

# Sixth Wave Innovations Inc. “Green Lixiviant for Gold Mining” Research Program Confirms Non-Toxicity with Superb Gold Recovery

written by Raj Shah | March 1, 2022

March 1, 2022 ([Source](#)) – **Sixth Wave Innovations Inc. (CSE: SIXW) (OTCQB: SIXWF) (FSE: AHUH)** (the “**Company**” or “**Sixth Wave**”) is pleased to report that mine effluent submitted for ecotoxicity testing to independent H2Labs (<https://h2lab.ca/en/>) is confirmed as “nontoxic” for fish and daphnia as defined by Canadian environmental standards. Completion of the ecotoxicity test completes Phase 2 of the **Green Lixiviant for Gold Mining** research program. The effluent was submitted by the Centre Technologique des Résidus Industriels.

SIXW reported results in September 2021 that demonstrated the extraction of gold at a high capacity with lower reagent costs. The results were achieved during the successful completion of Phase 1 of the “Green Alternatives for Gold Leaching and Recovery” initiative (the “**Green Initiative**”). The research program was undertaken with the Centre Technologique des Résidus Industriels (“**CTRI**”), Australian company Mining and Process Solutions (“**MPS**”), and a major Canadian gold mining company. Sixth Wave has worked collaboratively with **MPS** and **CTRI** to test the efficacy of Sixth Wave’s IXOS® molecularly imprinted polymer for gold extraction in conjunction with MPS’ GlyCat™ process.

**Green Alternatives for Gold Recovery Project (Phase 1 and 2)**

## Noteworthy Results

### \*Reported by the CTRI Program Manager:

- IXOS® Molecularly Imprinted Polymer Beads with *GlyCat*™
  - The only “green alternative” for gold recovery to cyanidation in view of the ore, methods, and conditions researched by CTRI
  - Recover gold with 90% less cyanide usage than conventional cyanidation
  - IXOS® recovery averaged 95% of “recoverable” gold
  - No breakage of IXOS® beads was identified with visual inspection
  - Stripping of beads resulted in 100% metal removal and analyses at CTRI, Sixth Wave and MPS Laboratories were equivalent
    - Strip was completed in under 2 hrs, at 60° C and with no pressure confirming substantially reduced energy requirements for IXOS®
  - Gold mass balance confirmed all performance results based on ore head grade, leach efficiency, and gold recovery by IXOS®
- Cyanide destruction using ozone effectively removes all reagents from the leachate and other methods are under consideration
- “Non-Toxic” ecotoxicity test recorded no daphnia or rainbow trout deaths
- *GlyCat*™ primary lixiviant is recyclable and a less oxidising destruction method
- Residual glycine is confirmed as non-toxic indicating any traces of glycine is non-toxic
- IXOS®-In-Leach (IIL) Technology continues to show profound successes

IXOS® has proven effective in the extraction of gold from cyanide leach solutions and the completion of Phase 1-2 of the Green Initiative has demonstrated the ability of IXOS® to extract gold from the pregnant leach solution generated by MPS' GlyCat™ technology. IXOS® is superior to traditional activated carbon technology and demonstrates a higher selectivity for gold relative to other gangue materials, resulting in a higher gold capture than activated carbon.

*"Our collaboration with MPS and CTRI is a major focal point of our mining division activities," said Sherman McGill, Executive Vice President for Sixth Wave. "We are keenly aware of the need for environmental innovation and safeguards. Citing the Green Business Bureau, "Investors and firms across the globe are changing their priorities. For instance, Boston-based [Trillium Asset Management](#) is using a selection of environmental, social, and governance factors to identify companies that are in a good position for strong long-term performance. This move away from short-termism by financial institutions and capital markets has created a new buzzword in the corporate world: ESG." Couple the ESG focus, high-performance attributes of IXOS®, opportunities to lower Capex and Opex, and you have a compelling business case for adoption.*

*We believe gold mining companies will have significant interest in learning more about our results and how the technology may benefit their operations."*

*"We are very pleased to be in collaboration with Sixth Wave," states Mr. Ivor Bryan, Managing Director of MPS. "Our respective technological approaches can bring tremendous value to prospective customers by significantly cutting cyanide usage along with the associated costs and environmental impact. The*

*added benefits of IXOS® in ease of removal of the metals provide additional ESG benefits in reduced power consumption and thus reduced CO2 emissions making the combined technologies a very appealing solution."*

### **About IXOS® Technology**

The foundation of Sixth Wave's products for the resource sector is its IXOS® advanced extraction media developed using Molecularly Imprinted Polymers ("**MIPs**"). MIPs contain specifically engineered cavities designed to target and capture molecules of interest, based on molecular geometry and ionic charge.

Test results for extraction of gold from cyanide leach solutions have demonstrated the ability to capture elevated quantities of gold as compared to traditional activated carbon. MIPs nanotechnology can be applied to other target elements in addition to gold, including both inorganic and organic elements that require removal from solution.

### **About Sixth Wave**

Sixth Wave is a nanotechnology company focused on the extraction and detection of target substances at the molecular level using its patented technologies in the highly specialized field of molecularly imprinted polymers. Sixth Wave has commercialized IXOS®, a line of extraction polymers for the gold mining industry.

For more information about Sixth Wave, please visit [www.sixthwave.com](http://www.sixthwave.com)

### **About Mining and Process Solutions (MPS)**

MPS holds exclusive global rights to the Glycine Leaching process developed by Curtin University. The company was formed in 2014 as a privately owned and funded company headquartered in Perth, Australia. MPS has 5 international patents granted and pending for Glycine leaching. MPS is developing a number of leaching processes with its GlyCat™ process currently available to the market. Two commercial operations in Africa are using the technology to retreat copper/gold tailings that would otherwise be an environmental waste liability. MPS was selected as the 2021 winner of the cleantech category in the global Extreme Technology Challenge – the competition consisted of 3700 startups and is the world's largest startup competition. MPS was also the overall winner of the 2019 Western Australia Innovator of the Year Award and winner of the 2017 Australian Technologies Competition – Mining Sector.

For more information about MPS, please visit [www.mpsinnovation.com.au](http://www.mpsinnovation.com.au)

#### **ON BEHALF OF THE BOARD OF DIRECTORS**

*"Jon Gluckman"*

Jonathan Gluckman, Ph.D., President & CEO

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#### **Cautionary Notes**

*This press release includes certain statements that may be deemed "forward-looking statements" including statements regarding IXOS® system scale-up, performance, and commencement of full-scale production. All statements in this release, other than statements of historical facts, that address future events or developments that the Company expects, are forward-looking*

statements. Although the Company believes the expectations expressed in such forward-looking statements are based on reasonable assumptions, such statements are not guarantees of future performance and actual events or developments may differ materially from those in forward-looking statements. Such forward-looking statements necessarily involve known and unknown risks and uncertainties, including the risks that IXOS<sup>®</sup> system performance may not be maintained at a production level, that anticipated cost savings and performance levels relative to competing technologies may not be realized, that other technology with better performance or costs may be developed by competitors, and other risks detailed in the Company's filing statement available at [www.sedar.com](http://www.sedar.com), which may cause the Company's actual performance and financial results in future periods to differ materially from any projections of future performance or results expressed or implied by such forward-looking statements.