Ira Leifer, PhD, Bubbleology Research International, Inc.

Dr. Leifer is the CEO and chief scientist of Bubbleology Research International, Inc. Dr. Leifer has worked for several decades on natural and unnatural hydrocarbons in the ocean and atmosphere by in situ and remote sensing, including oil, greenhouse gases, and other trace gases. Dr. Leifer has developed unique, state-of-the-art science platforms, such as SISTER™ – a mobile air quality laboratory for installation in a pickup truck and SeaSpires™ – an oil slick thickness remote sensing package for airborne deployment. These and other custom developed science systems have been featured in numerous peer reviewed publications (Dr. Leifer has authored 124 papers) and major media, such as Business Insider.

Bubbleology Research International (BRI) is a small, flexible, greentech company focused on environmental consulting, instrumentation development, satellite data analysis and validation, and environmental assessment since 2003. BRI has handled complex projects for Fortune 500 companies, involving universities, the Navy, NASA, NSF, and other state and federal agencies.

Active Research Areas and Interests

- *Leak detection from oil and gas production, refining, and distribution*
  Currently investigating the chemical fingerprint between oil fields, including abandoned and idled wells with respect to reservoir geochemistry for NASA and California Energy Commission.
- *Oil spill remote sensing*
  Underlying physics of thermal oil thickness remote sensing - Leifer et al. (2022) and several papers under review.
- *Natural marine hydrocarbon seepage*, relationship to reservoir dynamics, and production and upper food web ecosystem impacts.
- *Health impacts of air pollution* on downwind communities.
  Currently deriving emissions at the Ports of Los Angeles / Long Beach and surveying air quality in downwind communities.
- *Sustainable dairies and shrinking the environmental footprint*
  In situ and remote sensing measurement of dairy methane, ammonia, aerosols, and other gas emissions to identify sustainable best practices.
- *Rift valley volcanic trace gas emissions*
  Currently investigating the repercussions of the Ridgecrest earthquake on volcanic trace gas emissions from Death Valley for the National Science Foundation.
- *Arctic methane*
  Evaluation of satellite methane, ice trends, and currents focused on marginal arctic seas.




Leifer I, Melton C, Daniel WJ, Kim JD, Marston C. 2022. Measuring floating thick seep oil from the Coal Oil Point marine hydrocarbon seep field by quantitative thermal oil slick remote sensing. *Remote Sensing*, www.mdpi.com/2072-4292/14/12/2813/pdf.

Follow BRI news and science at https://twitter.com/BubbleologyRes and www.bubbleology.com,
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