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Composite Beads for Forming in situ Microcosm of Biodegrading Microbial Communities in Groundwater

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Abstract

For exploring a new tool, which could monitor in situ biodegradability of the organic pollutants in groundwater, AC-N composite beads for forming in situ microcosm of biodegrading microbial communities were prepared using activated carbon and nylon66. The characterization results showed that the AC-N beads had open and through porous structure which formed by the hydrogen bond interaction between activated carbon and nylon66. The bead could adsorb enough organic pollutants such as 40 mg/g naphthalene with desorption ratio less than 4.5%. The bacteria *Bacillus subtilis* could enter into and colonize in the AC-N beads.

Key words: A. Activated carbon, A. Nylon66, D. In situ microcosm, D. Groundwater

1. Introduction

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