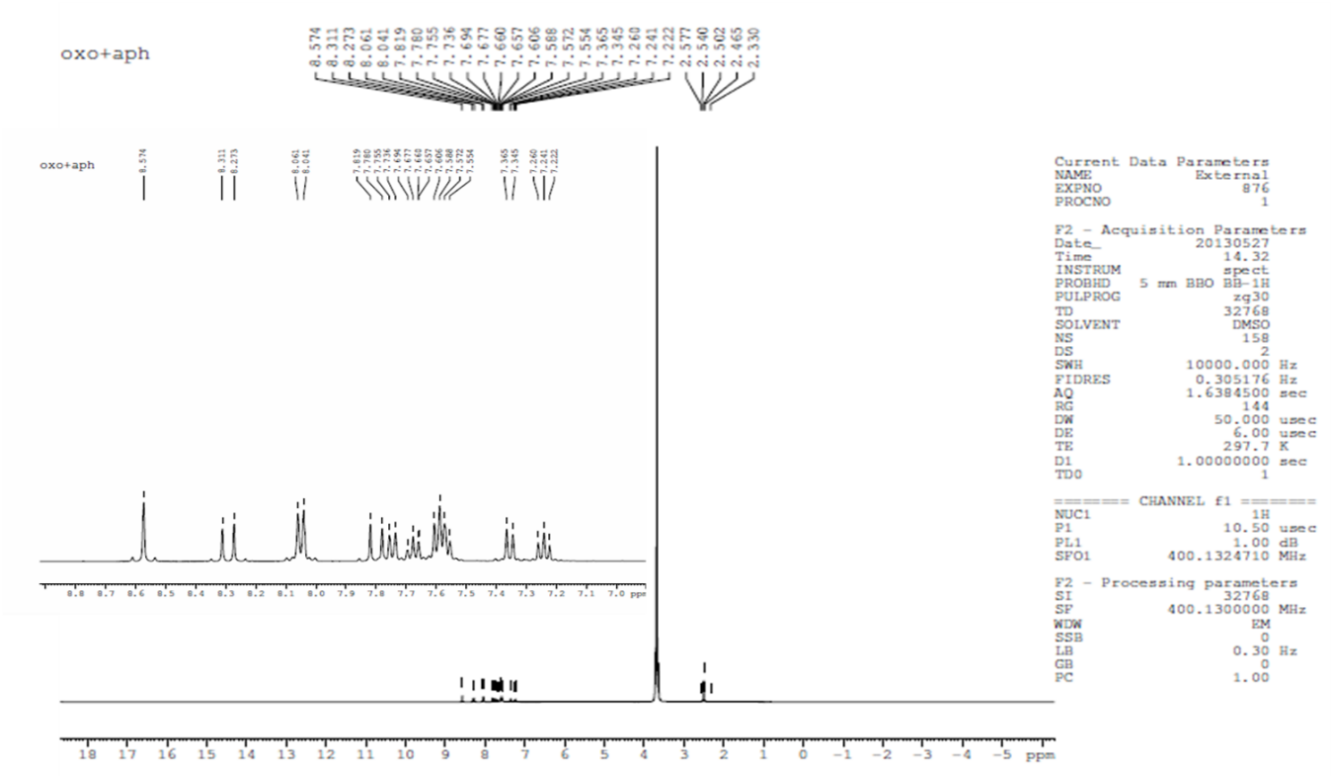

Fig. S1. ^{1}H NMR Spectrum of 1

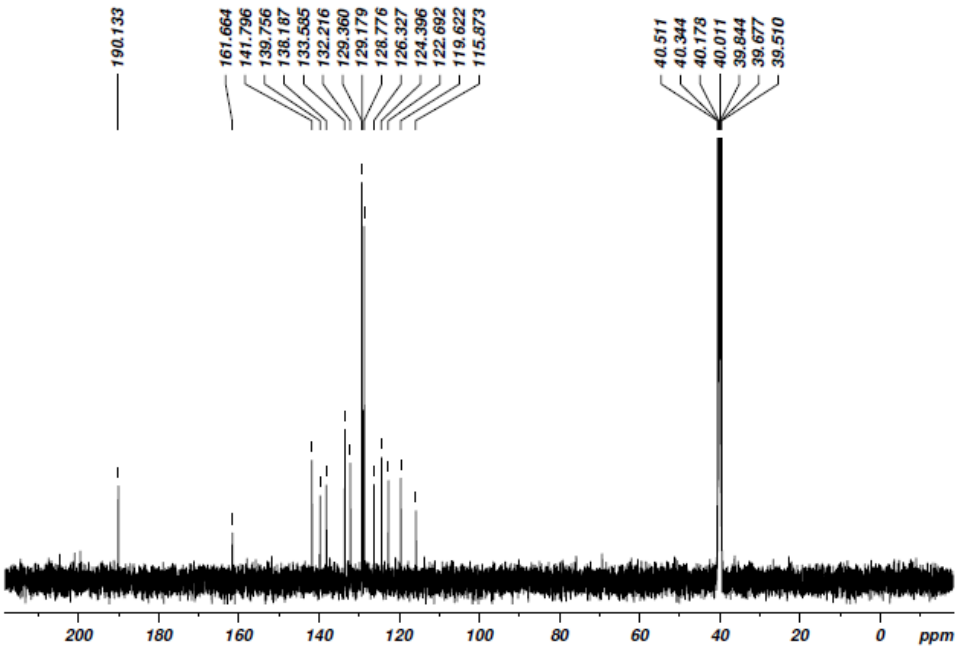

Fig. S2. ^{13}C NMR Spectrum of 1

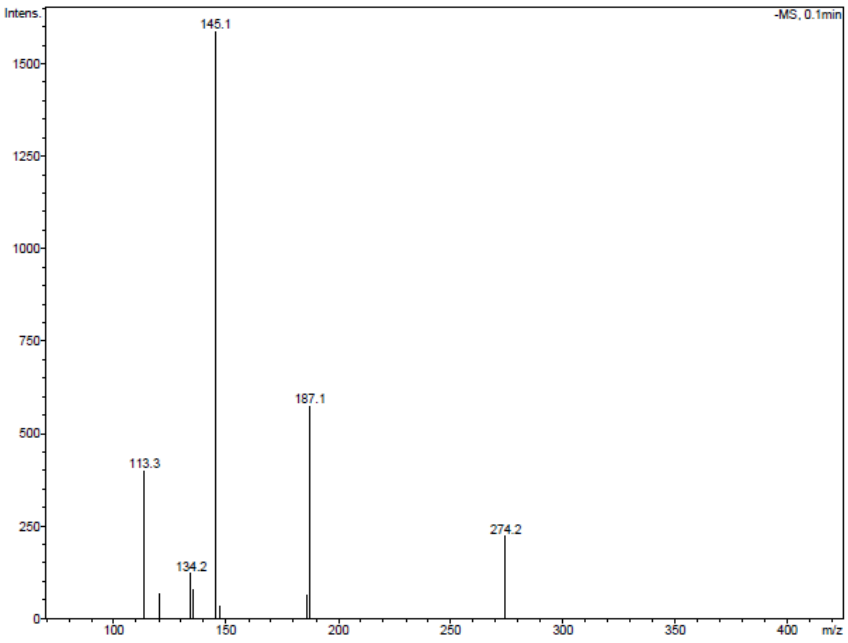

