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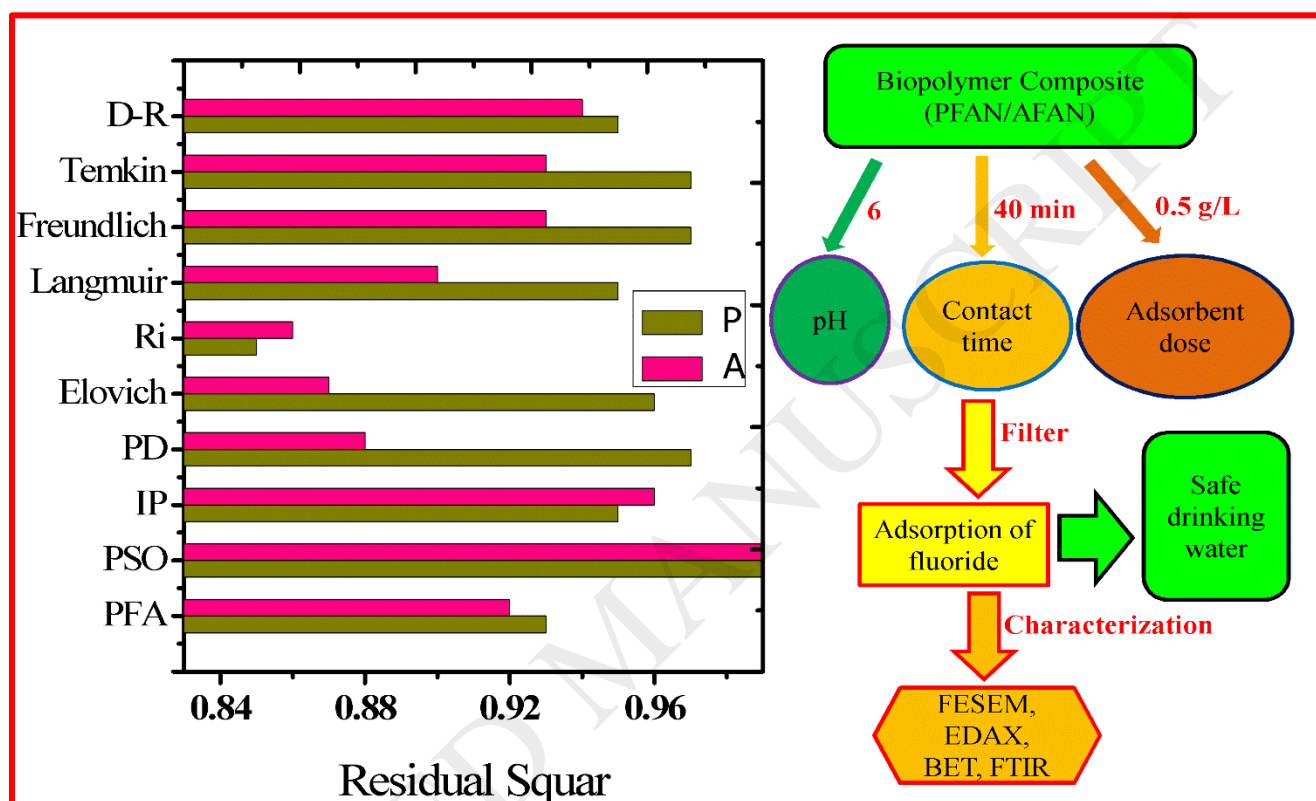
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Comparative Kinetics and Thermodynamic Studies of Fluoride Adsorption by Two Novel Synthesized Biopolymer Composites

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Graphical Abstract

Highlights:

- The pectin-based composites show exceptionally higher adsorption capacity and faster fluoride removal.
- Both composites were characterized by BET, FESEM-EDAX, XPS, FTIR, TGA-DSC, Zeta sizer.
- The adsorption capacity of PFAN and AFAN was 285 and 200 mg/g, respectively.

Abstract

Fluoride (F^-) contamination in water is of immense concern and has far-reaching effects. Among the many technologies available for fluoride removal, adsorption is the most popular. In this study, two new biopolymers (pectin and alginic) based trimetallic oxide (Fe-Al-Ni)

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