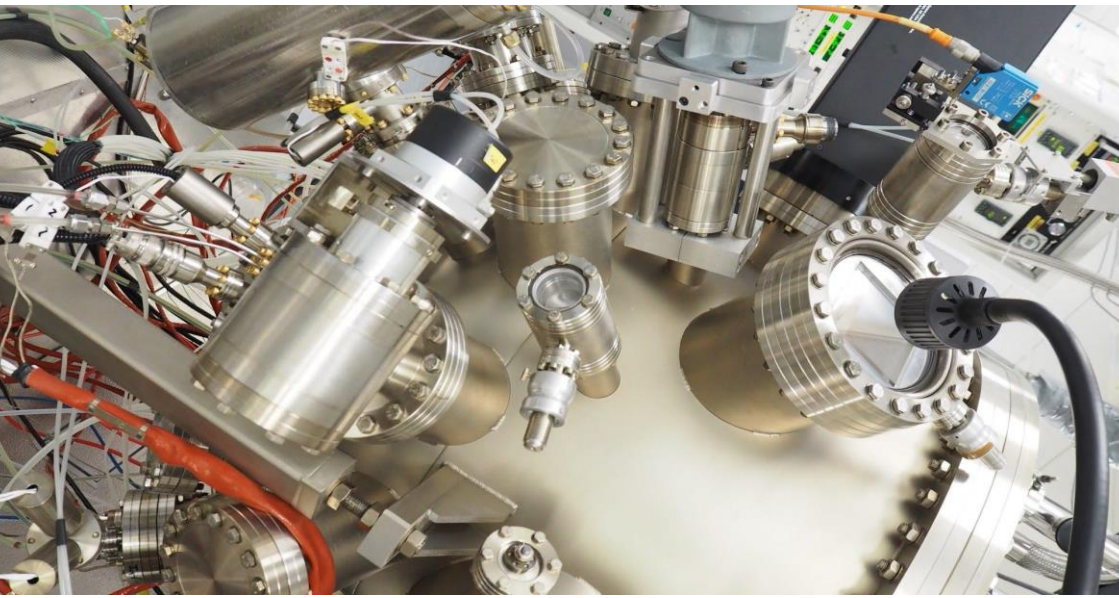
NATIONAL EPITAXY FACILITY

Engineering and Physical Sciences Research Council

Universities of Sheffield Cambridge & University College London

Pump Priming Scheme



The National Epitaxy Facility operates a ‘Pump Priming’ scheme, which provides a limited number of wafers to researchers free of charge without the need for a current EPSRC grant. The scheme is designed to stimulate UK strategic activity in III-V and group IV semiconductors with the expectation that the recipient will, within 6 months, write a full EPSRC proposal building on the results of the feasibility study. The scheme is open to everyone who qualifies for an EPSRC grant.

If you are interested in applying for the scheme contact us via email: epitaxyfacility@sheffield.ac.uk to discuss the requirements and feasibility of your project. You will then be asked to complete a proforma outlining the strategic need for the work, the principle(s) to be demonstrated, the resources required, the timescales involved and how a full EPSRC proposal should result from the successful conclusion of the study. Each request will be considered for approval by an external committee based on scientific quality, strategic need, and the Facility capabilities.

The Facility Location:
Centre for Nanoscience and Technology
The University of Sheffield
Electronic and Electrical Engineering
North Campus, Broad Lane
Sheffield S3 7HQ

Contact details:
Phone: +44 (0)114 222 5905
E-mail: epitaxyfacility@sheffield.ac.uk
www.nationalepitaxyfacility.co.uk

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Some of our Pump Priming projects include:

- InGaAs Quantum Dot/Quantum Well based waveguide structures for photonic integration
- Selective growth of GaN on Si on sapphire for CMOS integration
- Near surface InAs Quantum Dots for plasmonic coupling
- Ultrafast multi-active region Quantum Dot lasers
- Semiconductor-Superconductor hybrid 2DEG devices
- Green emitters for surface enhanced Raman sensors
- Droplet epitaxy for quantum emitters
- GeSn for photodetector applications

Our current Pump Priming project stats are:

- Over 40% support early career academics starting new positions or fellowships
- Over 60% support studies conducted by new users of the Facility
- 12 current projects are carried out at 13 different institutions

The Pump Priming scheme has recently been expanded thanks to new partnerships to include new and emerging materials, such as:

- Gallium Oxide (via University of Bristol and Swansea University)
- Silicon Carbide (via University of Warwick)
- 2D Transition Metal Dichalcogenides (TMDs) (via University of Southampton)
- II-VIs (via Swansea Universities)
- 2D III-VIs (e.g. GaSe) and h-BN (via University of Nottingham)
- Topological Insulators (Bi,Se,Te,Sb) (via University of Leeds)
- THz and mid-IR devices (via University of Leeds)
- ALD of oxides, nitrides and sulphides

"Communications were always timely and useful, and the addition of Te exceeded expectations". Prof Louise Hirst, University of Cambridge

"Wafers were delivered as expected and to spec. Useful for developing process modules and analysis of reverse leakage in GaN-on-Si quasi-vertical Schottky diodes". Dr Matthew Smith, University of Bristol

Please visit our website for further details:
http://www.nationalepitaxyfacility.co.uk/about-us/pump-priming/

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