

廢污泥研製吸附劑對染料溶液的吸附特性研究

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摘要

在處理染料廢水的方法中，利用吸附程序是有效的處理方法之一。利用廢棄物研製成吸附劑，可以降低處理成本。本研究以廢污泥所研製的吸附劑，以不同化學活化劑製備成的吸附劑及不同初始濃度(20~100ppm)的條件下，對於單一成份與多成份染料(AR4、AR27、MG與RB5)溶液的吸附行為進行研究，並探討其吸附平衡與動力之間的關係。結果研究顯示，以自製吸附劑吸附雙成份染料AR4+RB5與AR27+MG，吸附動力式皆以Pseudo-second-order equation的符合情形最佳。單成份染料及雙成份染料的等溫吸附模式，皆以Langmuir adsorption isotherm來描述最佳，且利用單成份Langmuir adsorption isotherm的常數值可推算出雙成份的吸附值。實驗結果發現以利用ZnCl₂+H₂SO₄當活化劑之吸附劑吸附效果最好。關鍵字：廢污泥，活化劑，吸附動力式，等溫吸附模式，染料

關鍵詞：廢棄污泥，化學激活技術，動力學方程，吸附等溫線，染料

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