

## **Competitive biosorption of Cr(VI) and Zn(II) ions in single- and binary-metal systems onto a biodiesel waste residue using batch and fixed-bed column studies**

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Figure S1 FTIR spectra of (a) Raw, (b)Cr(VI)-loaded, (c) Zn(II)-loaded and (d) Cr(VI)+ Zn(II)-loaded DPOC.

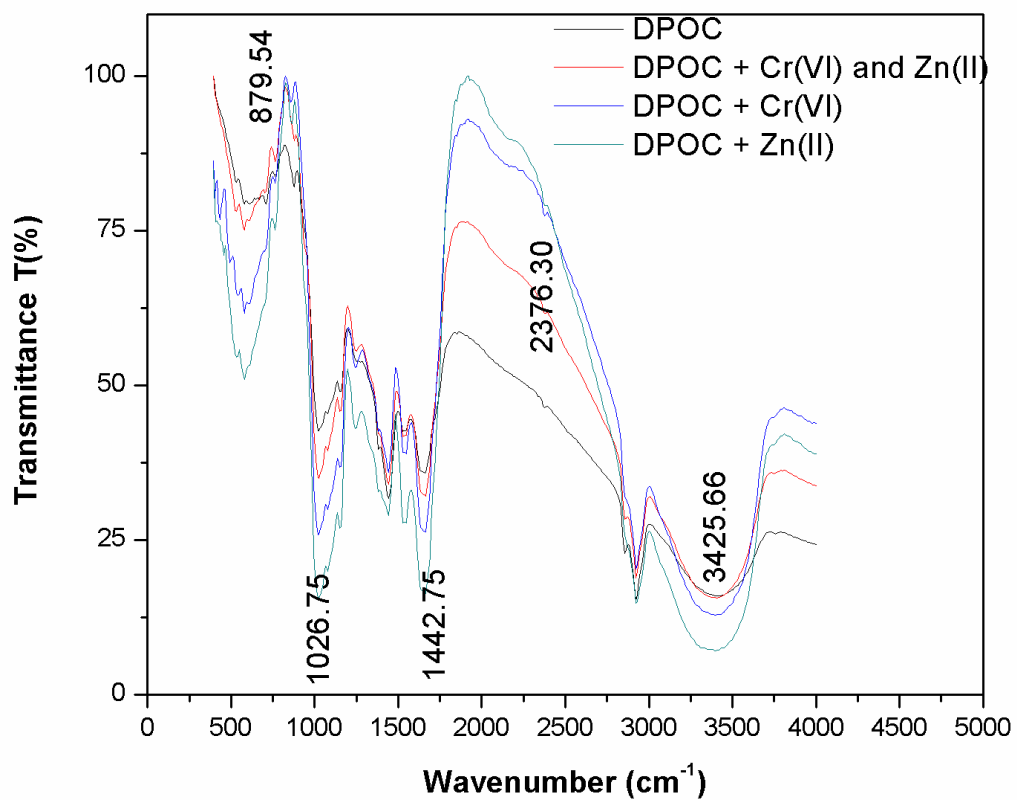


Figure S2

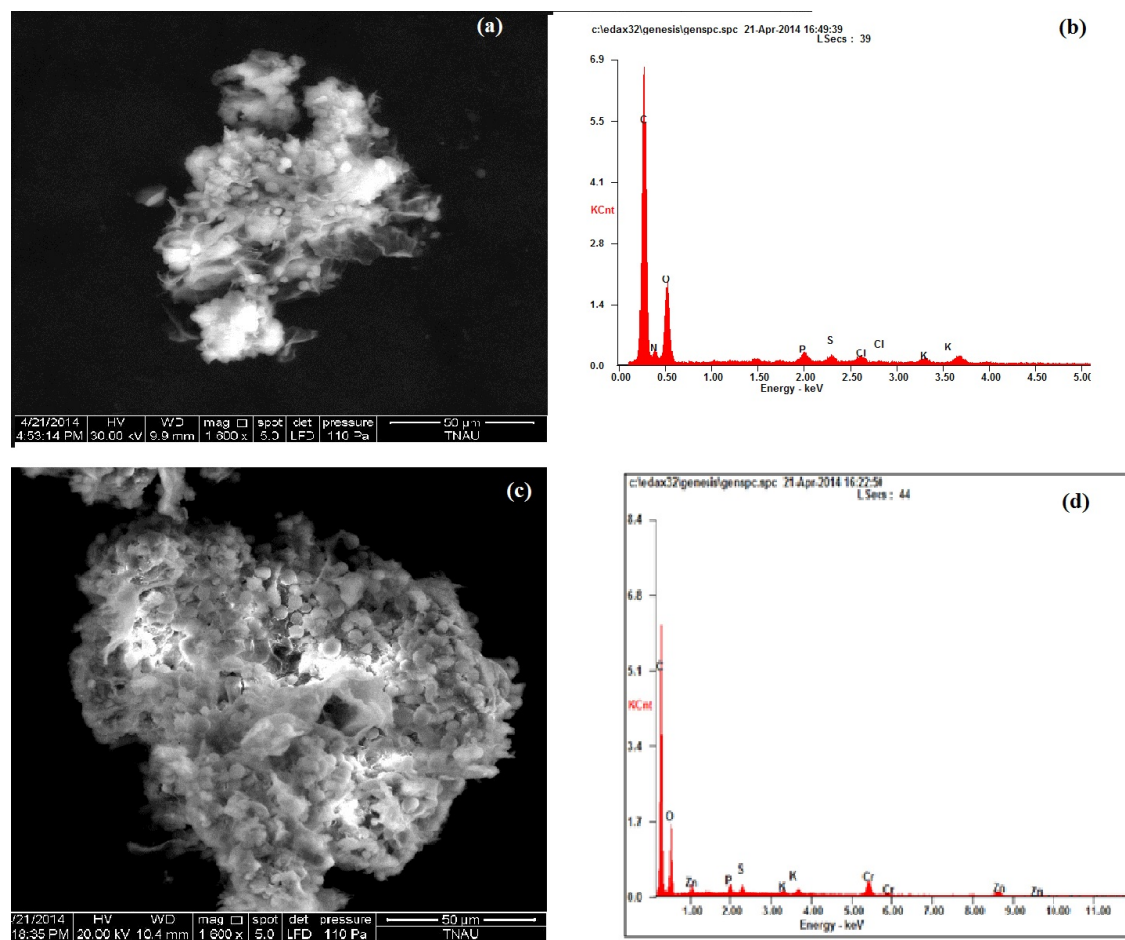


Figure S2 SEM and EDAX images of raw DPOC (a) and Cr(VI)/Zn(II) loaded DPOC

Table S1

Properties	Cr(VI)	Zn(II)
Atomic radii (pm)	140	134
Vander Waals radii (pm)	200	139
Electro negativity (pm)	1.66	1.65

Atomic properties of chromium and zinc ions