

LumIR

Lasers

EPIC Industrial Meeting
July 14th, 2021

Louis-Philippe Pleau, Co-Founder and CEO

Company

- Established 2019

- Our Mission:

“To bring to market the first truly disruptive suite of **powerful, low-cost** mid-infrared fiber lasers ruggedized for industrial applications.”



World-leading Expertise



Vincent Fortin, PhD
CTO, LumIR Lasers

World-class mid-IR fiber
laser expert



Martin Bernier, PhD
Professor, Laval U.

Leading FBG expert
for the Mid-IR



Pr. Réal Vallée, PhD
Professor, Laval U.

Pioneer of the Mid-Infrared
fiber laser revolution



LE VERRE FLUORÉ
INFRARED SOLUTIONS

Leading provider of MIR Fibers
and components since 1977

Over a decade leading Mid-Infrared
Fiber Laser research

EPIC Technology Meeting – Louis-Philippe Pleau, CEO
Contact us at: info@lumirlasers.com



Products



LumIR 2800 Series

Specifications

- ▶ Wavelength range: 2.8-2.9 μm
- ▶ Power: Up to 10 W average
- ▶ Operation: Continuous (CW) or Quasi-Continuous
- ▶ Output beam: Single-mode ($M^2 < 1.3$)
- ▶ Available as: OEM

Applications

- ▶ Surgical and aesthetic laser systems
- ▶ Dentistry
- ▶ Organic material marking (fabrics, food, plastics)
- ▶ Research and Development



LumIR 3200 Series

Specifications

- ▶ Wavelength : 3.1 to 3.3 μm
- ▶ Power : Up to 5W
- ▶ Operation : Continuous (CW) or Quasi-Continuous
- ▶ Output Beam : Single-mode ($M2 < 1.3$)
- ▶ Available as OEM

Applications

- ▶ Gas sensing
- ▶ Defense and Security
- ▶ Research and Development

Innovation

LumIR aims to provide fiber laser sources all the way up to **4 μm** in wavelength, with **pulsed versions** planned as well.

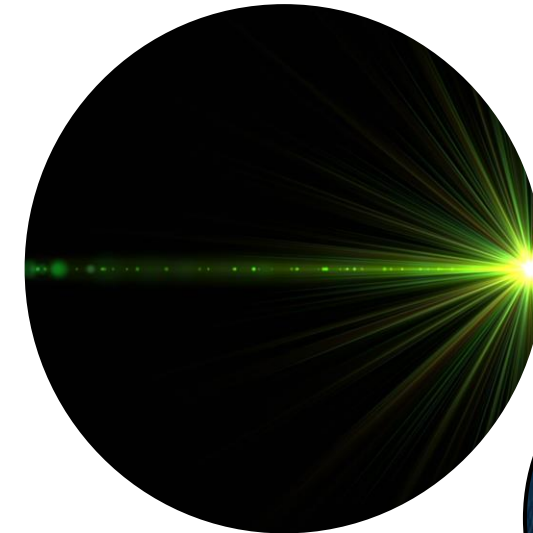
Example application:

Ablation / cleaning of polyethylene with a prototype source emitting **above 3.4 μm** , something **not possible** with current fiber and CO₂ lasers.



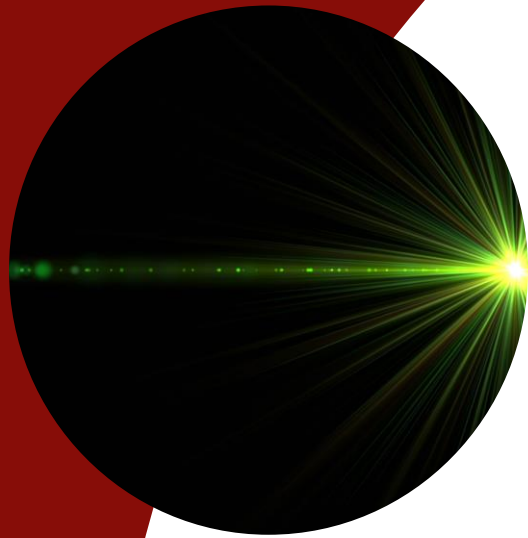
Partnership Opportunities

- System manufacturers
 - Processing of non-metals
 - Mid-IR sensing and countermeasures
 - Surgical and aesthetic laser systems
- Mid-IR or applications researchers
 - Special discounts for academics
- Providers of Mid-IR optical components
 - Lenses and AR coatings
 - Index polymers



