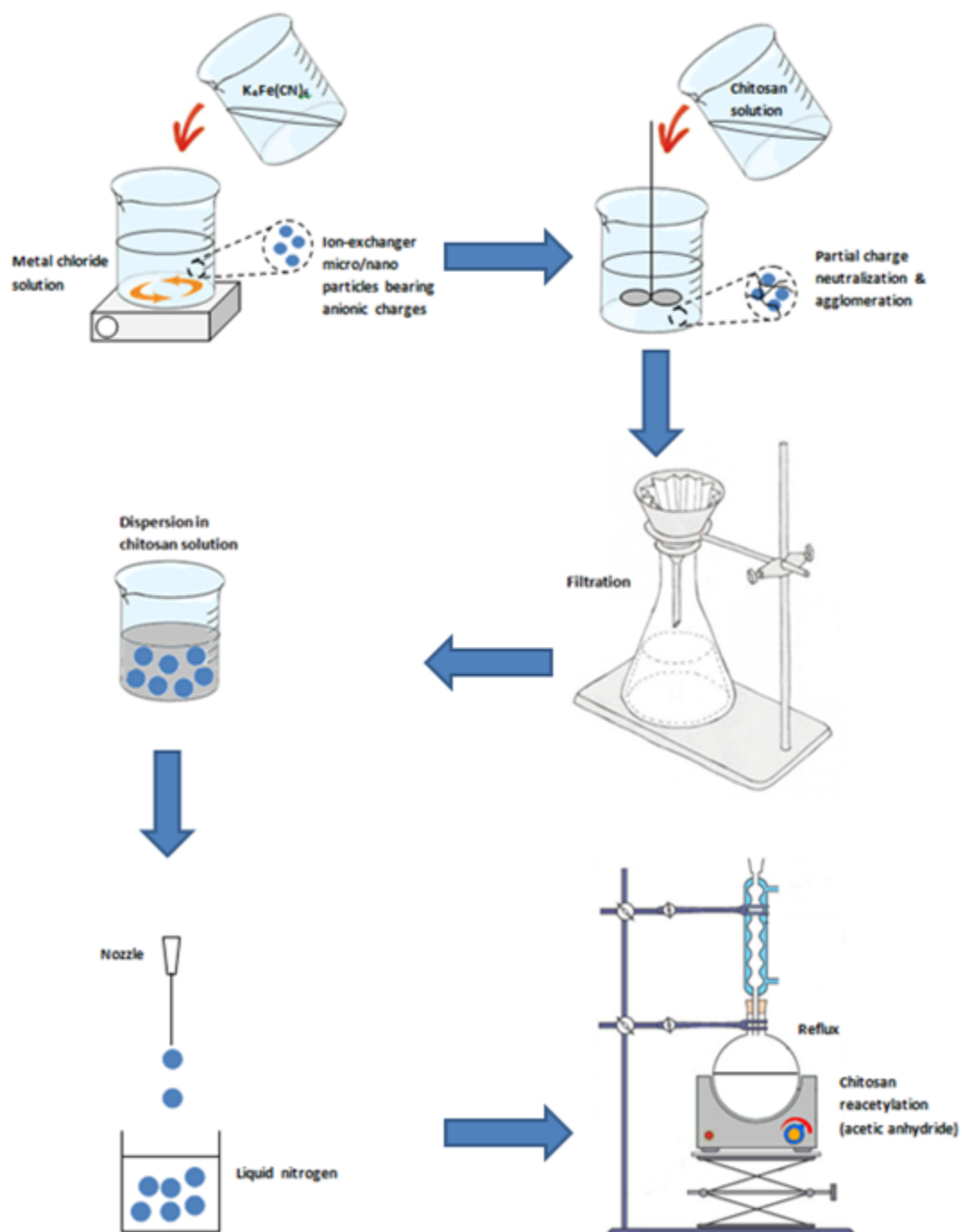


Additional Material section

Scheme 1: Synthesis procedure



Scheme 2: Schematic structure of encapsulated material

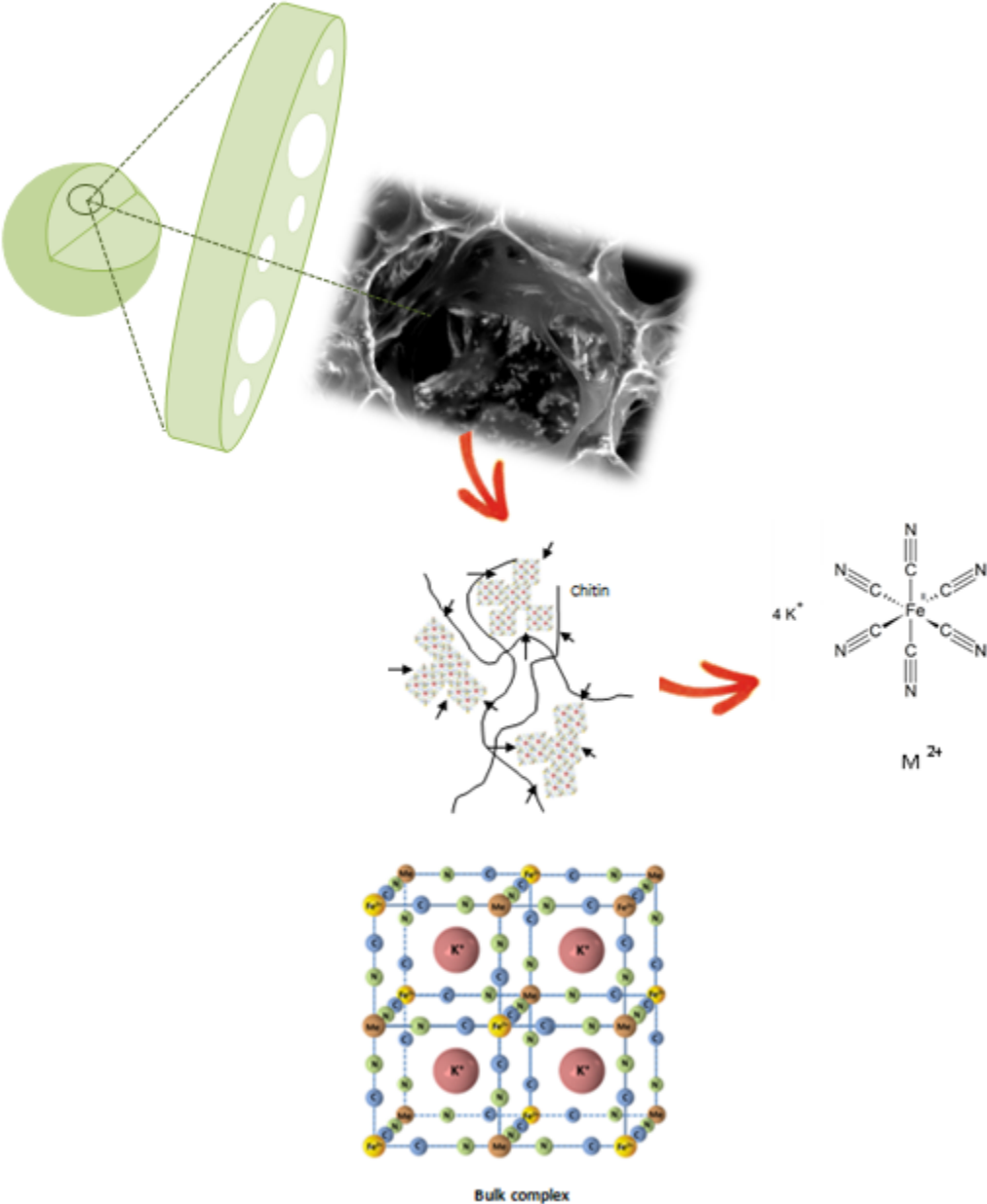


Table AM1: Zeta potential of suspensions before (bulk) and after chitosan stabilization (CSC, chitosan-stabilized complex; prior to encapsulation)

HexaCNFe-Metal	Zeta potential (mV)	
	Bulk	CSC
