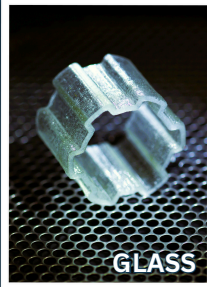
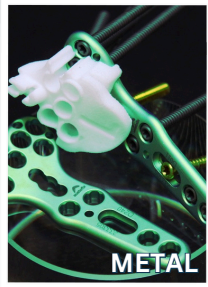

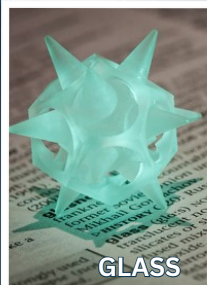
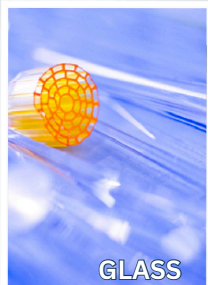
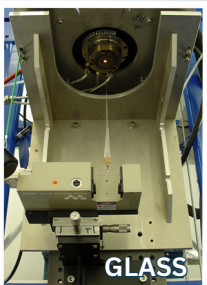


CAPABILITY HIGHLIGHTS

MATERIAL TYPE

Optofab Adelaide can manufacture, process and machine a large range of materials including those in the table, using melting, extrusion, drawing, milling and 3D printing capabilities.

Material Type	Supply / Fabrication	3D PRINTED	3D PRINTED	3D PRINTED
Silica	Commercial			
Fluoride	In-house			
Tellurite	In-house			
Germanate	In-house			
Lead-silicate	Commercial			
Borosilicate	Commercial			
Soda-lime-silicate	Commercial			
Other silicates	On request			
Polymer	Commercial			
		MILLED	EXTRUDED	DRAWN
				

MELTING AND ANNEALING

Optofab Adelaide's glass melting facilities support the fabrication of a range of oxide and fluoride glasses with transmission ranging from the UV to the mid-infrared.

These facilities include equipment for batching, melting, casting and annealing in a controlled atmosphere, enabling the manufacture of glass with customised dimension from traditional and novel glass compositions, including rare earth doped glasses.



For pricing and availability contact:

www.adelaide.edu.au/optofab

Mr Luis Lima-Marques
luis.lima-marques@adelaide.edu.au

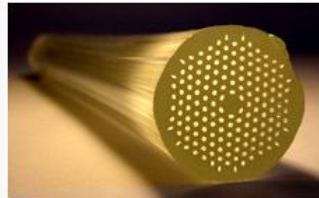
www.anff-optofab.com

 /optofab-adelaide

CAPABILITY HIGHLIGHTS

EXTRUSION

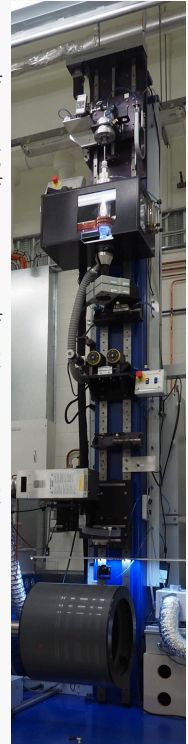
Optofab Adelaide's billet extrusion facility is capable of manufacturing fibre preforms from polymer and glass materials with softening temperatures varying from 100°C to 1100°C. Extrusion allow the manufacture of preforms with an almost unlimited range of structures including rods of 1-20mm diameter; thin and thick-wall tubes of 10-20mm outer diameter and 0.5-10mm diameter; multi-hole structures with large and small air-filling fractions such as suspended core, hexagonal arrays of up to 160 air holes, negative curvature hollow-core structures; and multi-material such as core/clad preforms.



FIBRE DRAWING

Optofab Adelaide has two fibre drawing towers to fabricate canes of 0.5-3mm diameter and fibres of 100-400µm outer diameter from preforms with diameters ranging from 8-30mm and a large range of cross sectional structures.

The 4m tower can draw preforms up to 180mm lengths made of polymer and glass materials that can be drawn at temperatures up to ~1100°C. The 6m tower can draw preforms up to 1m length made from silica-based glasses that can be drawn in the temperature range of 1800°-2200°C. Both towers are equipped with acrylate coating capability to apply a polymer coating in-situ during fibre drawing.



5-AXIS ULTRASONIC & HIGH-SPEED CUTTING MILLING

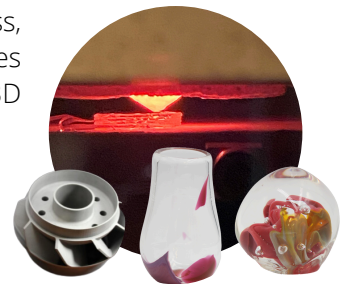
The DMG Ultrasonic 20 linear offers a perfect solution for soft, hard and advanced high-performance materials. The kinematic superposition of the tool rotation with an additional oscillation added allows for high-performance materials machining. Excellent results can be achieved for a wide range of applications from medical and dental, to precision optical, engineering and aerospace.



GLASS AND POLYMER PRINTING

Print with a variety of glass, polymer and silica nanoparticles loaded resin on specialised 3D printers.

Material: Glass, plastic, resin



METAL PRINTING

Print direct from your CAD drawings with a variety of metal alloys on a 3D Systems ProX200 selective laser printer.

Metal: Stainless Steel, Tool Steel, Titanium Alloy, Cobalt Chromium Alloy, Aluminium Alloy, Inconel



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