Electronic Supplementary Material (ESI) for Dalton Transactions.

Supplementary materials

Molecular insights into selective action of a magnetically removable complexone-grafted adsorbent

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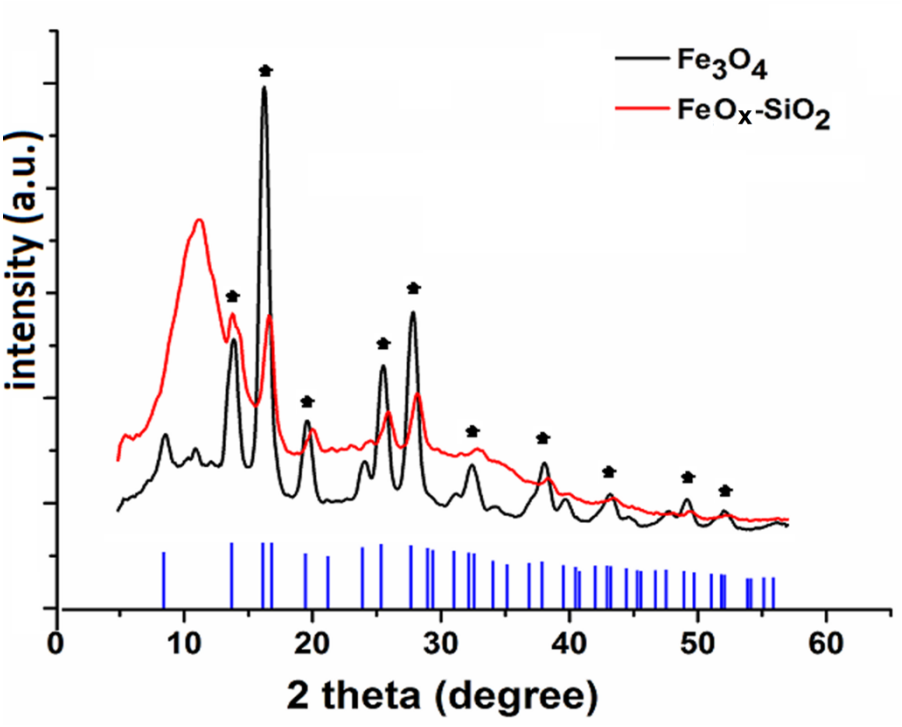

Figure FS1. X-ray powder diffraction patterns of Fe_3O_4 and γ-Fe_2O_3-SiO_2 nanopowders.