Fig. S3. Mass Spectrum (LC-MS) of 1

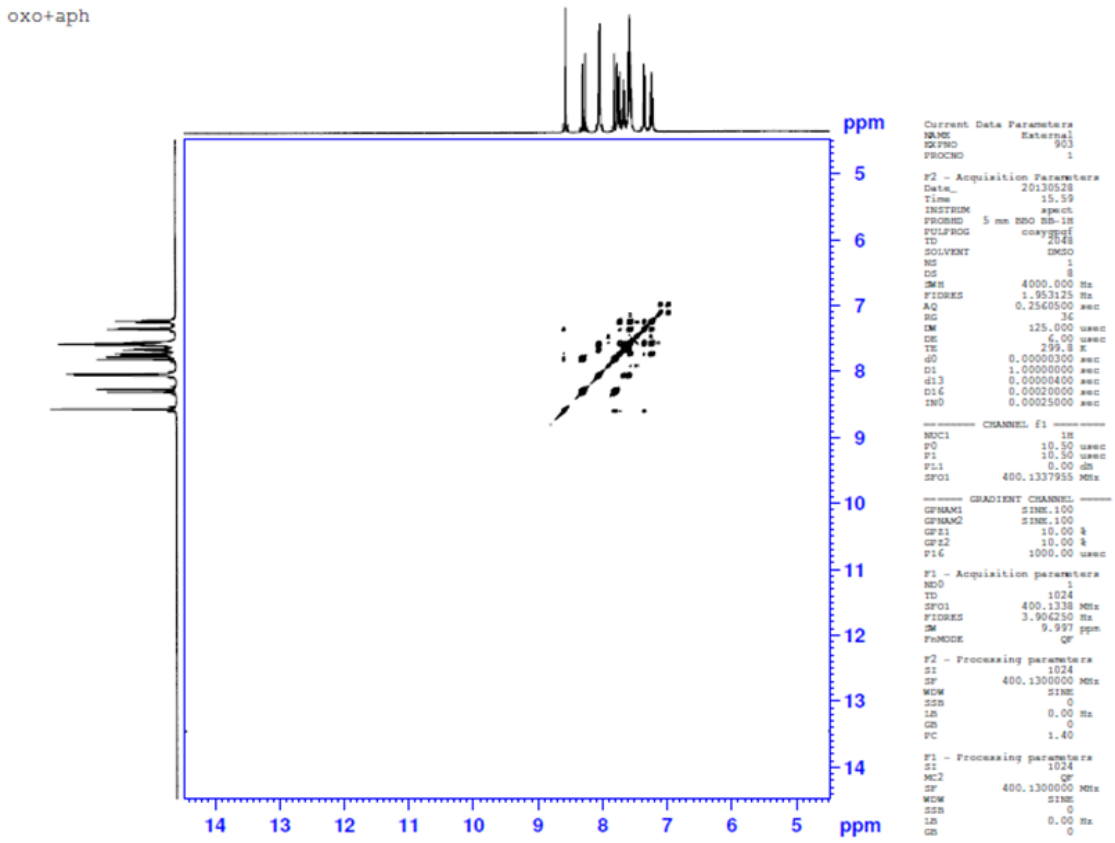

Fig. S4. 2D (^{1}H−^{1}H COSY) NMR Spectrum of 1

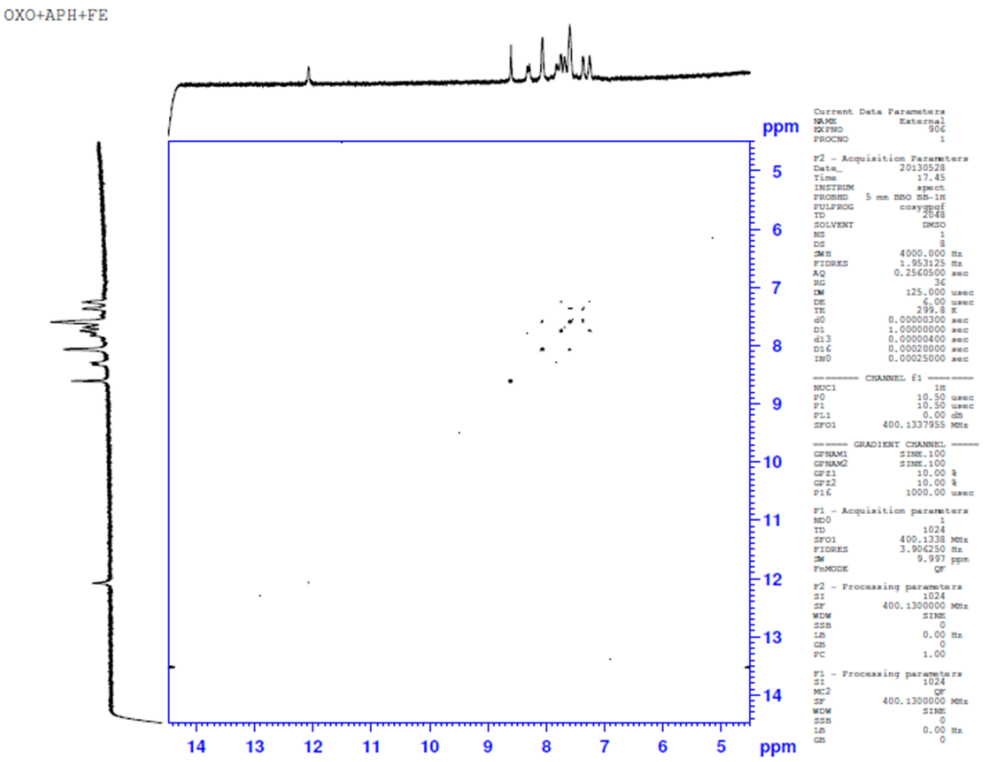