Ni	-40	-1
Zn	-39	-31
Co	-39	-3
Cu	-51	-39
Fe (PB)	-17	-28

Table AM2: Particle size (analyzed by laser light scattering) on bulk compounds (HexaCNFe-Fe, BP, was not analyzable)

HexaCNFe-Metal	Major particle size (μm)	Maximum volume (%)
Ni	27	6
Zn	0.25	9
Co	4	8
Cu	30	6

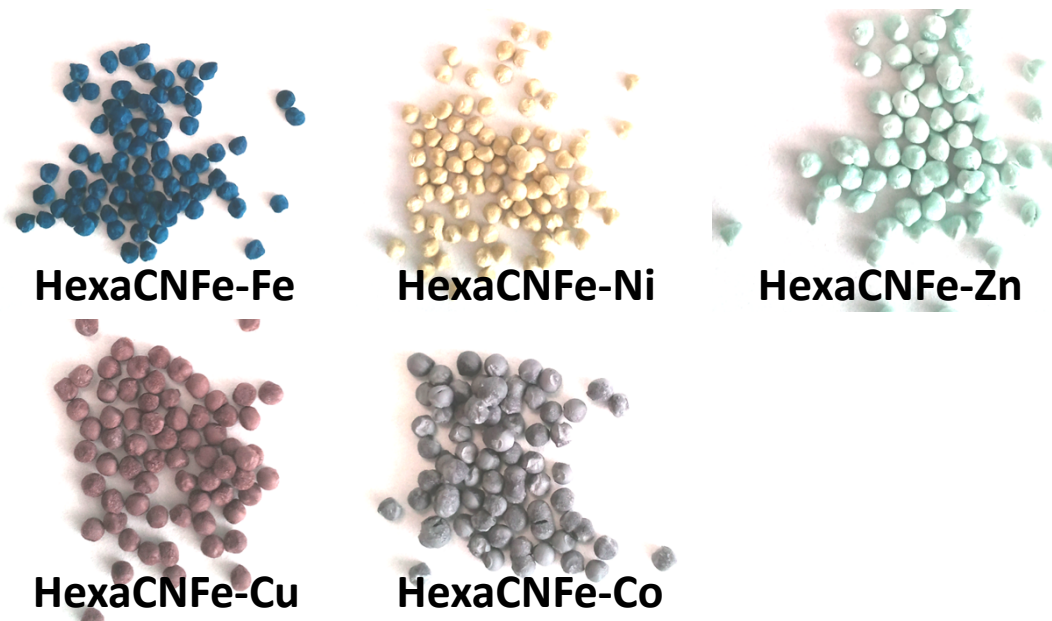


Figure AM1: Optical photographs of metal-potassium hexacyanoferrate/chitin composites.

