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Safe, Biodegradable Oxidation coming to Mining

Life Science May Hold the Answers

Sudbury— July 1, 2020 **-** Inside living systems lurks the most powerful chemical oxidation known to man. This type of REDOX is called ROS/RNS (Reactive Oxygen Species / Reactive Nitrogen Species). Highly reactive versions of very common molecules containing Oxygen and Nitrogen. These molecules are extremely powerful and can oxidize a large variety of targets stronger than the chemicals known today like Ozone, peroxide, and Chlorine.

Bio-Mine Ltd has been researching this phenomena inside our consortium for 2 years now, and has opened a division for organic polymer / reagent manufacturing around trying to develop a slow release system for these reactive elements, such that they don't disappear so quickly upon contact with water, which has been the drawback of these species.

In March of 2020, the Bio-Mine team stumbled across a stable salt version of these oxidants wrapped in a particular housing that could solubilize in water and release these tiny molecular oxidants with specific proprietary activation, over a longer period.

"*We believe this is a breakthrough in the field of chemical oxidation, as we can harness the power of the ROS / RNS found in living systems inside mine slurries, heaps and waste. Imagine an oxidation reagent added to a slurry tank or heap leach, where the most powerful oxidation takes place followed by a return of the reactive molecules back to safe and friendly versions like O_2, OH and H_2O. The applications in mining are numerous, from targeted oxidation of the organic carbons plaguing the gold industry, to chalcopyrite oxidation without passivation, to remediation of waste and water treatment."*

Kurtis Vanwallegham, CEO at Bio-Mine Ltd..

Bio-Mine Ltd. has begun to establish the facilities to manufacture this ROS-V23.1 in bulk, setting up API suppliers in Canada, USA and India. This will allow Bio-Mine to manufacture this reagent to economically compete with traditional chemicals being used today.

Its this type of advanced research in fields of molecular and life science that may provide some answers to this industry as to how they will navigate the future for safer and more environmentally friendly mining. Bio-mine is working with some of the world's largest operators to foster this advanced research and development.

Company

Founded in 2016, Bio-Mine Ltd. is an advanced research incubator for cleaner mine processes and remediation using biochemistry and advanced molecular science as its foundation. Bio-Mine believes the answers to cleaner mining will not come from metallurgy or conventional thinking, so the company approaches "*clean mining*" from a completely different, and highly technical direction… Molecular science.

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