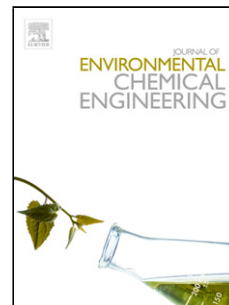


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Adsorptive Removal of Sulfamethoxazole and Bisphenol A from Contaminated Water using Functionalized Carbonaceous Material Derived from Tea Leaves

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Abstract:

In this study, we report a facile method for the preparation of sulfonic acid functionalized carbonaceous adsorbent (TW-SO₃H) from tea leaves. The adsorbent was characterized using Fourier-transform Infrared Spectroscopy (FTIR), Scanning Electron Microscopy (SEM), Energy-dispersive X-ray Spectroscopy (EDS), Thermogravimetric analysis (TGA), Raman Spectroscopy and Zeta potential measurements. The adsorbent was utilized for the adsorptive removal of antibiotics such as sulfamethoxazole (SMX) and endocrine disrupting chemicals such as bisphenol A (BPA) from water. The calculated adsorption capacities of TW-SO₃H were 258.87 mg/g and

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