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## MANAGEMENT OF OIL SANDS TAILINGS

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## **ABSTRACT**

In Alberta, oil sands bitumen is utilized for synthetic crude oil (SCO) production by surface mining, bitumen extraction followed by primary (coking) and secondary (catalytic hydrotreating) upgrading processes. SCO is further refined in specially

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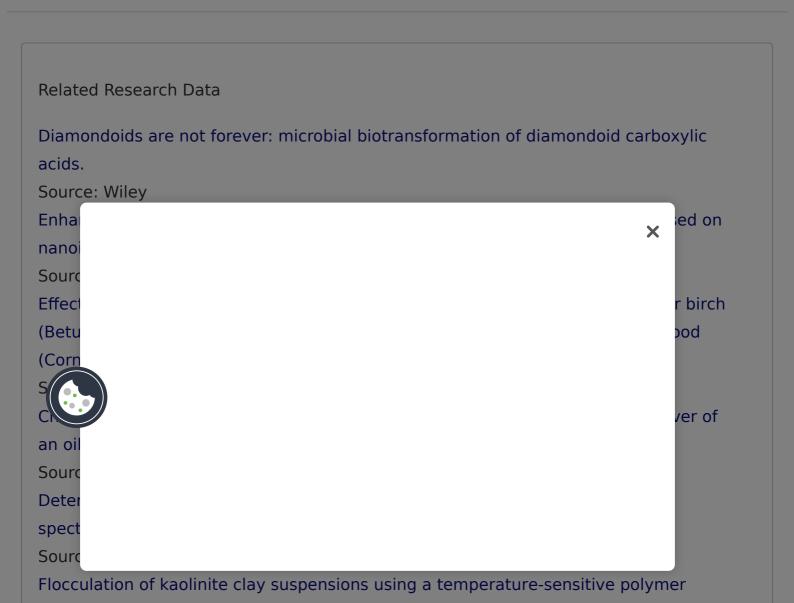
treatment

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times without accumulation of any ions in the recovered water. This makes it possible to recycle the recovered water, probably after a chemical treatment, as warm as possible, which improves the thermal efficiency of the extraction process. The AEI Process can be applied in many different fashions for the management of different fractions of the tailings effluent, depending on the overall plant operating priorities.

## **ACKNOWLEDGMENTS**

The authors greatly appreciate the financial support provided by IRAP, NRC Canada (Contract Number: 28565U), Syncrude Canada Ltd.'s courtesy in providing tailings samples and the technical advice provided by Bill Shaw, Ted Kizior, Michael Rogers and Wayne McKee of Syncrude Canada Ltd. Gilbert Wong and Ken Leung of the Geotechnical Group of the University of Alberta diligently and carefully performed the experimental program.



Source: Wiley

Linda

Source: Wiley

OIL SANDS PRODUCTION AND THE ENVIRONMENT

Source: American Geophysical Union (AGU)

Measuring solid percentage of oil sands mature fine tailings using the dual probe heat

pulse method.

Source: Wiley

Metagenomic analysis of an anaerobic alkane-degrading microbial culture: Potential

hydrocarbon-activating pathways and inferred roles of community members.

Source: Canadian Science Publishing

Dual polymer flocculants for mature fine tailings dewatering

Source: Wiley

Impact of flocculation-based dewatering on the shear strength of oil sands fine tailings

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Role of colloidal interactions in oil sand tailings treatment

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Thermal properties of oil sands fluid fine tailings: laboratory and in situ testing

methods

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