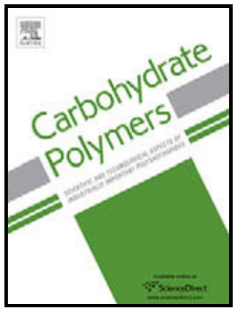

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Surface molecularly imprinted amino-functionalized alginate microspheres for enantio-selective extraction of L-ascorbic acid

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Highlights

- Sodium alginate microspheres were strengthened by ECH covalent cross-linking.
- The cross-linked microsphere particles were amino-functionalized through grafting of PAm followed by Hofmann degradation.
- Surface molecular imprinting was carried out by adsorption of L-ascorbic acid enantiomer followed by glyoxal cross-linking.
- The prepared adsorbent particles were investigated using elemental analysis, FTIR, XRD, TGA and SEM.
- The particles were successfully employed for enantio-selective extraction of L-ascorbic acid and chiral resolution of d/l-ascorbic acid racemate.

Abstract

A surface molecular imprinting technique was utilized in the fabrication of an enantio-selective adsorbent based on amino-functionalized alginate microspheres