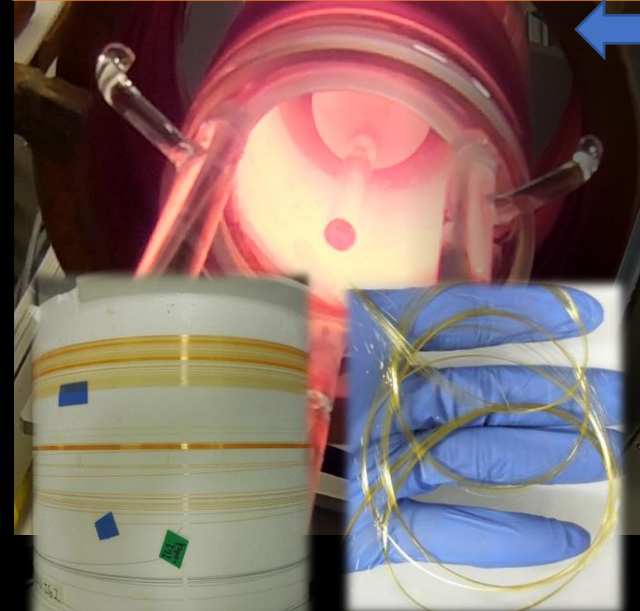


## Crucible drawing molten glass



100s of meters of crystal-free, coreless GLS and GLSSe fibre for bundling

- Reproducible process
- Versatile setup
- Crucible drawing fibre from other chalcogenide glass equally feasible

## Gallium Lanthanum Sulphide (GLS)

GLSO    GLS    GLSSe20%    GLSSe40%

500nm ← Enhanced Visible Transmission    Enhanced Infrared Transmission → 17µm

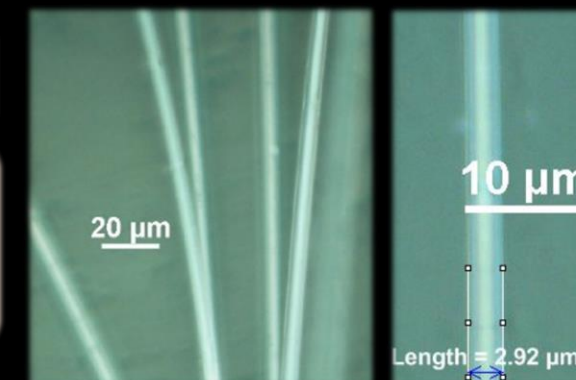
### Advantages

- Thermal stability (high transition temperatures)
- Chemical flexibility enables to move the transmission window
- Chemical resistance
- Mouldable
- Transparency in the visible

### Applications

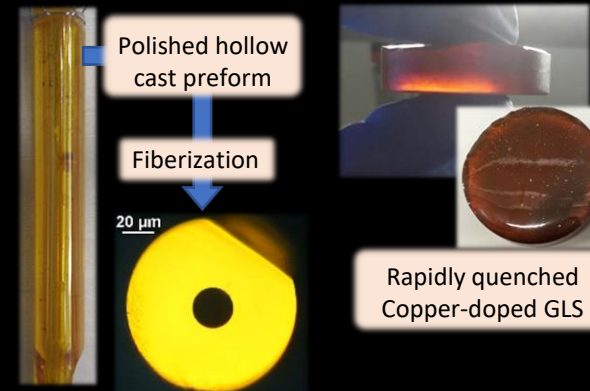
- Laser power delivery
- Chemical & gas sensing
- Thermal imaging & spectroscopy
- IR sources/lasers, amplifiers
- Optical switches
- Electronics & Data storage/memory
- Li ion batteries & Solar/thermoelectrics

## Ultra-thin fibre (<10µm)



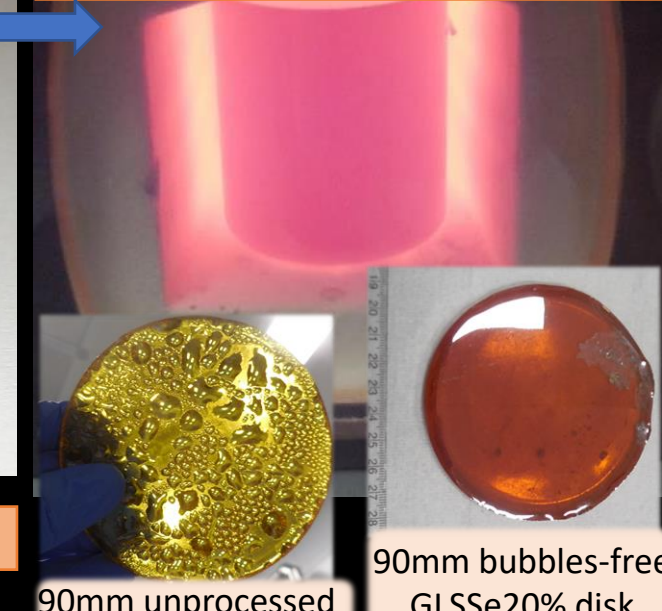
- Consistent diameter
- Applicable to other compositions

## Glass casting



- Preform fabrication
- Novel compositions achieved via rapid quenching

## Large diameter window fabrication



- Unfractured disks and bubbles-free interfaces demonstrated
- Currently upgrading towards 150mm windows