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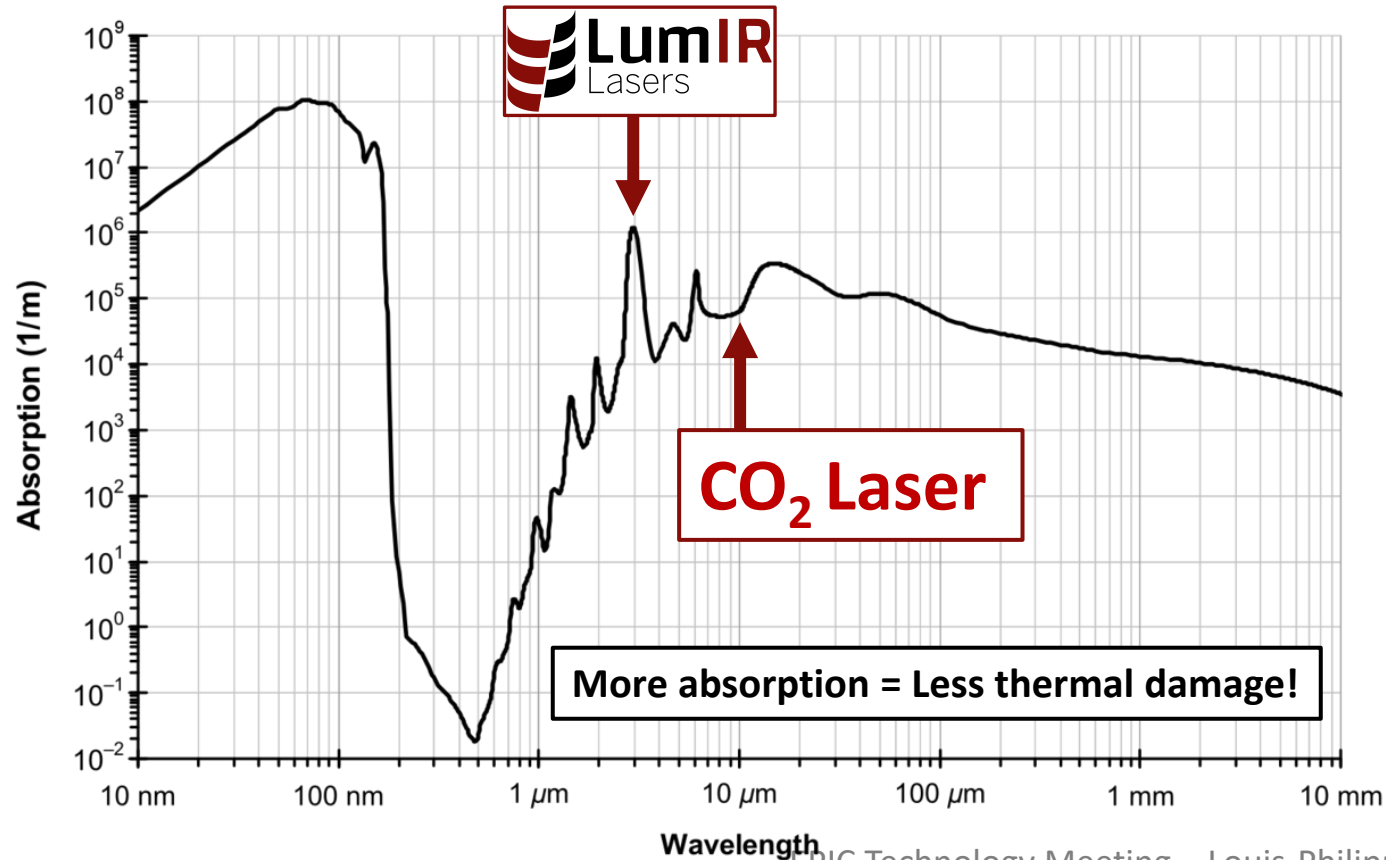
LumIR
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THANK YOU!

