

5<sup>th</sup> World Convention on

# RECYCLING AND WASTE MANAGEMENT

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## A novel biometallurgical approach to capturing value from electronic waste

**Ollie Crush**

Mint Innovation, New Zealand

The challenges associated with the two current industry standard techniques for recovering valuable metals from electronic scrap mean that over 80% of the 50 million tons scrapped per annum end up in landfill. Pyrometallurgy; burning off gold and other precious metals at elevated temperatures is energy intensive, very costly and releases dangerous gases such as dioxins. Hydrometallurgy; using strong leaching chemicals such as cyanide solution or very strong acids are expensive, very toxic and completely non-recyclable. Mint Innovation; a New Zealand cleantech company have developed a unique biometallurgical approach to recover precious metals from electronic waste and other residues such as mining tailings and ores. The Mint process uses microorganisms to selectively and rapidly recover precious metals from circuit boards under environmentally benign conditions. The process is low cost, recyclable and fully scalable making the ideal solution for recovering value from e-waste at any scale. A key aspect of the Mint process is the broad spectrum of biosorbents that can be used to selectively recover a variety of metals. This enables recovery of precious metals from a range of resources and remediation of metal contaminated streams.

ollie@mintinnovation.co

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