Fig. S5. 2D (^{1}H−^{1}H COSY) NMR Spectrum of 1+Fe^{3+}

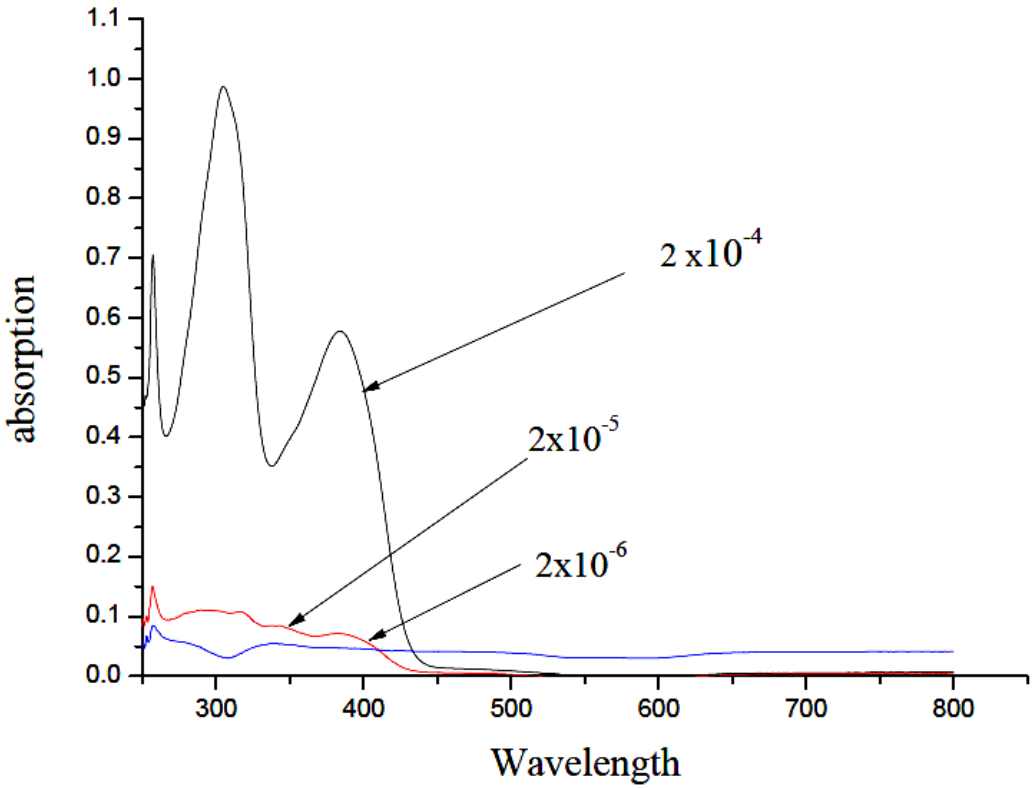

Fig. S6. Absorption spectrum of 1

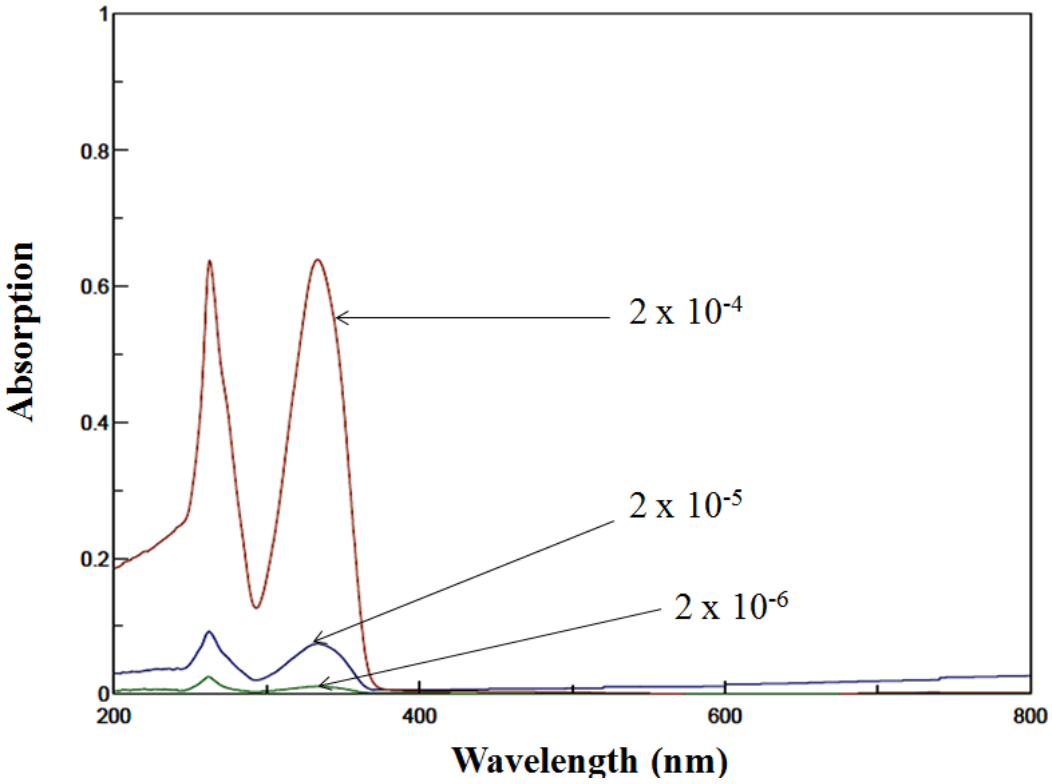

