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Efficient ultrasonic assisted adsorption of organic pollutants employing bimetallic-carbon nanocomposites


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ABSTRACT

In recent times, carbon nanofibers (CNF) have been used extensively for the remediation of environment owing to their hollow layered organization, high specific surface area, and strong electrostatic interactions which formulate it as an appropriate adsorbent material. Metallic nanoparticles were blended onto its surface in order to engineer a novel metal-CNF nanocomposite. The study aimed the ultrasonic assisted adsorption of rhodamine B dye (RhB) and pesticide dichlorophenoxyacetic acid (2,4-D) out of aqueous matrix by using silver (Ag) and copper (Cu) based bimetallic composite (Ag-Cu/CNF) material. The synthesized nanocomposites were characterized for its crystalline analysis, textural characteristics, surface chemical bonding, and specific

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