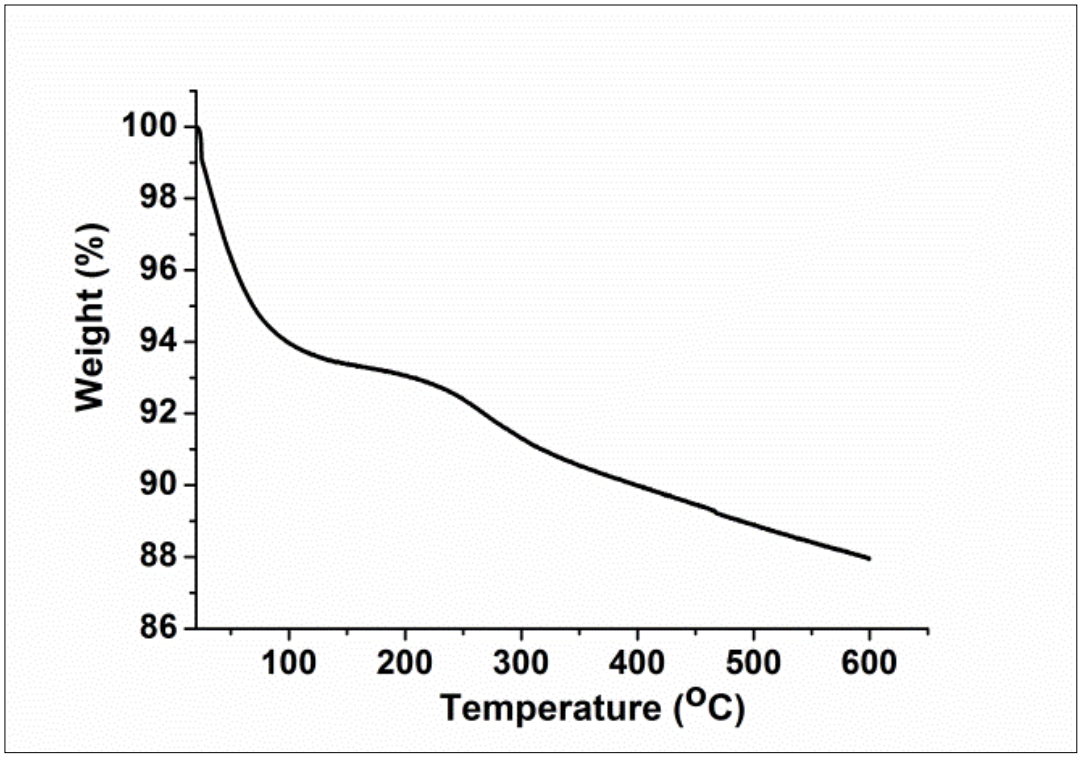

Figure FS2. TGA curve for the thermal treatment of γ-Fe_2O_3-SiO_2-IDA nanoparticles in air. Heating rate 5°C/min.

