



SOIL GAS-FLUX MEASUREMENT SYSTEM

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Overview

Soil produces or consumes gases such as carbon dioxide, methane, nitrous oxide, ammonia, and oxygen through normal biological and geological processes. Current soil gas-flux measurement systems are expensive and can be difficult to deploy, greatly limiting their application for many important uses.

The Invention

UW-Madison researchers have designed a low-cost soil gas-flux measurement system using gas-specific sensors that may be distributed among compact collection chambers. By eliminating the need for fluid communication to a central analyzer (through hoses or the like) and employing a low-mass vent door design, a practical wireless battery power system can be produced having low-cost and flexible deployment. These benefits increase the spatial sampling of the soil to offset potential loss of accuracy from the low-cost sensors and small area of the collection chamber.

Additional Information

For More Information About the Inventors

- [Bhuvana Krishnaswamy](#)
- [Jingyi Huang](#)
- [Francisco Arriaga](#)

Tech Fields

- [Analytical Instrumentation, Methods & Materials : Sensors](#)
- [Animals, Agriculture & Food : Precision agriculture](#)

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