

UNISON is a cutting-edge European project funded by the European Union and coordinated by CNRS (Centre National de Recherche Scientifique).

UNISON



Grant agreement :
101128598

UNISON focuses on advancing environmental monitoring through high-resolution optical spectroscopy in the mid-infrared (mid-IR) spectral range.

BRINGING TOGETHER 8 ESTEEMED PARTNERS FROM 5 EUROPEAN COUNTRIES



ETH

Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

SENSIRION

**université
PARIS-SACLAY**



<http://unison.c2n.universite-paris-saclay.fr/>

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**Environmental
Monitoring**

Telecommunications

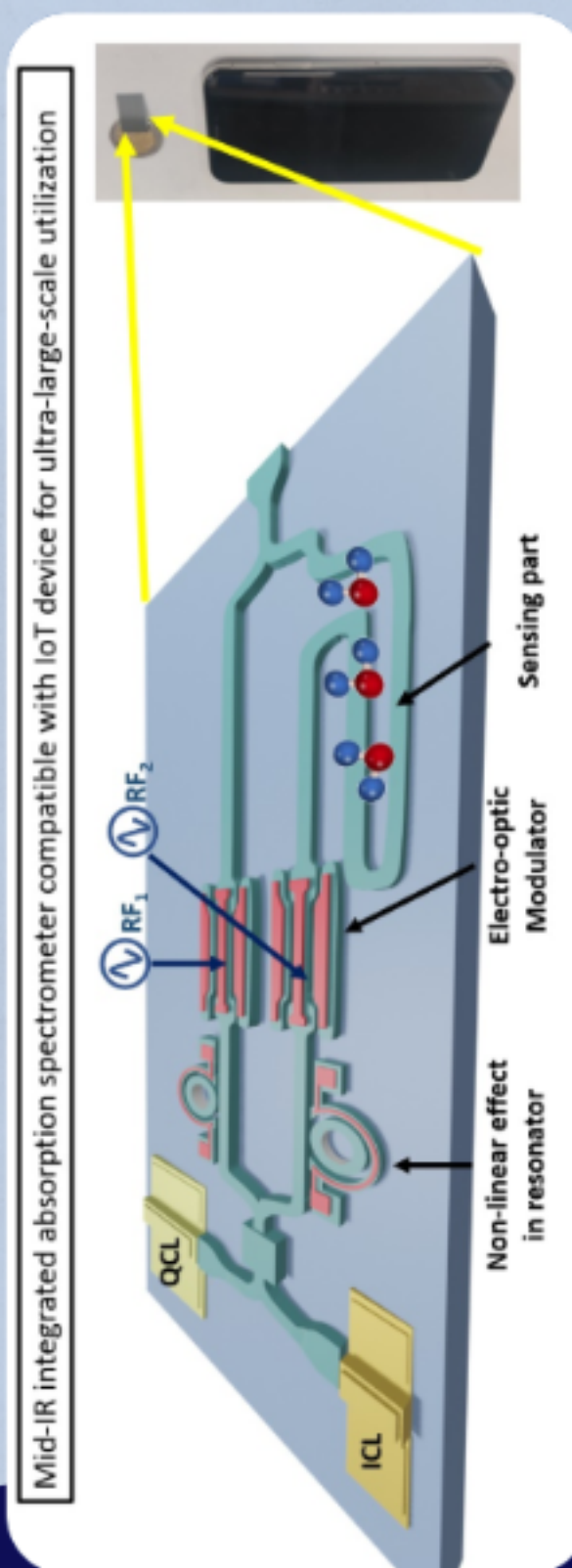
And more applications



UNISON

🌍 Why It Matters ?

- Enables ultra-sensitive gas detection (parts-per-billion level) for environmental monitoring.
- Supports the EU's "Zero Pollution Action Plan" for cleaner air, water, and soil.
- Advances wearable and IoT-integrated sensing for real-world applications.



⚙️ Key Innovations :

- ✓ Dual Comb Spectroscopy – Leveraging advanced Quantum Cascade Lasers (QCLs) and Silicon-Germanium photonics.
- ✓ Compact & Scalable – Overcomes the size and cost limitations of traditional mid-IR spectrometers.
- ✓ Versatile Applications