Fig. S7. Absorption spectrum of 2

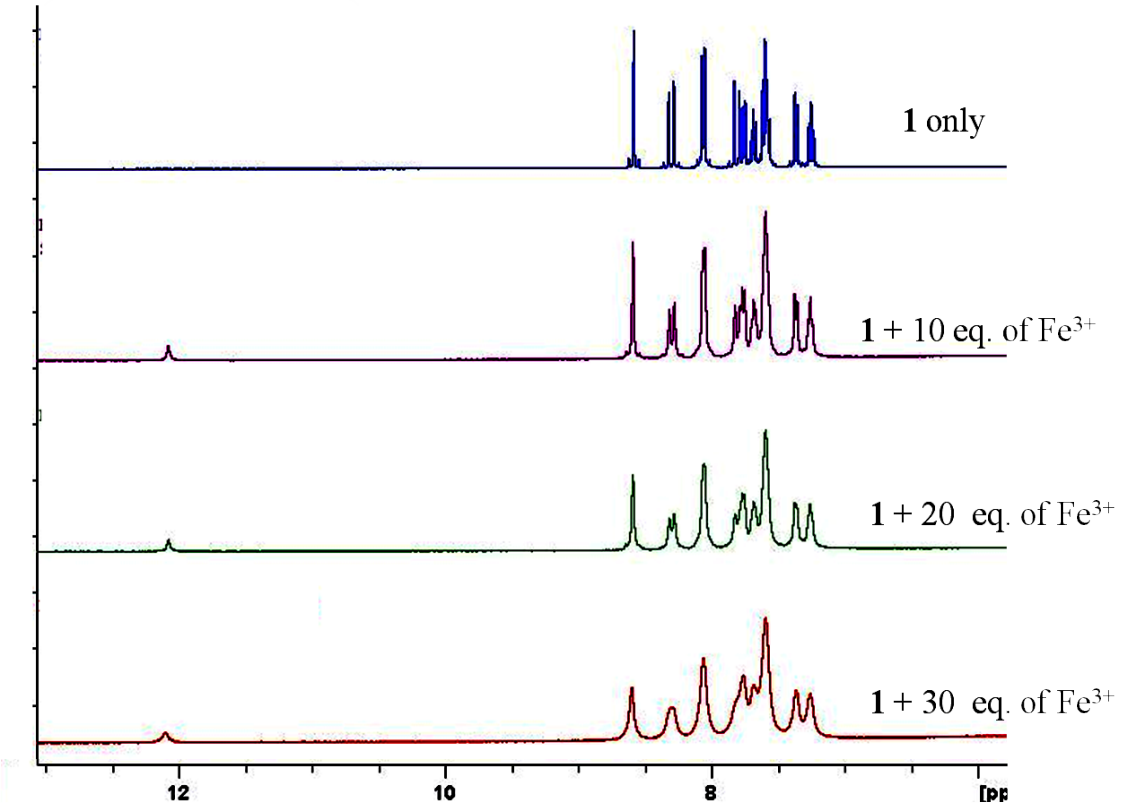

Fig. S8. NMR titration Spectrum of 1 and 1+Fe^{3+}

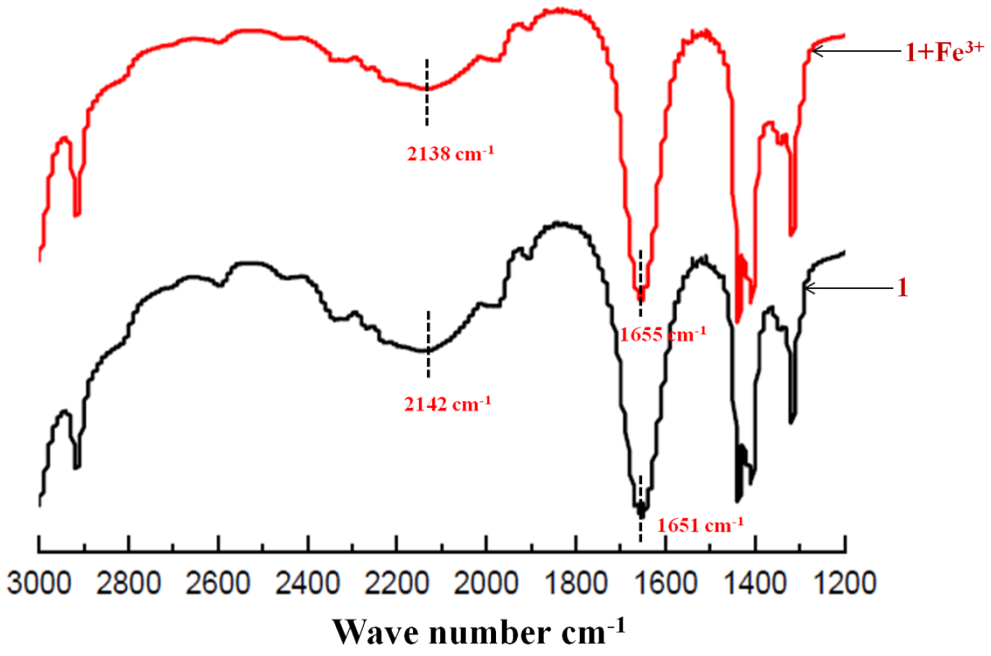

Fig. S9. IR-Spectrum of a) 1 only b) 1+Fe^{3+}

Table 2. Determination of Fe^{3+}-ions in ground and river water samples with **1** (1 x 10^{-5} M)

Sample	Fe^{3+} present (ppm) (AAS)	Other metal ions present (ppm) (AAS)	Fe^{3+} found by using sensor 1 (ppm) (mean + S.D)
Ground Water	7.8	Mg = 0.8 Pb = 0.1 Zn = 3.3 Cd = 0	7.85
River Water	4.1	Mg = 1.4 Pb = 0.2 Zn = 4.2 Cd = 0	4.02