

## Accepted Manuscript

Title: Adsorption of Cd(II), Cu(II) and Ni(II) ions by cross-linking chitosan/rectorite nano-hybrid composite microspheres

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**Highlights**

- The cross-linking chitosan/rectorite nano-hybrid composite resins were prepared.
- The adsorption of the resins was investigated in single and binary metal systems.
- The adsorption capacity of the resins followed the order of  $\text{Cu(II)} > \text{Cd(II)} > \text{Ni(II)}$ .
- EDTA desorbed metals from resins better than HCl.
- Coordination bonds were formed between metals and the nitrogen atoms of resins.

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