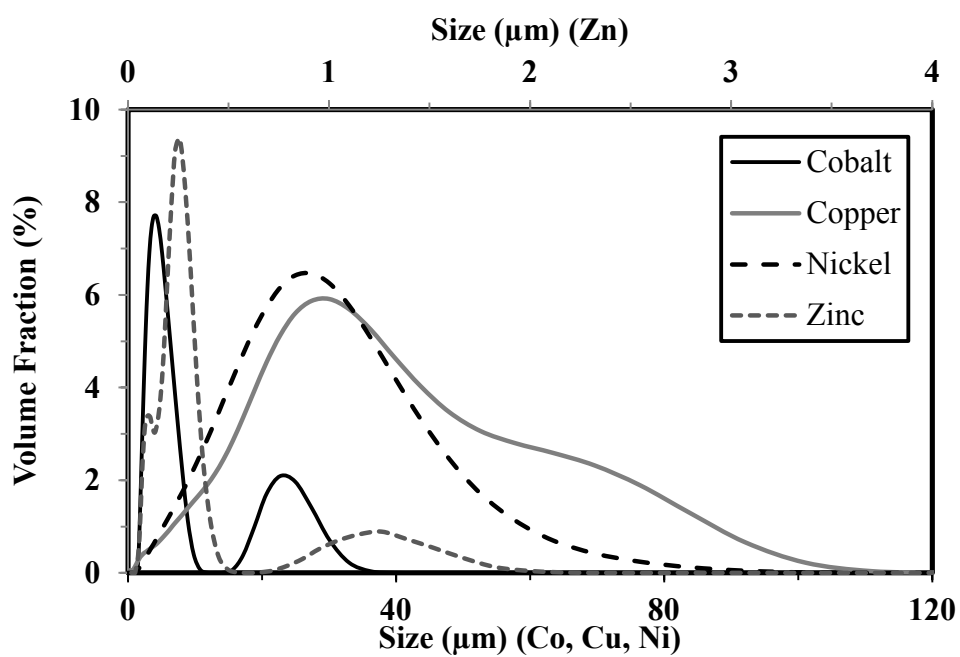


Figure AM2: Size analysis (laser light scattering) on bulk compounds (HexaCNFe-Fe, BP, was not analyzable).

