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Multidisciplinary characterization of U(VI) sequestration by *Acidovorax facilis* for bioremediation purposes

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Highlights

- First kinetic studies on U removal by *A. facilis*
- U is mainly bound to phosphate groups of LPS within the first hour
- Subsequent U removal on carboxyl groups of PGN
- *A. facilis* as suitable candidate for bioremediation purposes

Abstract

The contamination of the environment by U may affect plant life and consequently may have an impact on animal and human health. The present work describes U(VI) sequestration by *Acidovorax facilis* using a multidisciplinary approach combining wet chemistry, transmission electron microscopy, and spectroscopy methods (e.g. cryo-time resolved laser-induced fluorescence spectroscopy, extended X-ray absorption fine structure spectroscopy, and in-situ attenuated total reflection Fourier transform infrared spectroscopy). This bacterial strain is

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