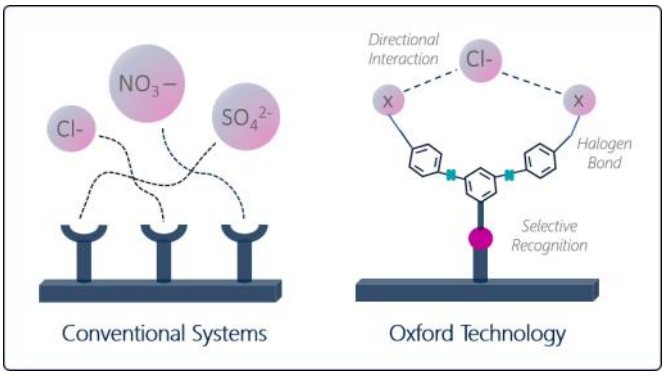
PROJECT NUMBER

22895, 23325

Halogen bonding sensors for environmental pollutants

Oxford researchers have developed a novel pillararene host molecule for the optical detection of dicarboxylates and other environmentally harmful substances.

Applications: Environmental sensing, molecular Recognition, chemical purification



Features	Benefits
Enhanced sensing	Improved detection
Adjustable componentry to translate the sensing properties to a readable or quantifiable output	Integrated halogen bonding recognition sites with bright fluorophores, meaning a sensor can identify pollutants through distinct fluorescence response
Detection indicator can be switch-on or switch-off, as required	Superior binding affinity compared to traditional hydrogen-bonding alternatives
	This ensures that a user gets a clear signal when target compounds are detected

Features	Benefits
	Particularly effective in aqueous-organic media, where the hydrophobic effect significantly enhances the receptor’s sensitivity
	Allows the end user to dictate the preferred mechanism
	Demonstrates a powerful strategy for sensing both charged and neutral environmental contaminants

Patented and Available for

- Co-development
- Consulting
- Licensing

To find out more, contact enquiries@innovation.ox.ac.uk and quote the project number.

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