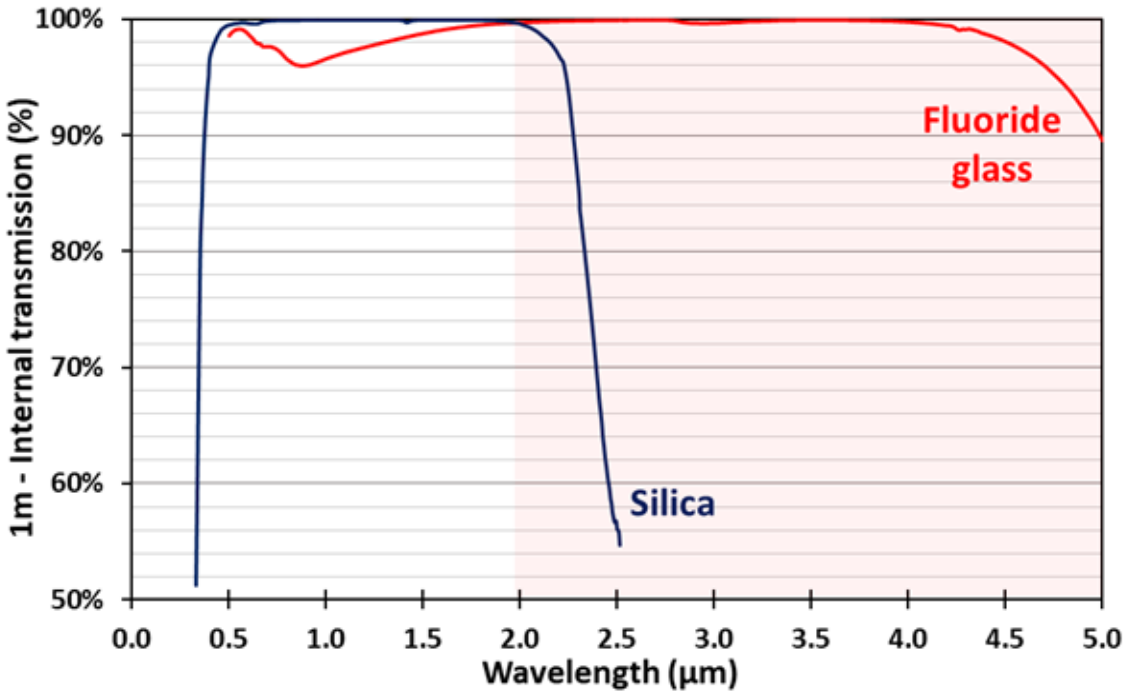
LE VERRE FLUORÉ

FIBER SOLUTIONS

MidInfrared fibers for MidInfrared Alliance

Interests of the technology

High transparency from UV to mid-IR (300 nm – 5500 nm)



Best transparency among all technologies in the 2000 nm – 5000 nm range

> 50 rare-earth transitions in visible and infrared

allow new generation of fiber **lasers** and **amplifiers**

Passive fibers

❖ **Fluoride glass multimode fiber**

1µm-5µm spectroscopy

Mid-IR laser delivery (small and average power)

❖ **GeO2 multimode fibers**

High power laser delivery (Er-YAG or Ar:YSGG, up to 1.5j/pulse)

❖ **Fluoride glass single mode fibers**

Single mode light delivery

ICL/QCL pigtailing/combining

COOPERATIONS :

using LVF and Art Photonics fibers to cover very broadband range (up to 15µm)

developing standard interface for ICL/QCL pigtailing

Active fibers, fiber lasers and fibers modules

2.8 µm - 3 µm fiber laser (Er doped fiber)
10W CW available, ns pulsed version expected in 2024

3 µm- 3.3 µm fiber laser (Er doped fiber + Dy doped fiber)
5W CW available, ns pulsed version expected in 2025

3.3 µm – 3.5 µm fiber laser (Tm doped fiber + Er doped fiber)
10W CW expected in 2024

Mid-IR supercontinuum (single mode fluoride glass fibers + chalcogenide fibers)
700 nm – 4100 nm
800 nm – 4800 nm
2500 nm – 9500 nm

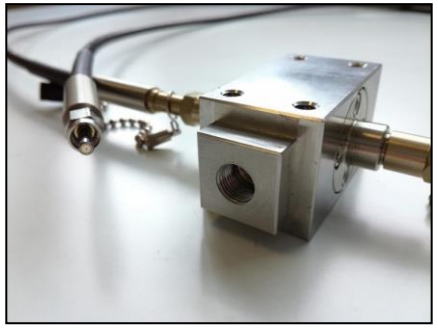
2.5 µm – 3.7 µm broadband source (Er/Dy doped fiber)
To be developed

COOPERATIONS :
Development of new light sources
Integration of mid-IR light sources for material processing and OCT

Mid-IR fiber components

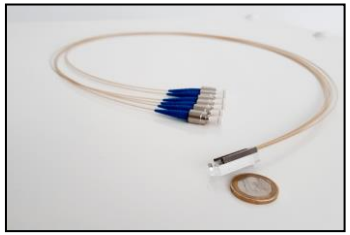
Hermetic feedthrough

Splices and endcaps



Flow cell

Fiber bundle



ICL/QCL fiber combiner

Those technical solutions can integrate all step index mid-IR fibers

COOPERATIONS :
Integration/improvement of mid-IR fiber components in complex projects.

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LET'S COLLABORATE TOGETHER!

Thank you for your attention

EPIC

European Photonics Industry Consortium