

Supplementary Materials:

Synthesis, characterization and immobilization of a new cobalt (II) complex on modified magnetic nanoparticles as catalyst for epoxidation of alkenes and oxidation of activated alkanes

Zeinab Asgharpour, Faezeh Farzaneh *, Alireza Abbasi

Table S1 Selected crystallographic data and details for the structure refinement of complex1

Empirical formula	C ₂₈ H ₂₈ CoN ₂ O ₆
Formula weight	547.45
Temperature (K)	94(2)
Wavelength (Å)	0.71073
Crystal system; space group	Triclinic, P ⁻¹
<i>a</i> (Å)	6.2460(12)
<i>b</i> (Å)	9.5510(19)
<i>c</i> (Å)	11.301(2)
α (°)	97.11(3)
β (°)	96.87(3)
γ (°)	106.95(3)
<i>V</i> (Å ³)	631.3(2)
<i>Z</i>	1
Absorption coeff. (mm ⁻¹)	0.726
<i>D</i> _x (Mg m ⁻³)	1.44
<i>R</i> _{int}	0.0541
Crystal size (mm ³)	0.25 × 0.07 × 0.05
θ Range for collection (°)	1.84-25.00
Index ranges	-7 ≤ <i>h</i> ≤ 7 -11 ≤ <i>k</i> ≤ 11 -13 ≤ <i>l</i> ≤ 13
Reflections collected	4836
Independent reflections	2098
Independent reflections [<i>I</i> > 2σ (<i>I</i>)]	1889
Data / restraints / parameters	2098 / 0 / 177
Final <i>R</i> indices [<i>I</i> > 2σ (<i>I</i>)]	<i>R</i> ₁ = 0.0459 <i>wR</i> ₂ = 0.097
<i>R</i> indices (all data)	<i>R</i> ₁ = 0.0543 <i>wR</i> ₂ = 0.1015

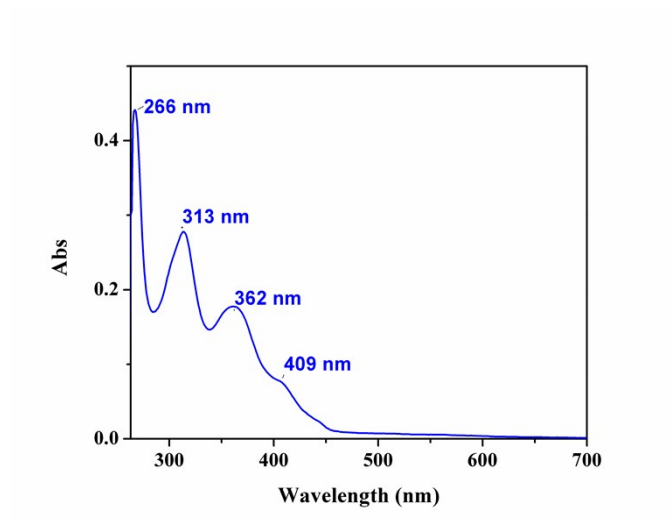


Figure S1. Electronic spectra of complex **1**(1×10^{-5} M in DMF).