Preparation of Polyaniline/Filter-paper Composite for Removal of Coomassie Brilliant Blue - DTU Orbit (11/02/2019)

Preparation of Polyaniline/Filter-paper Composite for Removal of Coomassie Brilliant Blue
Polyaniline/filter-paper (PANI/FP) composite was prepared by in-situ polymerization of polyaniline onto filter-paper and subsequently evaluated for the removal of Coomassie brilliant blue (CBB) from aqueous solution. Scanning electron microscopy (SEM), thermogravimetric analysis (TGA) and Fourier-transform infrared (FTIR) spectroscopy were used to investigate the morphology and physicochemical properties of PANI/FP composite. Batch experimental results showed that the pH value and temperature could affect the removal capability of the PANI/FP composite. Langmuir and Freundlich models were used to analyse the equilibrium adsorption. Pseudo-first and pseudo-second order models were used to investigate the kinetics of CBB adsorption onto PANI/FP composite.

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