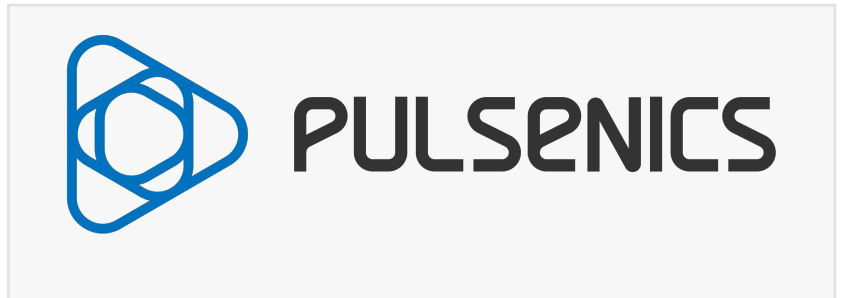


Pulsenics and BioLargo Water Accelerate Electrode Performance Qualification for Electrochemical Water Treatment

Advanced manufacturing protocols demonstrate rapid evaluation of electrochemical water treatment systems, supported by Next Generation Manufacturing Canada



TORONTO, CANADA, December 13, 2023 /EINPresswire.com/ -- Pulsenics

Inc. and BioLargo Water have successfully demonstrated advanced manufacturing protocols to rapidly evaluate electrode performance for electrochemical water treatment reactors, achieving a remarkable 500% faster performance qualification timeline.

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Our rapid evaluation protocols unlock conclusive diagnostics and expedite manufacturing scalability for clean technologies.”

*Dr. Essam Elsayhi, Pulsenics
CEO*

Supported by Next Generation Manufacturing Canada (NGen), the collaboration focuses on streamlining the assessment of new electrode surface treatments to extend the lifetime of BioLargo's next-generation Advanced Oxidation System™ (AOS). The AOS utilizes electrochemistry to remove harmful organic contaminants and provide high-level disinfection, offering a clean solution for treating industrial wastewater.

Traditionally, evaluating new surface treatments involved

lengthy and expensive manual investigation processes. Under this project, Pulsenics' novel spectroscopic diagnostic technology was used to extract critical performance indicators from BioLargo's reactors in real-time. This allowed for efficient and reliable monitoring of electrode and membrane conditions non-invasively as the reactor treated water.

Mariam Awara, Pulsenics COO, notes the impact: "Pulsenics' technology allowed BioLargo to evaluate five times more electrode surface treatments than would have been feasible under conventional methods, all achieved without the need to set up new testing infrastructure or test stands! Together with BioLargo and NGen, we have demonstrated a significant speed-up in the process associated with manufacturing electrochemical reactors."

BioLargo Water scientist, Artem Lavrentev, adds: "Our collaboration with Pulsenics has allowed us to rapidly identify key areas of improvement for our reactor design and electrode choices to maximize the AOS performance, bringing us to a market-ready commercial unit faster."

Dr. Essam Elsayhwi, Pulsenics CEO, emphasizes the project's success: "This project highlights the role of actionable insights in accelerating the deployment of electrochemical assets. Our rapid evaluation protocols unlock conclusive diagnostics and expedite manufacturing scalability for clean technologies."

The collaboration enhances Canada's standing in water remediation, expanding access to clean water for remote communities and contributing to economic development in the manufacturing industry.

"BioLargo's AOS technology offers a low-cost, high-performance solution for microbial and hard-to-treat contaminants such as pharmaceuticals in wastewater. Our collaboration with Pulsenics has led to a reactor that would be a game-changer in wastewater treatment," says Dr. Richard Smith, BioLargo Water President and CEO.

Together, Pulsenics Inc. and BioLargo Water have demonstrated an advanced approach to evaluate the performance of electrodes for electrochemical water treatment reactors 500% faster, paving the way for the accelerated scale-up and commercialization of innovative clean technologies.

About Pulsenics

Pulsenics is enabling the industrialization of electrochemical technologies with novel spectroscopy and data solutions. By introducing real-time performance diagnostics, Pulsenics is making it possible to monitor the internal conditions of electrochemical systems without the need for shutdown, leading to improved performance and lifetime. As a trusted industrial partner, Pulsenics is paving the way toward a more reliable and efficient electrochemical industry. www.pulsenics.com

About BioLargo Water

BioLargo Water develops innovative, sustainable water treatment technologies for a better water future. The company, based out of Edmonton, Alberta, Canada, is focused on commercializing its Advanced Oxidation System (AOS) technology, a practical and effective solution to tackling emerging contaminants while maintaining energy- and cost-efficiency. www.biologrowater.com

About NGen – Next Generation Manufacturing Canada

NGen is the industry-led not-for-profit organization that leads Canada's Global Innovation Cluster for Advanced Manufacturing. Its mandate is to help build world-leading advanced manufacturing capabilities in Canada for the benefit of Canadians. NGen works to strengthen collaboration among its membership of more than 5,000 manufacturers, technology companies, innovation

centers, and researchers, and provides funding and business support to industry-led initiatives that aim to develop, apply, or scale up transformative manufacturing solutions in Canada for commercialization in global markets. www.ngen.ca/membership

Mariam Awara

Pulsenics Inc

mariam@pulsenics.com

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