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Funder(s): EPSRC IAA, Converge

Abstract

Contamination of water by pesticides is difficult to detect quickly, and can be hugely detrimental to public health, disruptive to business & local authorities, and expensive to mitigate. Optical sensor-based systems for water security can be networked, lightweight, user-friendly, and low-cost for real-time alerting.

From lab to field



Sensing set-up (left), platform prototype (centre), remote monitoring site (right).

Project Description

F-Sense is an optical sensing spin-out from the University of St Andrews with a focus on rapid detection of contaminants in water. By 2050, water shortages are expected to affect over 50% of the global population and occurrences of water contamination by pesticides are found worldwide, so real-time safeguarding is crucial for public health and the wider environment. Monitoring pesticides in water is done infrequently due to current processes being expensive, off-site, and time-consuming. The F-Sense sensor removes these limitations by providing a flexible platform that can both detect and alert in real-time, leading to cleaner drinking water and lowered impact of contamination events.

Key Impacts

- **Winner of the Converge Kickstart Challenge 2020**
- National and international end-users in place
- Prototyping with product engineers to take the system shelf-ready

