MARK LEPAGE, PH.D.

@ mark@marklepage.ca marklepage.ca
+15149798852 Montréal, QC

EXPERIENCE

Founder - Flotation Metrics

June 2025 – Present Montréal, QC

- Founded Flotation Metrics to develop and apply **flotation measurement technologies and process diagnostics** for industrial applications.
- Leads industrial measurement campaigns and flotation studies from experimental design through data analysis and process interpretation.
- Develops sensor platforms, automated test systems, and analytical workflows for laboratory and plant-scale flotation applications.

Postdoctoral Researcher - Mining and Materials Engineering

Sep 2024 – Present McGill University - Montréal, QC

- Leads applied research on gas dispersion, froth characterization, and flotation hydrodynamics with emphasis on **measurement methodology and industrial implementation**.
- Designs laboratory and plant-scale studies, instrumentation, and analytical methods in collaboration with industrial partners.

Flotation Researcher - Corem

Dec 2021 – Jun 2024 Québec, QC

- Developed and deployed **gas-dispersion instrumentation** and **computer-vision systems** for industrial flotation applications.
- Designed experimental programs and translated research findings into practical recommendations for industrial partners.

Process Engineer - The Mosaic Company

Sep 2013 – Sep 2014 Colonsay, SK

- Supported process monitoring, troubleshooting, and optimization at the Mosaic Colonsay potash processing plant.

EDUCATION

Doctor of Philosophy - Mining and Materials Engineering

Sep 2015 - June 2023 McGill University - Montréal, QC

- Thesis: Development of novel instrumentation for characterization of flotation froth.

Bachelor of Engineering - Chemical Engineering with Distinction

Sep 2009 - Apr 2015 University of Saskatchewan - Saskatoon, SK

SELECTED INDUSTRIAL PROJECTS

Plant-Scale Flotation Circuit Diagnostics

2024–2026

- Led multiple industrial flotation campaigns integrating gas-dispersion measurements, metallurgical sampling, mass balancing, and circuit analysis to identify operating trade-offs and improvement opportunities.

Industrial Gas-Dispersion Measurement Systems

2024–2026

- Developed and deployed portable and continuous measurement systems for gas holdup, bubble-size characterization, and flotation hydrodynamics in industrial flotation cells.

PROFILE

Flotation specialist and technical founder combining mineral processing, instrumentation, and applied data science. Experienced in developing measurement technologies, industrial flotation diagnostics, and translating plant data into actionable operating insights.

SELECT PUBLICATIONS

Lepage, M.R., Morenon, N., Opoku, J., Waters, K.E. **Quantifying the frother potential of industrial flotation cell process water using dilution curves** *Minerals Engineering*, 2026.

Opoku, J., Lepage, M.R., Langlois, R., Waters, K.E. **Integrated portable gas dispersion device**. *Canadian Metallurgical Quarterly*, 2024, 1–9.

TECHNICAL SKILLS

Flotation & Process Diagnostics
Flotation · Gas dispersion · Froth characterization · Circuit analysis

Instrumentation & Prototyping
Sensor development · Electronics · PCB design · 3D CAD · 3D printing

Data & Software
Python · MATLAB · Machine learning · Image processing · Numerical modelling · SQL/NoSQL

Technical Leadership
Industrial R&D · Experimental design · Project management · Technical reporting

Tools
PyTorch · C++ · JavaScript · KiCAD · Fusion 360 · Excel/VBA

LANGUAGES

English - Native
French - Professional

OTHER INTERESTS

Hockey · Volleyball · Photography · Music · Travel · Building & DIY · Electronics · Programming