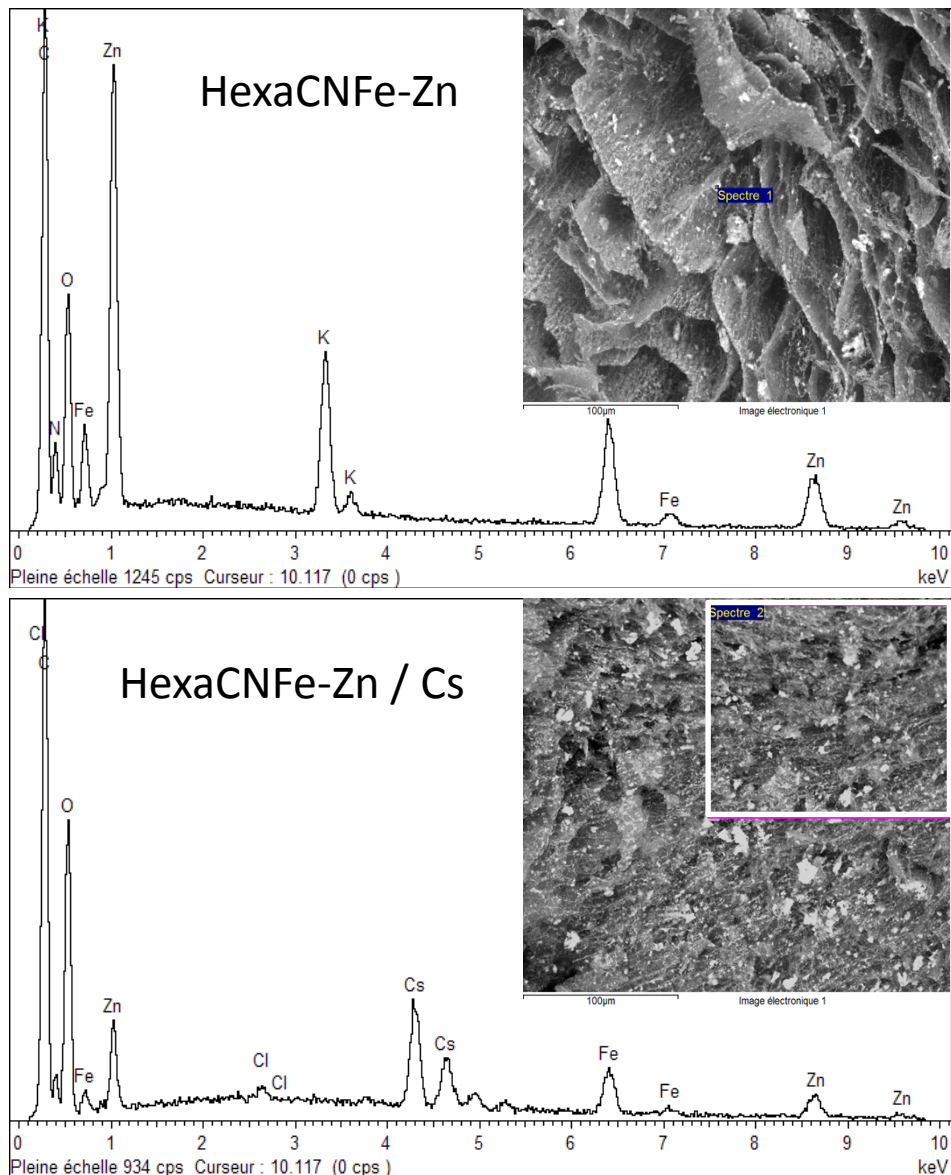


Figure AM3: SEM-EDX analysis of a cross-section of composite HexaCNF-Zn after Cs sorption (SEM photographs, X-ray spectra).

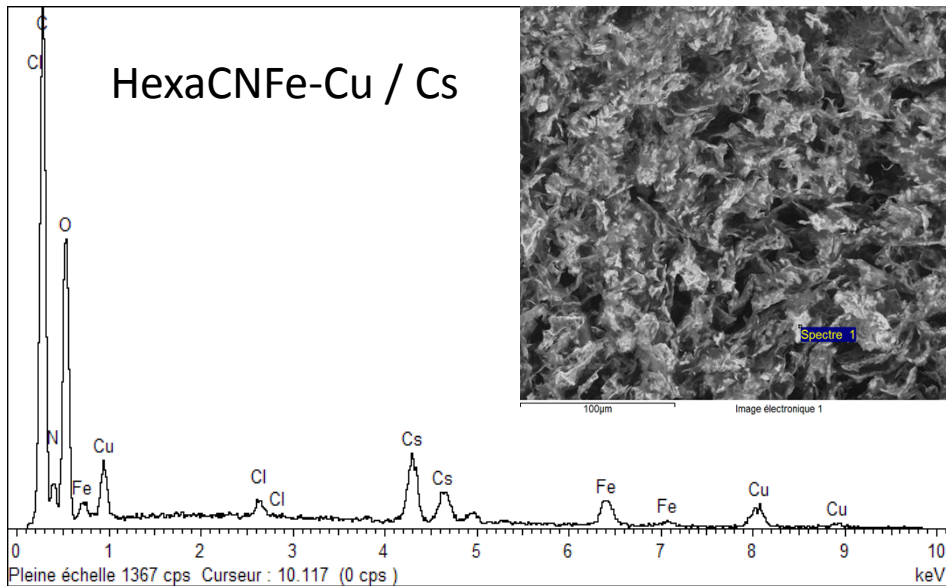


Figure AM4: SEM-EDX analysis of a cross-section of composite HexaCNF-Cu after Cs sorption (SEM photograph, X-ray spectrum).

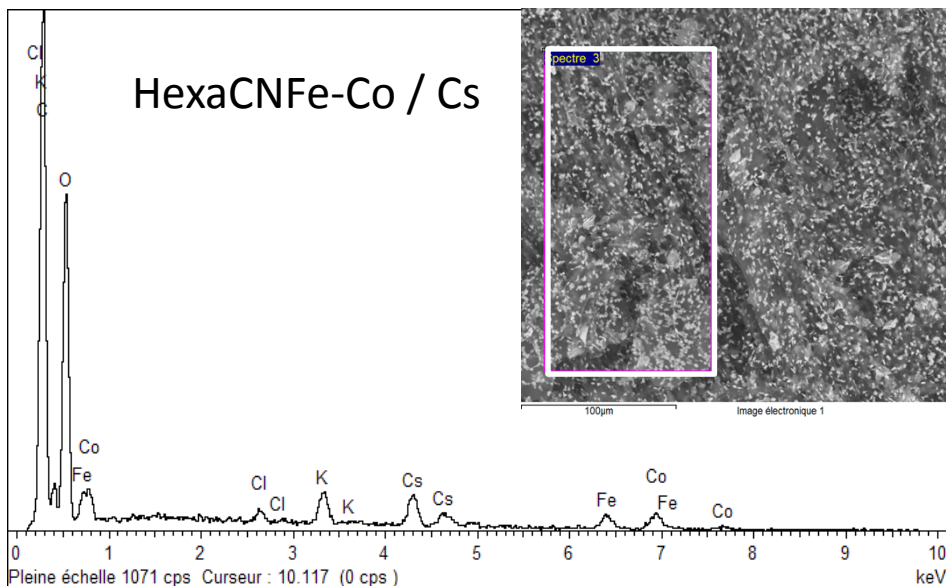


Figure AM5: SEM-EDX analysis of a cross-section of composite HexaCNF-Co after Cs sorption (SEM photograph, X-ray spectrum).

