عنوان مقاله:

Biosorption of hazardous dye Crystal violet from wastewater by using Chlorophytum Comosum as an inexpensive plant

محل انتشار:

چهارمین کنفرانس بین المللی برنامه ریزی و مدیریت محیط زیست (سال: 1396)

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خلاصه مقاله:

The removal of Crystal violet (CV) dye from wastewater by using the Chlorophytum Comosum as an inexpensive and accessible plant and its ability for sorption of Crystal violet dye on its roots was the aim of this study. In recent years, adsorption has found as an economic way to remove unwanted pollutants from aqueous systems. Adsorption on plant roots can also be beneficial due to its green chemistry, eco-friendly, inexpensive, high accessibility, non by-productive method and easy operation. The adsorption efficiency was dependent on different operational parameters such as initial dye concentration, adsorption time, pH and amount of plant. The results showed that the biological adsorption efficiency decreased with increasing initial CV concentration and pH. Also this adsorption increased as the reaction time and amount of plant increasing. The batch experiment's results, revealed the ability of plant, Chlorophytum Comosum, in biosorption of Crystal violet up to 90% from waste water

کلمات کلیدی:

biosorption, Chlorophytum Comosum, Crystal violet, textile dye, wastewater treatment