



# Ruby N. Ghosh

Founder, CEO and Chief Science Officer of Opti O<sub>2</sub>

## Contact Details

Opti O<sub>2</sub>, LLC, 4942 Dawn Ave., Ste. 204

East Lansing, MI 48823, USA

**T:** (517) 331 9577

**E:** ghosh@optio2.com

**W:** www.optio2.com



## About Ruby N. Ghosh

Opti O<sub>2</sub> founder, CEO and Chief Science Officer Ruby N. Ghosh, Ph.D., champions scientific innovation to address challenging problems. Dr. Ghosh — one of just a small group of women in the field of experimental physics — is the lead inventor and driving force behind a revolutionary oxygen-sensing technology poised to play a critical role in keeping people safe from water contaminants globally.

In addition to her role establishing and leading Opti O<sub>2</sub>, Dr. Ghosh is a research associate professor at Michigan State University within two different departments: the Department of Physics and Astronomy as well as the Department of Electrical and Computer Engineering. She has more than 40 peer-reviewed studies and has served as the principal investigator for more than \$5 million in funding from the National Science Foundation, the U.S. Department of Energy, the Michigan Economic Development Corporation, and Ford Motor Company.

Prior to founding Opti O<sub>2</sub>, Dr. Ghosh worked at Bell Laboratory, Lucent Technologies in New Jersey. In that role, she developed an optical amplifier for fiber-to-the-home internet connectivity.

Committed to solving Earth's most pressing problems through applied physics, Dr. Ghosh studied at Cornell University, where she received her master's degree and Ph.D. in applied and engineering physics. She earned her bachelor's degree in physics from Swarthmore College.

Along with Dr. Ghosh's academic accomplishments and groundbreaking work at Opti O<sub>2</sub>, she is a proud mother of two grown children, one who teaches math to underserved youth in urban settings and another who turned his love for statistics into a career as an analyst.

While Dr. Ghosh has lived in Michigan for 25 years, her family roots are in India and she spent time during her youth in Kenya, Uganda, Egypt and Brazil. She is an avid folk dancer, enjoys swimming, hiking, cross-country skiing — and spending time with people from all walks of life.

## About Opti O<sub>2</sub>

Opti O<sub>2</sub> is a high-tech innovator developing and manufacturing a novel oxygen sensor for clean water and environmental applications. The company holds two patents on its optical oxygen sensor

system. The system provides a vital role in assessing water quality; identifying problems within water supplies and monitoring changes that indicate possible contaminants.

The applications for this technology — which range from drinking water to wastewater to the aquaculture that produces 50% of all seafood consumed by humans — are broad and crucial to community and ecological health. The Opti O<sub>2</sub> sensor system continuously measures the quality of water in soil and aquatic and marine environments — rather than only taking measurements at specific times — and allows for monitoring the health of an ecosystem in real time.

This groundbreaking oxygen-sensing technology can be a powerful tool to mitigate hypoxic algae blooms in Lake Erie and a way to foster sustainable aquaculture farming in Southeast Asia. The ultimate dream for Opti O<sub>2</sub>? Getting the Opti O<sub>2</sub> system in every watershed to ensure clean drinking water at all times.

Based in East Lansing, Michigan, Opti O<sub>2</sub> is energized to begin supporting clients around the world. The company already has over \$5 million in grant funding towards research and development of its optical dissolved oxygen sensor system. To further commercialization efforts, Opti O<sub>2</sub> has also secured alliances with well-known names in the scientific field: the Lawrence Berkeley National Laboratory and the Pacific Northwest National Laboratory.

