OB2. **EVALUATION OF MAGNETIC CHITOSAN COMPOSITE AS A GREEN ADSORBENT FOR REMOVAL OF REACTIVE ORANGE 16 FROM SIMULATED WASTEWATER**

Maria Celina ALEXANDRICĂ, Alina IBĂNESCU, Doina HRIŢCU, and Marcel Ionel POPA

"Gheorghe Asachi" Technical University of Iasi, 71D, Mangeron, 700050, Iasi, Romania

Partial oxidation of ferrous ions dispersed in the polymer solution was used for preparing a novel magnetic chitosan composite (MagCS) [1]. The obtained material was used for removal of Reactive Orange 16 dye from aqueous solutions. Towards this purpose a series of batch studies were carried out. The adsorption process was optimized with respect to various experimental parameters such as pH, initial dye concentration, adsorbent mass, contact time and temperature. Physicochemical characterization of MagCS before and after adsorption experiments was performed by EDX analysis. Three kinetic models were taken into consideration to fit the sorption data: pseudo-first order, pseudo-second order and intra-particle diffusion. Langmuir, Freundlich and Dubinin-Radushkevich models were used to analyze the adsorption isotherms. The results showed that MagCS is an efficient adsorbent for the removal of the anionic dye from wastewater.

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