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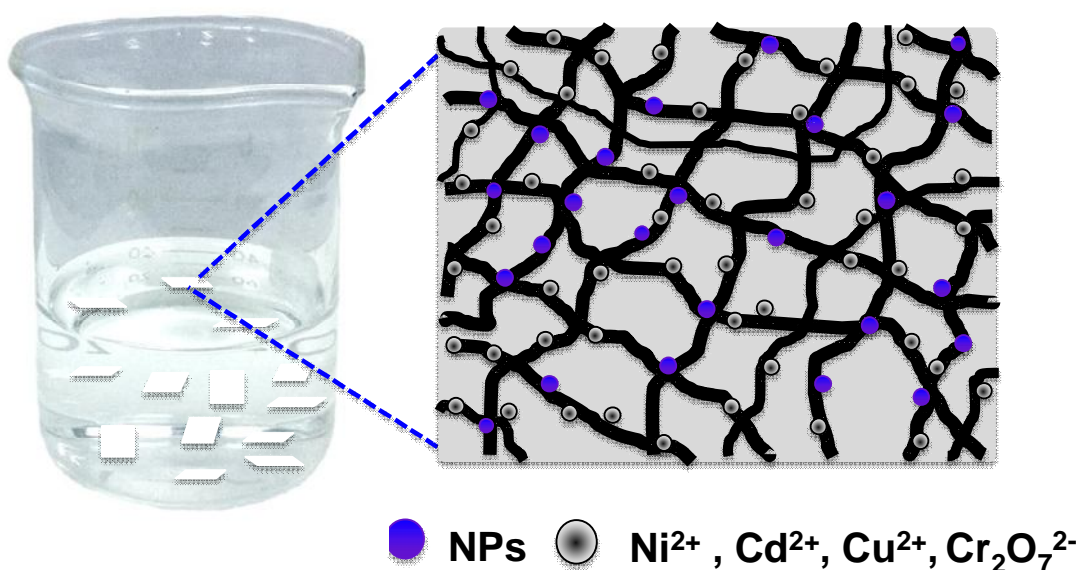
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Table of contents entry

Adsorption process of PEI-coated cellulosic fibers on treated paper



Low cost renewable PEI-functionalized paper was used for efficient extraction of Ag and Au nanoparticles, Ni^{2+} , Cd^{2+} , Cu^{2+} , and $\text{Cr}_2\text{O}_7^{2-}$ ions from water.

Highlights

- PEI-coated paper is developed as renewable low-cost adsorbent for water purification.
- Cross-linked paper showed high stability and adsorption efficiencies towards metal ions and nanoparticles.
- The treated paper showed excellent Langmuir adsorption capacities for pollutants.
- The modified paper retained its extraction efficiencies upon desorption of pollutants.

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