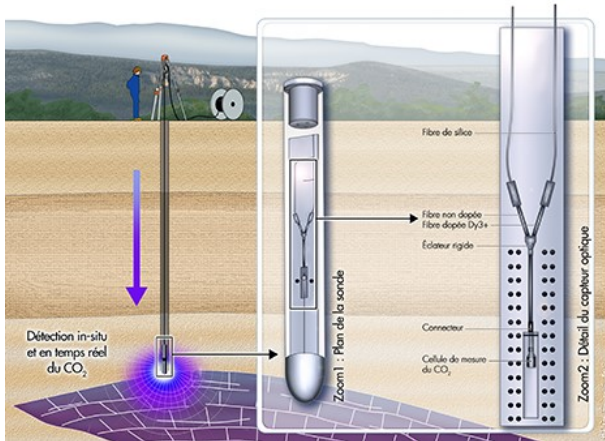




CO2 OPTICAL SENSOR FOR GEOLOGICAL STORAGE MONITORING (ENOS) PROJECT EXAMPLES



Collaborative project ENOS (Enabling On-shore CO₂ storage in Europe): IDIL Fibres Optiques is collaborating with other 28 partners and research institutes from 17 countries to provide a CO₂ optical sensor.

After the success of the collaborative project COPTIK with ADEME, IDIL offers its expertise in the validation of CO₂ optical measurement technology for the European ENOS project.

IDIL is involved in managing leakage risks for protection of the environment and groundwater: i.e. geochemical monitoring and potential impact of leakage on potable aquifers, and more specifically, the subtask increasing the TRL of groundwater quality monitoring tools.

For that purpose, IDIL is developing a specific fiber optic probe connected to an interrogator and laser diode using an innovative fiber offering high performance in term of sensitivity and detection speed.

ENOS Project

ENOS project is [CO2GeoNet](#) initiative endorsed by y [EERA-CCS JP](#)

Launch in September 2016, the main objective of the project is to enable the development of CO₂ storage on-shore in Europe in order to prevent large quantities of CO₂ from being released into the atmosphere.

More information about [ENOS](#)

IDIL is developing the optical probe to prove that the CO₂ is not returning to the biosphere and to quantify leakage if it does occurs, by direct measurements.

ENOS partners: BRGM, BGR, BGS, CGS, CIEMAT, CIUDEN, FLODIM, CGR, IDIL Fibres Optiques, IRIS, NHAZCA, OGS, SGIDS, SILIXA, SOTACARBO, TNO, UNIROMA1, UNOTT, CO2GEONET, GBA, GEOCOMAR



Applications

- CO₂ Geological storage
- Dissolved CO₂
- Carbon capture and storage monitoring
- Sensing

Features

- In situ CO₂ measurement using infrared light
- Real time control of the monitoring system
- Best signal-to-noise-ratio
- Robust probe

Specifications

PROJECTS	
Project names	COPTIK: 2014-2016 ENOS (Enabling On-Shore CO2 storage in Europe): 2016-2020
Objectives	-Increase field experience relevant to geological storage of CO2 -Refine techniques and tools used for site selection and monitoring -Advance communication between science and society on the geological storage of CO2
Research institutes participating	COPTIK: 5 ENOS: 29 from 17 countries
Field sites	ENOS: GeoEnergy TestBed, Q16-Maas, LBr-1, Hontomin, Sulcis Fault Lab
IDIL MISSIONS	
IDIL Objectives	ENOS: Managing leakage risks for protection of the environment and groundwater
IDIL testing site	ENOS: GeoEnergy TestBed (UK)
IDIL product	Specific CO2 optical probe
IDIL PROBE SENSOR	
Optical fiber	Innovative fiber in chalcogenide glass for the probe Standard silica fiber for the connection fiber
Fluorescence source	4,3 μm
Interrogator	Yes

All other requirements upon request: length, outer diameter, connectors, operating temperature, pressure resistance

Related products

- Optical bundle
- In situ transmissive pH sensors
- Non-intrusive reflective PH sensors
- Oxygen sensors



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