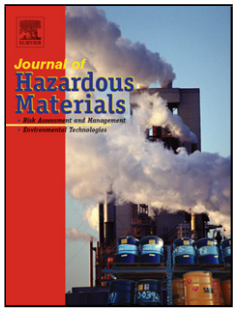

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Preferable Removal of Phosphate from Water Using Hydrous Zirconium Oxide-based Nanocomposite of High Stability

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Highlights

- The nanocomposite HZO-201 was stable under varying solution chemistry
- HZO-201 exhibited preferable phosphate removal over other ubiquitous anions.
- Selective sorption mechanism was probed and discussed.
- HZO-201 could be regenerated for cyclic use with constant efficiency.

Graphical abstract

ABSTRACT

In this study we employed a new nanocomposite adsorbent HZO-201, which featured high stability under varying solution chemistry, for preferable removal of phosphate from synthetic solution and a real effluent. An anion exchange resin (D-201)