

## **COPPER BIORECOVERY FROM ELECTRONIC SCRAP USING ULTRASOUND**

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**Abstract:** The interest in biohydrometallurgy continues unabated and it is now gaining importance in bioleaching pertaining to the recycling industry. It has clear environmental advantages, is economically competitive and enables reductions in energy consumption as well as in pollution and waste generation. "Clean technology" would not be possible without creative innovations based on advanced science and technology; therefore bioleaching is likely to play an important role. The use of power ultrasound in combination with bioleaching has been studied and is shown to be beneficial in the recovery of copper from electronic scrap. The role of ultrasound in improving the benefits and lowering the drawbacks of bioleaching to an acceptable level are described. A possible mechanism for improving and intensifying this process is hypothesised.

**Key words:** copper; bioleaching; ultrasound; electronic scrap