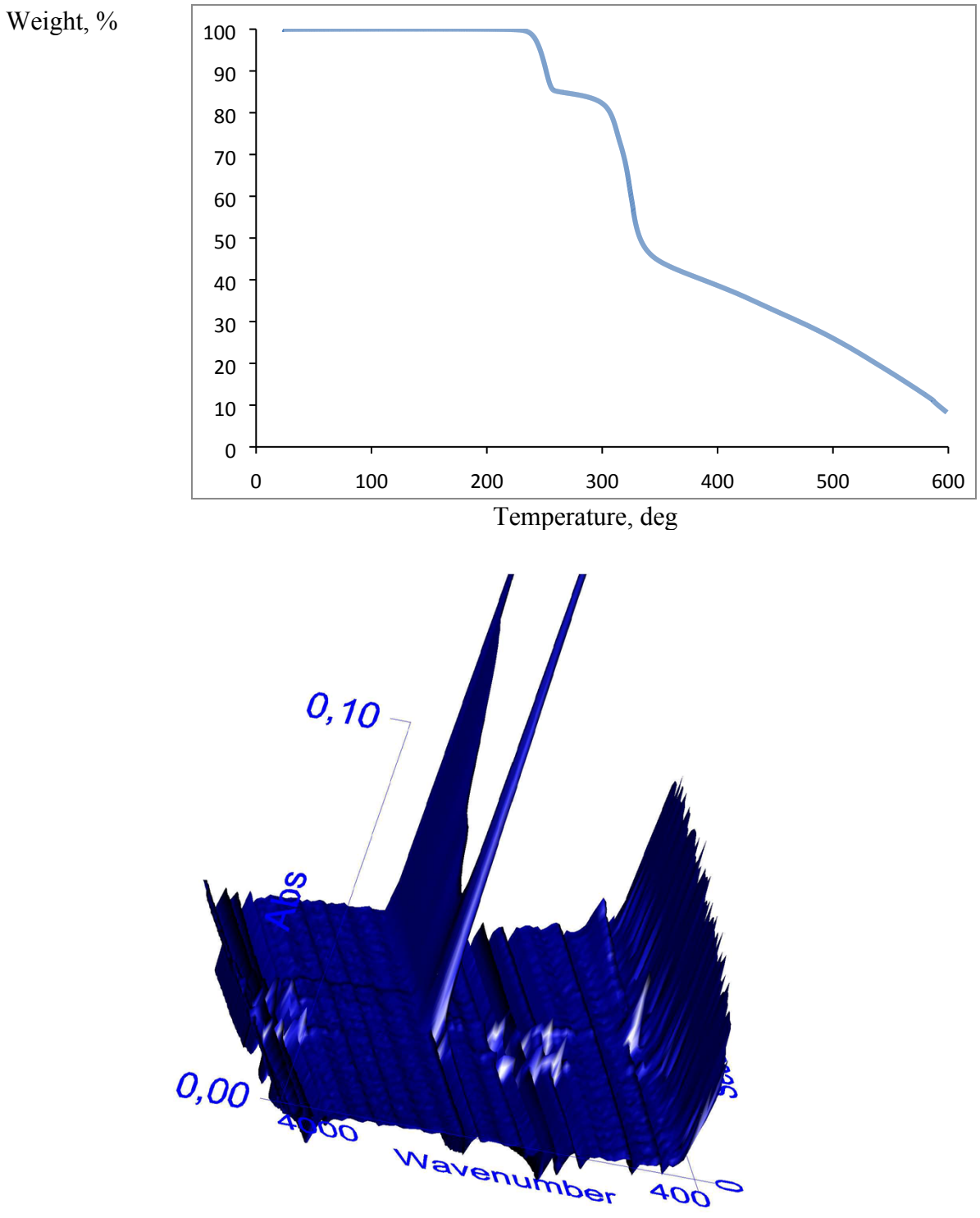

Figure FS 3 TGA (above, 5°C/min) and the temperature/time-resolved FTIR (below) for the thermal decomposition of pure crystalline iminodiacetic acid.

