

# PANDA FIBERS & SAP FABRICATION

INO is a world-class center of expertise in industrial applications for optics and photonics, As a leading technology developer and provider, INO is home to the largest concentration of skills in the field of specialty optical fibers in Canada.



MCVD

## CUSTOM BORON DOPED SAP

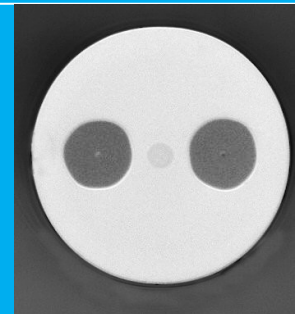
- \_ Typical core composition :  $\text{SiO}_2$  and  $\text{B}_2\text{O}_3$ 
  - . Other dopants available upon request
- \_ Typical dopant concentration :  $[\text{B}_2\text{O}_3] = 21\text{mol}\% \pm 2\text{mol}\%$ 
  - . Higher concentration available upon request
- \_ Typical geometrical parameter
  - . Boron-doped core diameter  $< 7 \text{ mm}$
  - . Residual silica layer thickness  $\sim 200 \mu\text{m}$
  - . Length: 250mm
  - . Other diameters and lengths available upon request
- \_ Core circularity  $> 95\%$

## TRANSFORMATION OF PREFORMS INTO POLARIZATION MAINTAINING FIBERS

- \_ Mother preform fabrication
- \_ Panda fiber design
- \_ Single-clad and double-clad drawing capability



Ultrasonic drilling



Panda fiber

COMM-110026



CHALLENGING LIGHT  
FOR OUR PARTNERS

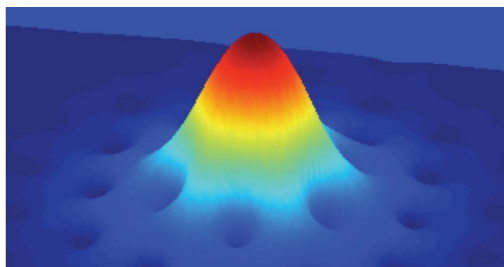
# SPECIALTY OPTICAL FIBERS

INO is a world-class R&D center specializing in optics and photonics and one of the world's leading suppliers of specialty optical fibers. Our team of experts can design and fabricate a wide range of superior quality custom optical fibers to meet your special needs in various fields such as fiber lasers, telecommunications, industrial processes, military, equipment, aerospace, and biomedical applications.

## OUR STRENGTHS

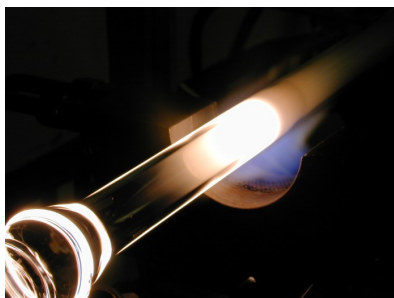
Expertise in:

- . Preform fabrication
- . Fiber and rod drawing, glass processing
- . Advanced fiber modeling and simulation



Cutting-edge facilities:

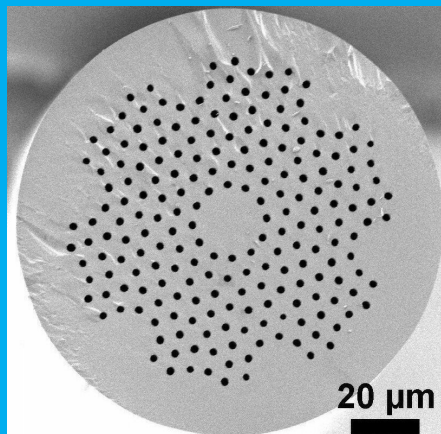
- . MCVD and glass lathes
- . Fiber drawing towers
- . High temperature furnace
- . Equipment for glass fabrication
- . Ultrasonic drilling equipment



## CUSTOM FIBERS FOR YOUR APPLICATIONS

Over time, this specialized know-how has translated into:

- . Single and multilayer rare earth doped optical fibers (also available in PM version)
- . Low-photodarkening fiber composition
- . Microstructured optical fibers for specific applications
- . Stress-applying-parts (SAP) for PM fiber fabrication
- . Photosensitive optical fibers for Bragg gratings
- . Fibers optimized for Raman fiber amplifiers
- . High attenuation fibers (singlemode and multimode)
- . Custom silica capillary tubes



Archimedean-like lattice microstructured optical fiber