

| Facility                  | Description  |
|---------------------------|--|
| Source room               | Secure room with optical table and laser source access                                       |
| Process room              | Interlocked laser processing chambers  |
| Ultrafast                 | Precision 3 axis CNC machining centre in laser enclosed room                                 |
| Spray room                | Cold spray and laser spray powder deposition chamber   |
| Holography Suite          | Complete holographic imaging system  |
| Holographic Imaging       | Holo-eye holographic projector   |
| Holoeye projections       | Spatial light modulator used for spatial manipulation of laser beams                         |
| Lightening scanner        | Fast galvanometric scanner head for material processing applications @ 1060 nm               |
| Tektronix 100Mhz MSO      | Oscilloscope   |
| PM10 power meter          | Laser power meter  |
| Fibre power meter         | A fibre-optic power meter with a FC/PC connector   |
| CMOS imaging camera       | High dynamic range camera for ultrafast imaging applications (shutter speed down to ~100 ns) |
| G3 Marker                 | SPI G3 1um fibre laser marker system   |
| 200W Marker               | SPI 200W 1um fibre laser marker system   |
| Met prep                  | Sample cutting, mounting, and polishing suite.   |
| DC010                     | 1kW Rofin CO2 slab laser, 10.6um   |
| YLR-1000-SM               | 1kW IPG single mode fibre laser, approx 1um  |
| YLS-4000                  | 4kW IPG, low order mode fibre laser, approx 1um  |
| G3                        | 20W high peak power SPI fibre laser  |
| 200W                      | 200W SPI fibre laser   |
| 300W                      | 300W SPI fibre laser   |
| Firestar V40 CO2          | 40W Synrad sealed CO2 laser  |
| Hurricane (Femto)         | Ultrafast laser, 120fs 800nm   |
| Satsuma                   | Ultrafast laser, approx 1um.   |
| Talisker Ultra            | Combined 1064, 532, 355nm <15ps laser  |
| CO2                       | CO2 processing head  |
| 1kW                       | 1um precision processing head  |
| 5kW                       | 1um high power processing head   |
| Microscope suite          | Optical microscopes with analysis software   |
| Micro hardness            | Micro hardness measuring machine   |
| Surface profiler          | Stylus profiler  |
| Veeco                     | White light interferometer system  |
| PIV                       | PIV system   |
| Pyrocam Camera            | Pyroelectric laser imaging camera  |
| Spiricon                  | Infrared laser imaging camera  |
| Prometec                  | Spinning needle laser analyser for focussed and raw beams                                    |
| USB4000 spectrum analyser | High speed spectrum analyser   |
| High speed pyrometer      | Single wavelength high speed pyrometer   |
| Dual channel pyrometer    | Dual channel pyrometer   |
| A615 thermal camera       | FLIR A615 microbolometer thermal camera  |
| Power Meters (average)    | Assorted laser power meters from mW to 5kW   |
| PRIMES                    | Primes raw beam spinning needle analyser   |
| HoloEye                   | SLM holographic projector  |
| Centrifuge                | Allegra X-22 centrifuge  |
| Tube furnace              | MTI tube furnace   |
| Robot                     | Fanuc LR Mate robot  |
| Dismembricator            | Fischer Scientific Sonic dismembricator  |
| Plasma oven               | Dienier plasma oven  |
| Ultra Precision Table     | Aerotech ultra precision 5 axis granite table  |