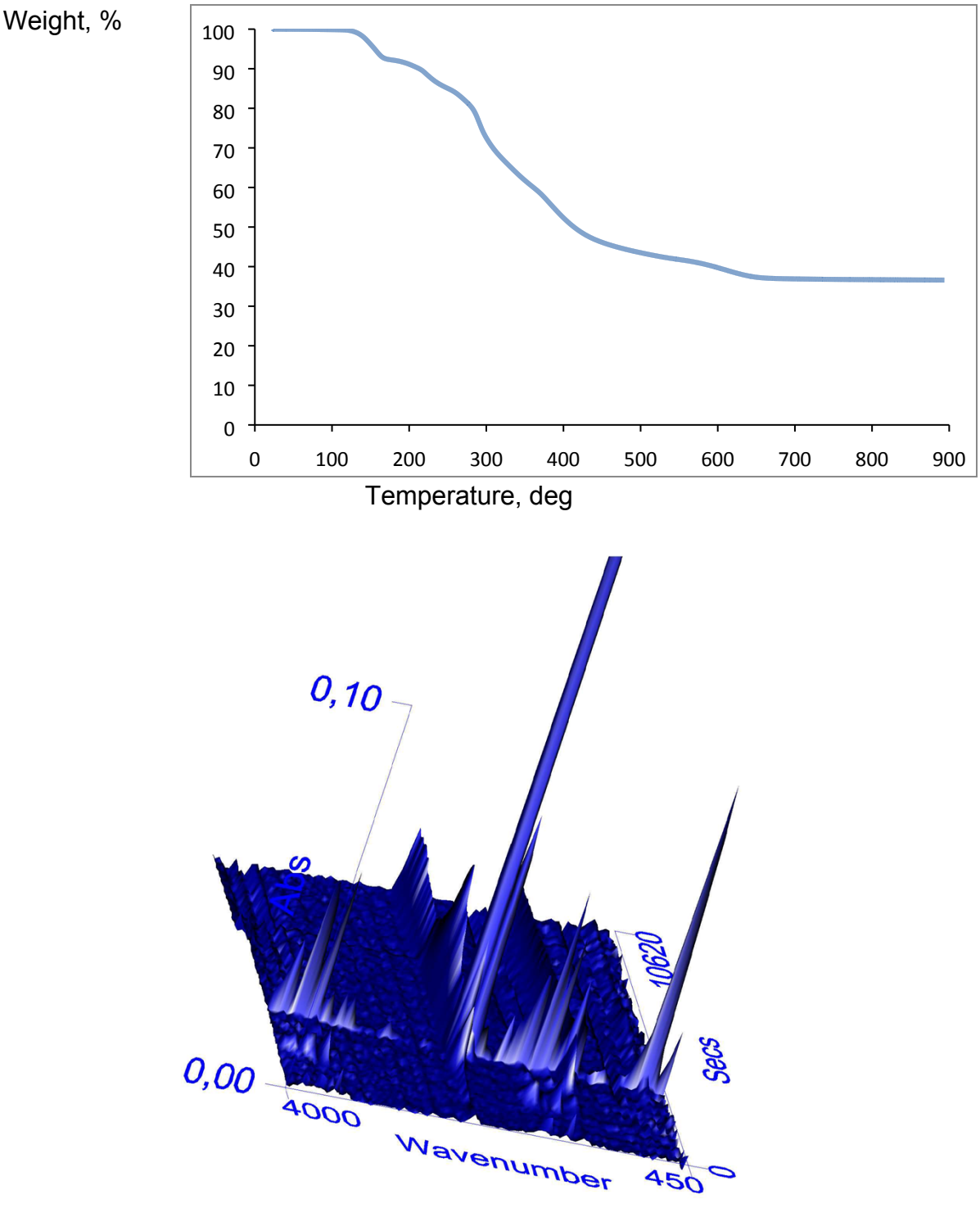

Figure FS 4 TGA (above, 5°C/min) and the temperature/time-resolved FTIR (below) for the thermal decomposition of compound **1**.

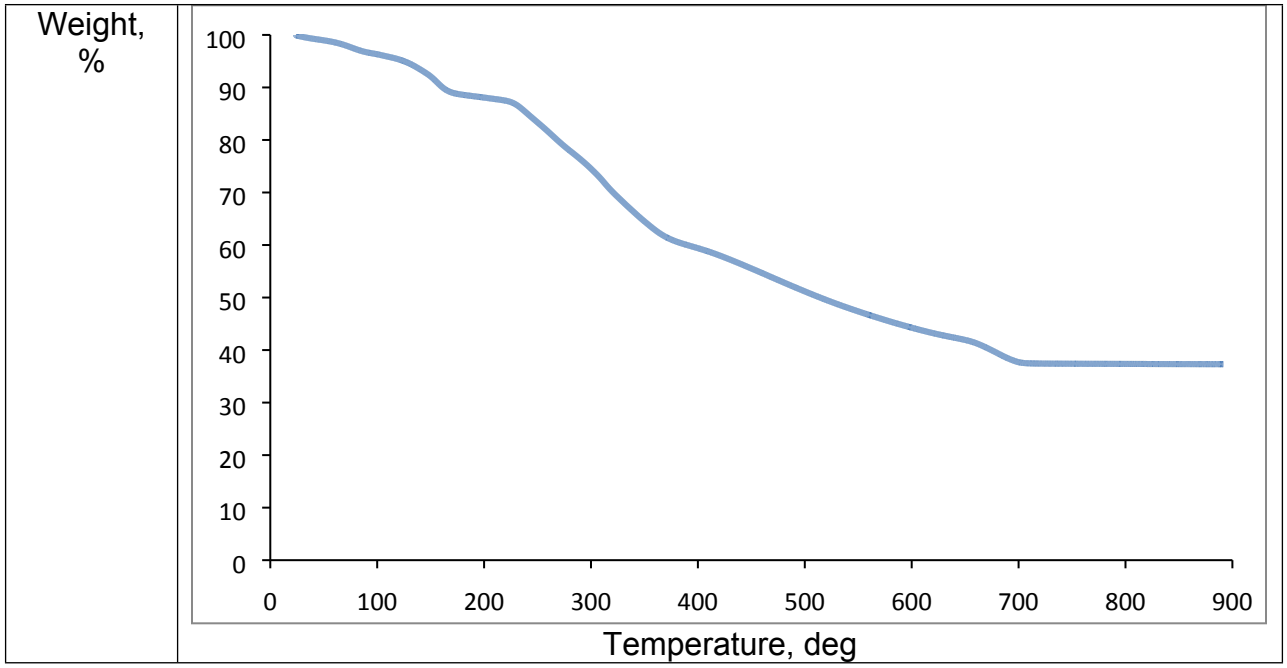

Figure FS5. TGA (5°C/min) for the thermal decomposition of compound **2**

Table TS1 Quantification of RE cations' adsorption and desorption by EDS

	Dy : Nd ratio	Standard deviation	Dy : La ratio	Standard deviation
Particles obtained after adsorption at neutral pH	3.9 : 1	1,5	4.2 : 1	1,2
Particles obtained after desorption at pH = 3	5,9 : 1	4,3	81 : 1	22
Particles obtained after desorption at pH = 1	1.3 : 1	1,1	1,8 : 1	1,3
Total uptake capacity (by titration), mmol RE^{3+}/g	0.242	0.002	0.275	0.009