

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



European
Innovation
Council



Funded by
the European Union

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



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

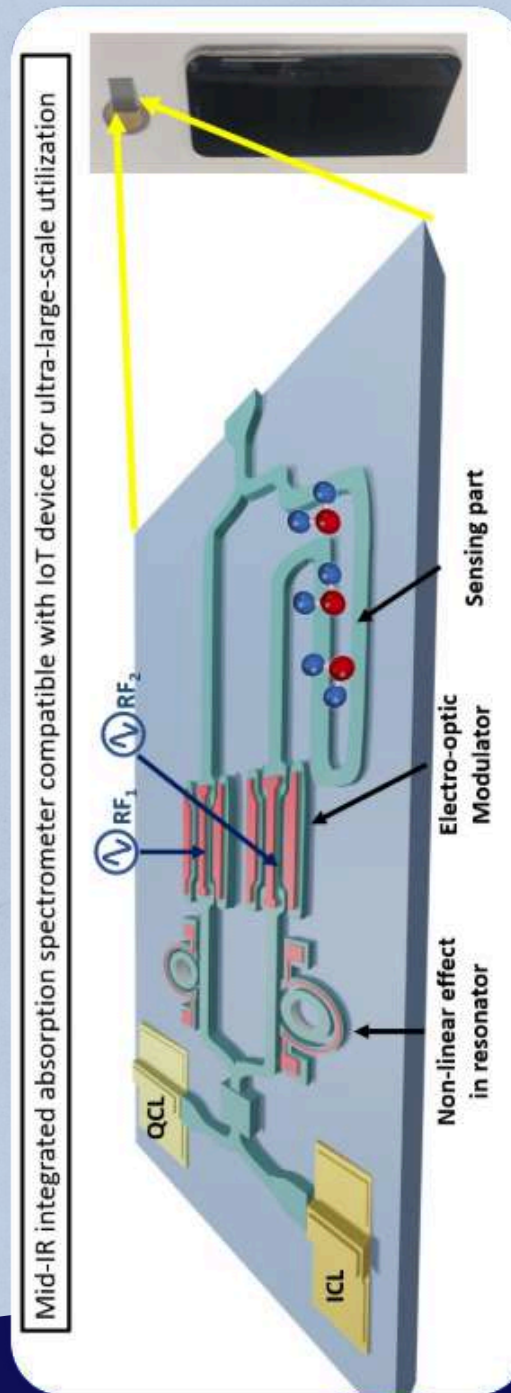
Telecommunications

And more applications



🌍 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