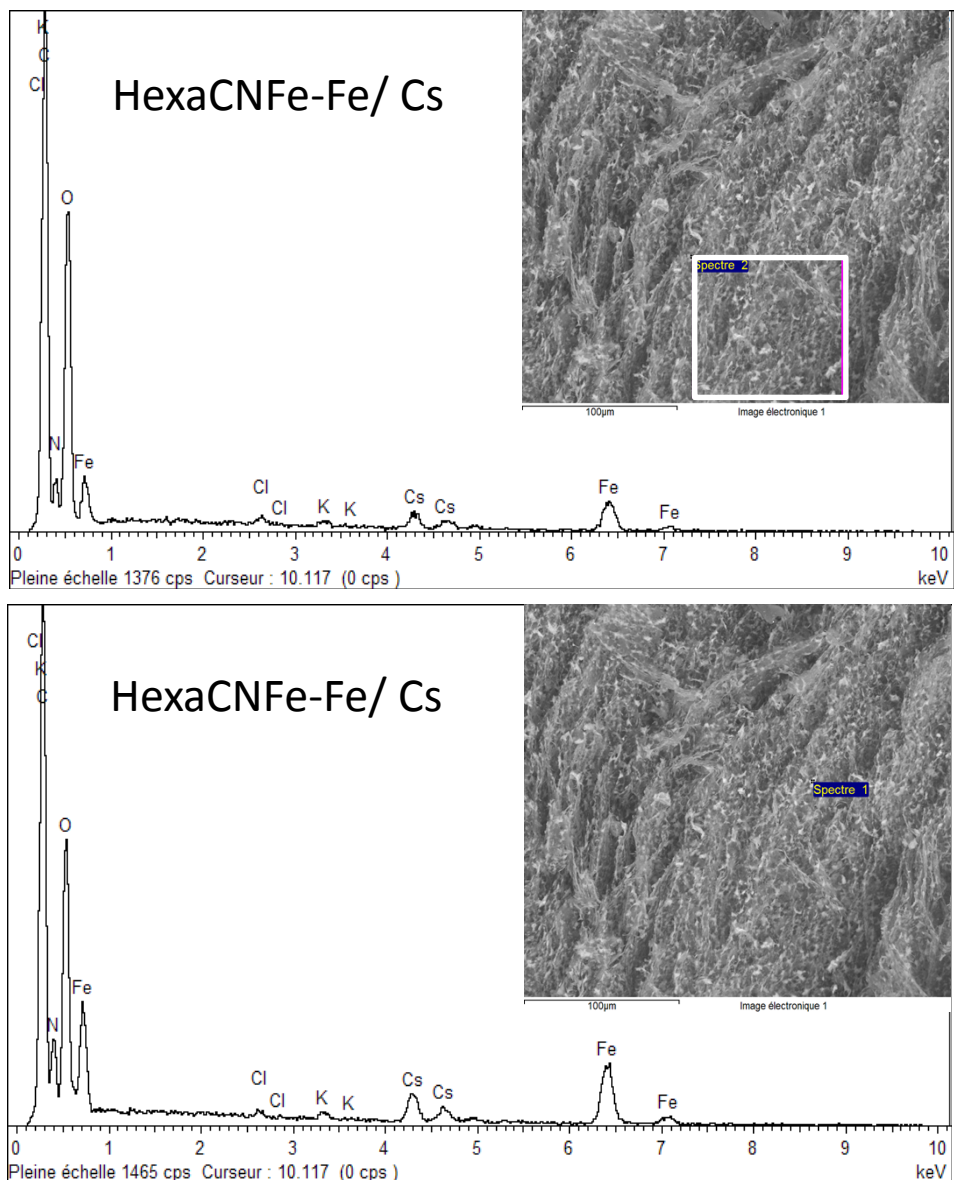


Figure AM6: SEM-EDX analysis of a cross-section of composite HexaCNF-Fe (Prussian Blue) after Cs sorption (SEM photographs, X-ray spectra).

