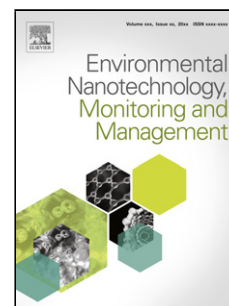


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Liquid Phase Scavenging of Cd (II) and Cu (II) ions onto novel nanoscale zerovalent manganese (nZVMn): Equilibrium, Kinetic and Thermodynamic Studies

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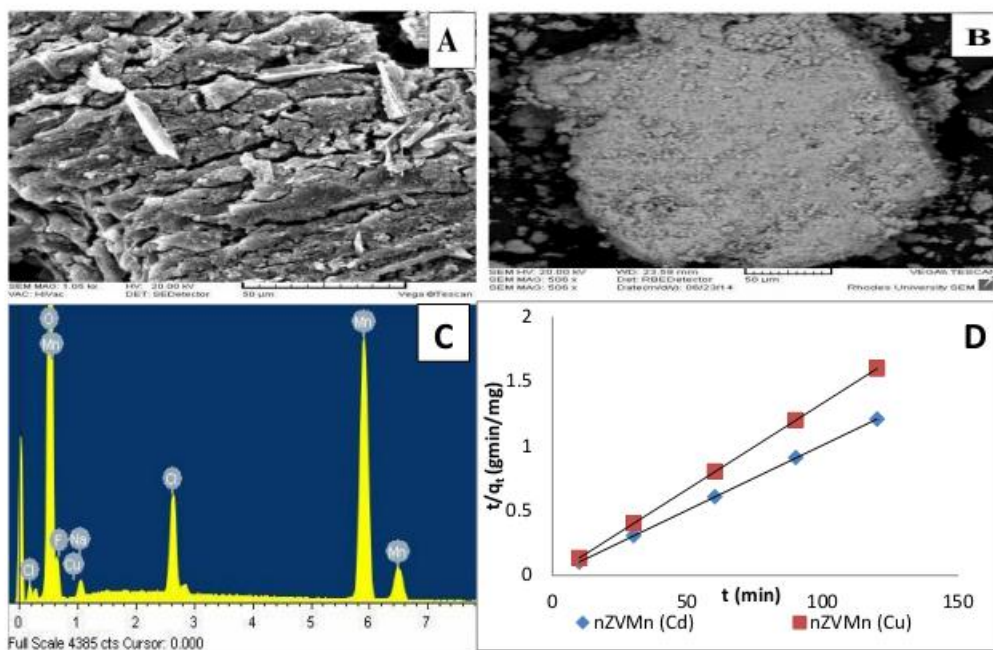
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Graphical abstract



HIGHLIGHTS

- Nanostructured zerovalent manganese (nZVMn) was successfully synthesized and characterized
- nZVMn was effectively utilized in scavenging of Cd (II) and Cu (II) ions from their aqueous solutions and influence of various operational parameters were investigated
- Kinetics data fitted well to pseudo second-order and the mechanism was pore diffusion controlled
- Best fit was given by Langmuir isotherms model and its monolayer capacities surpassed most existing ones
- Renaissance of nZVMn via the desorption studies was best achieved using HCl

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