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Preparation of a bioflocculant by using acetonitrile as sole nitrogen source and its application in heavy metals removal

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Highlights

- ACN could be as an available nitrogen sources for *K. oxytoca* to produce bioflocculant.
- Hydroxyl, carboxyl and amino groups were abundant in the A-GS408.
- Flocculation efficiency was over 90.0% when the pH ranged from 3.0 to 5.0.
- The K_f was up to 439.2 and 112.2 $\text{mg}^{1-1/n} \text{l}^{1/n} \text{g}^{-1}$ for Pb^{2+} and Cu^{2+} , respectively.
- Chemisorption was involved in the metals and bioflocculant.

Abstract

A novel bioflocculant, A-GS408, produced by *Klebsiella oxytoca* GS-4-08

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