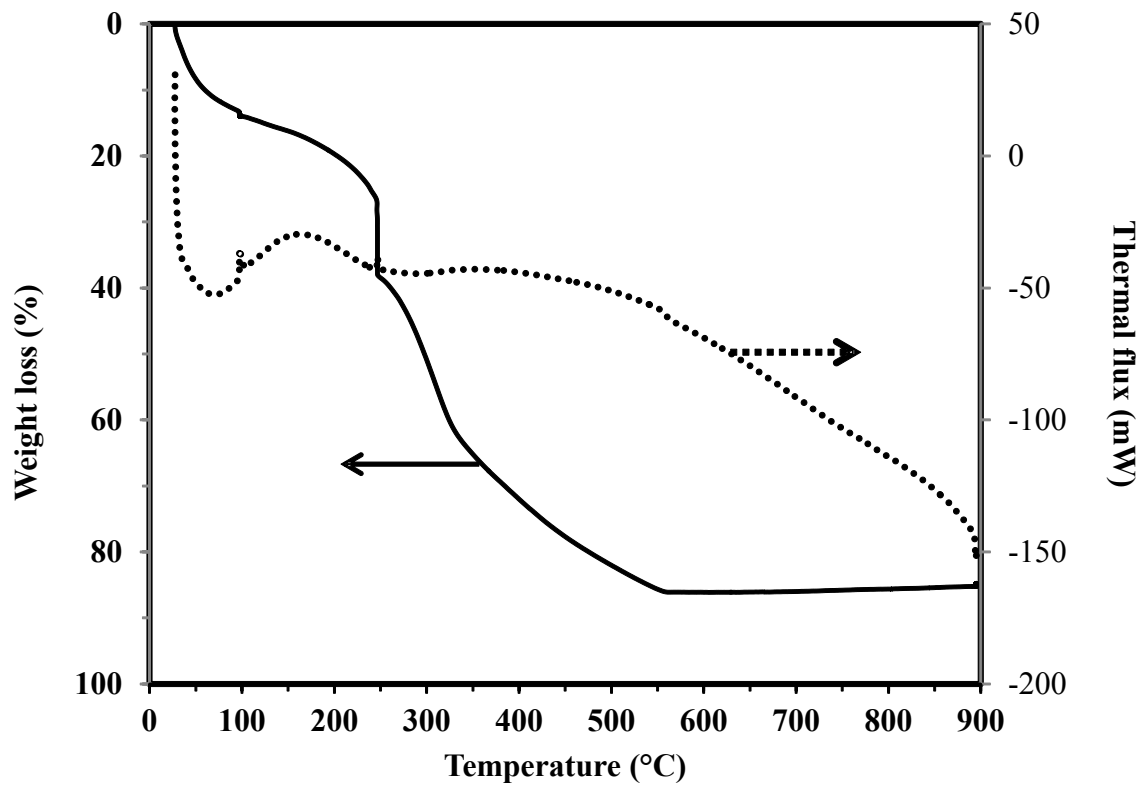


Figure AM7: ATG-ATD of HexaCNFe-Fe/chitin composite.

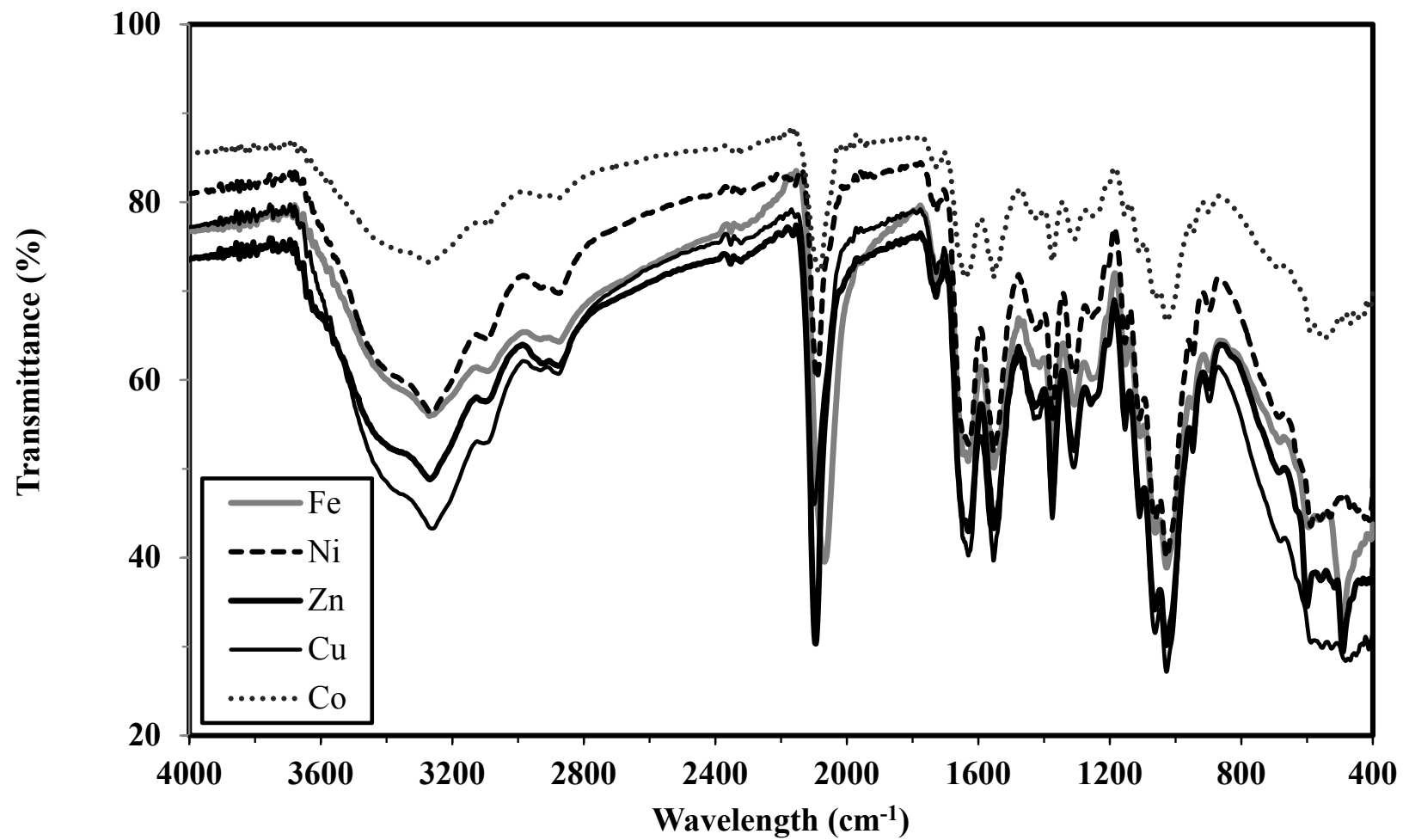


Figure AM8: FT-IR spectra of metal-potassium hexacyanoferrates/chitin composites.