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www.lumirlasers.com

The mid-infrared (MIR)

Water Absorption

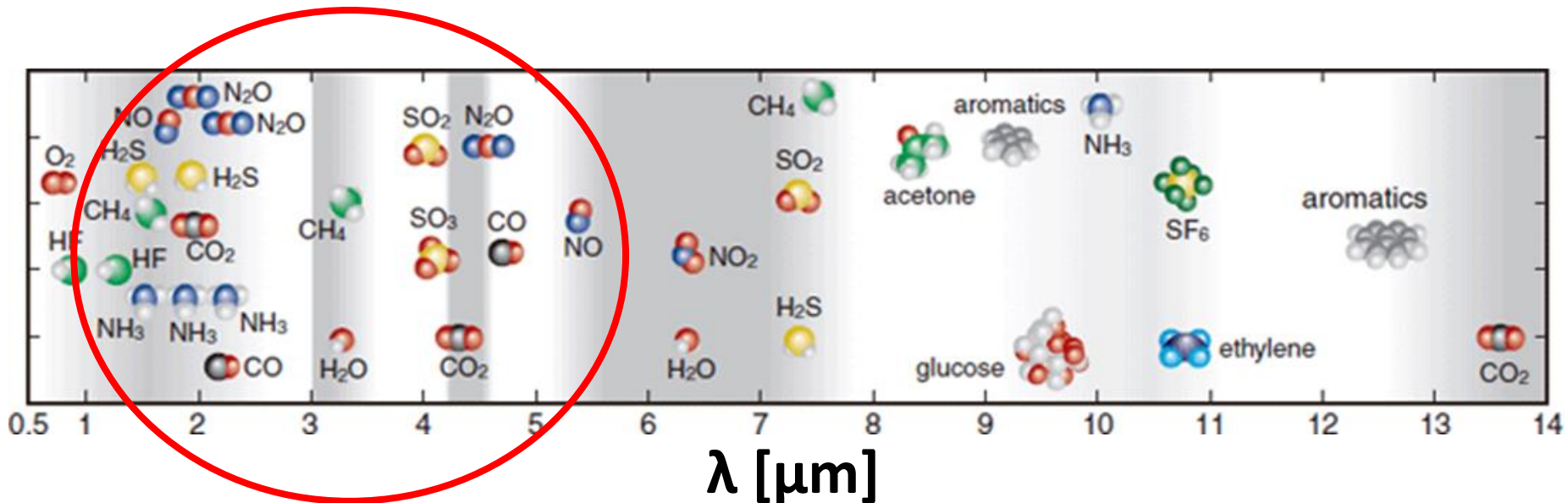


High efficiency and benefits for:

- General surgery
- Glaucoma treatment
- Aesthetic skin resurfacing
- Dentistry

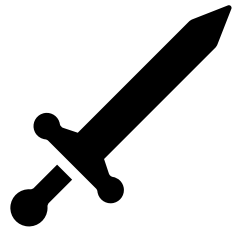
The mid-infrared (MIR)

- High hydrocarbon absorption in the 2-5 μm wavelength band
- Disruptive benefits for medical applications, gas sensing, industrial processing, etc.



Fiber lasers

High Average Power



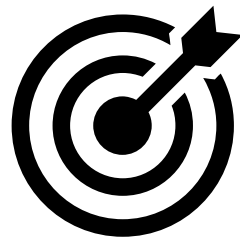
Reliable & Low Maintenance



High Efficiency



Single-mode beam quality



Convenient & Ergonomic



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