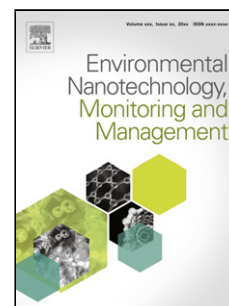


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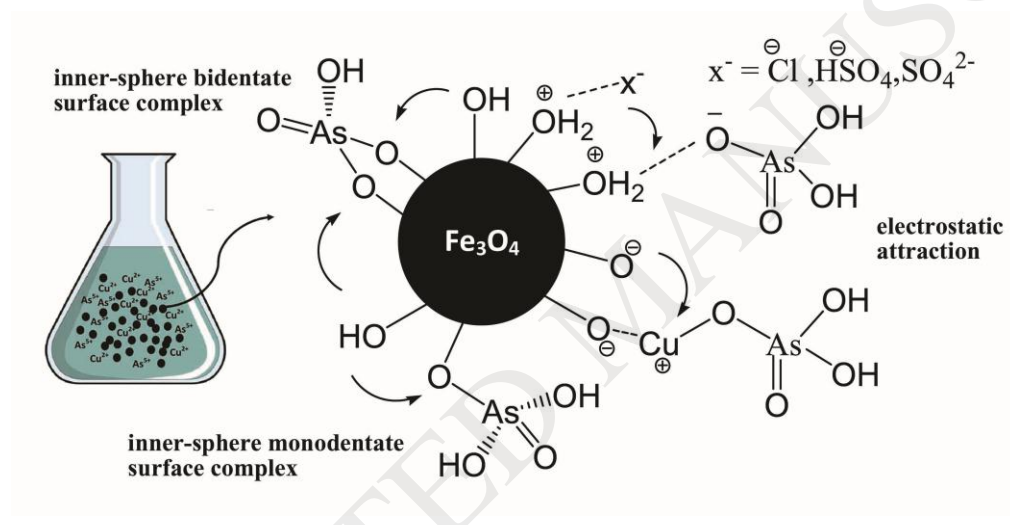
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Influence of heavy metals on the adsorption of arsenate by magnetite nanoparticles: kinetics and thermodynamic

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Graphical Abstracts



Highlight

- Nano-magnetite synthesized from iron tailings by reduction-precipitation method.
- The synthesized nanoparticles were ferromagnetic at the room temperature.
- In comparison with Zn^{2+} and Mn^{2+} , Cu^{2+} affected the As^{5+} adsorption noticeably.
- Arsenate adsorption decreased in the presence of Fe^{3+} and Al^{3+} at pH 2.5.
- The prepared nano- Fe_3O_4 can be reused in consecutive adsorption-desorption cycles.

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