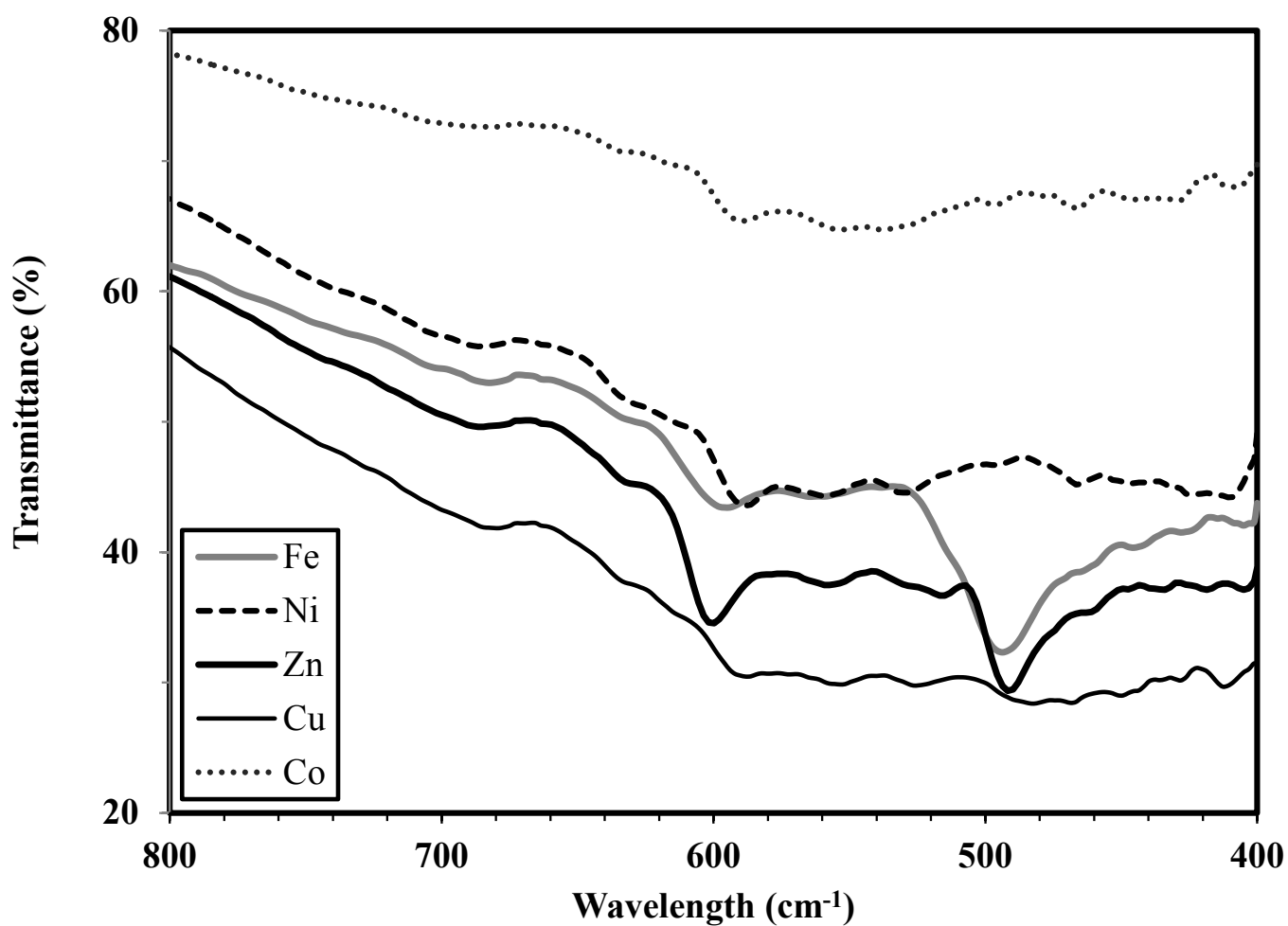


Figure AM9: FT-IR spectra of metal-potassium hexacyanoferrates/chitin composites (focus on wavenumber range: 800-400 cm⁻¹; deformation mode for Fe-CN).

