



THESIS DEFENSE

May 5, 2023

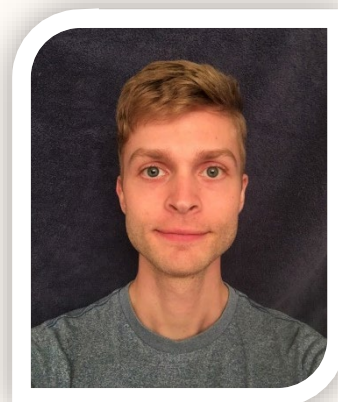


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Remote; Zoom

Municipal landfill leachate inorganic analysis focusing on detecting valuable metals

Recent research suggests that waste electronics thrown away by consumers could amount to \$37.5M of potentially recoverable metals in single landfill. Rare and useful metals may have a large variance in presence from one landfill to another depending on factors such as age and waste management policies. The EPA in 2018 reports that 2.51 million tons of nonferrous metals are generated in MSW landfills, which could contain ample opportunity for recovering metals of high economic value. The nonferrous waste metals include waste consumer electronic devices disposed to landfills, which contain critically important and rare metals. A method to completely dissolve and analyze pumped landfill leachate resulted in quantifiable and positive detections of Platinum, (Post-) Transition, and Lanthanide group metals in the landfill leachates.



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BIO

BS in Civil Engineering
(Waste)water and Geology emphasis
Interests in environmental waste and resources

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