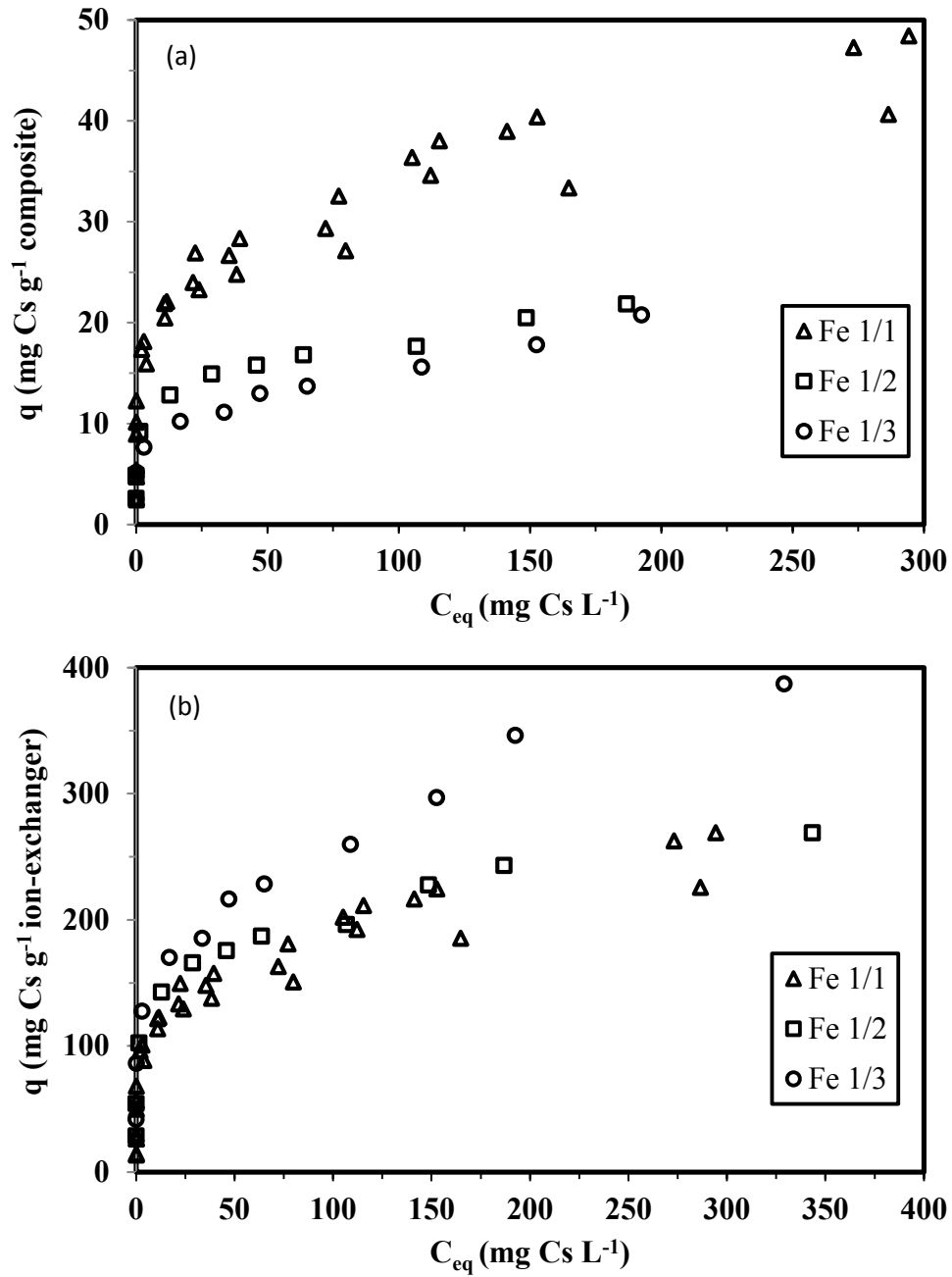


Figure AM10: Cs sorption isotherms using iron-potassium hexacyanoferrate/chitin composite with varying ion-exchanger content (1/n) in the composite and sorbent (a: sorption capacity referred to total mass of composite; b: sorption capacity referred to the mass of ion-exchanger)..

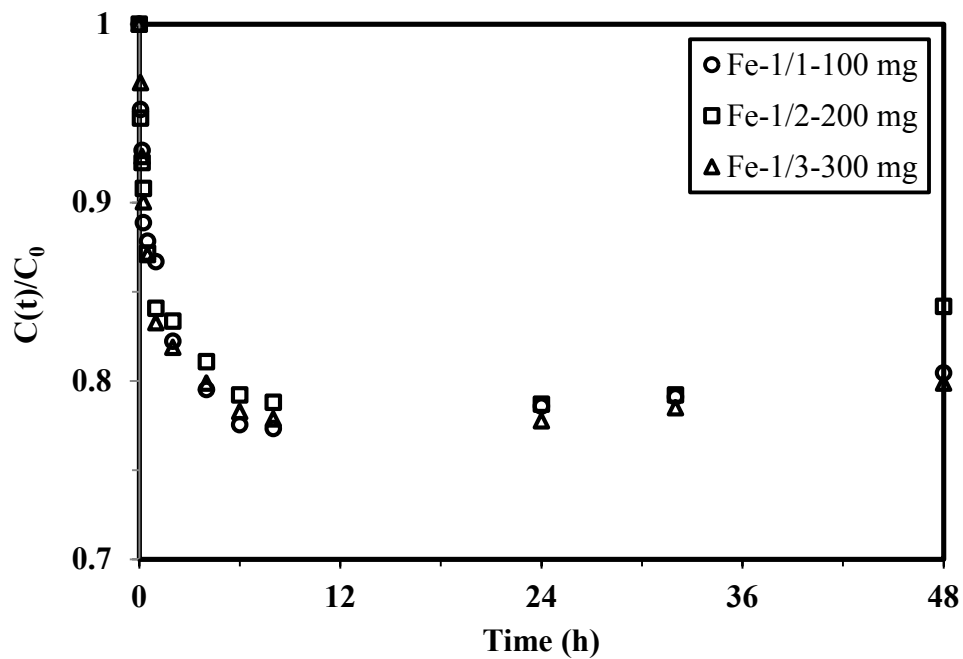


Figure AM11: Cs uptake kinetics using iron-potassium hexacyanoferrate/chitin composite with varying both ion-exchanger content (1/n) in the composite and sorbent dosage (N mg per L) (the final dosage of ion-exchanger in the solution remains constant).