



# CORNERSTONE

**CAPABILITY FOR OPTOELECTRONICS, METAMATERIALS, NANOTECHNOLOGY, AND SENSING**

## Silicon Photonics Fabrication Capability

### Free-to-access capability for UK academia until Sept 2019

CORNERSTONE is a new fabrication capability that can provide competitive prices for both active and passive silicon photonic devices. The CORNERSTONE team, headed up by Professor Graham Reed at the University of Southampton, aims to offer up to 6 passive calls and 2 active calls per year via a multi-project-wafer service.

With a track record of world-leading results, and supported by some of the world's best academic fabrication facilities for microfabrication and high-spec. nanofabrication, CORNERSTONE offers a flexibility that may not be accessible at conventional foundries.

Through the use of lithography techniques such as advanced projection lithography and direct write e-beam lithography (by request), CORNERSTONE offers both an industry compatible fabrication capability, and a design flexibility essential for research and prototyping purposes.

### Standard platforms

CORNERSTONE offers regular access to multi-project-wafer batches for both active and passive silicon photonics devices. The three standard silicon-on-insulator platforms are:

- 220 nm Si/2  $\mu$ m BOX
- 340 nm Si/2  $\mu$ m BOX
- 500 nm Si/3  $\mu$ m BOX

### Bespoke specifications

In addition to the multi-project-wafer service, CORNERSTONE can also offer bespoke fabrication runs to suit the individual needs of customers.

Please contact us to discuss your specific requirements:  
[cornerstone@soton.ac.uk](mailto:cornerstone@soton.ac.uk)

UNIVERSITY OF  
**Southampton**



University  
of Glasgow



UNIVERSITY OF  
**SURREY**

**EPSRC**  
Engineering and Physical Sciences  
Research Council



Provisional dates for future CORNERSTONE MPW fabrication calls:

| Call                          | Call type | Jan 2018 | Feb 2018 | Mar 2018         | Apr 2018 | May 2018 | Jun 2018 | Jul 2018 | Aug 2018 | Sep 2018 | Oct 2018              | Nov 2018 | Dec 2018 | Jan 2019 | Feb 2019 | Mar 2019 |
|-------------------------------|-----------|----------|----------|------------------|----------|----------|----------|----------|----------|----------|-----------------------|----------|----------|----------|----------|----------|
| MPW #7 - 340 nm SOI platform  | Passives  |          |          |                  |          |          |          |          |          |          |                       |          |          |          |          |          |
| MPW #8 - 220 nm SOI platform  | Passives  |          |          |                  |          |          |          |          |          |          |                       |          |          |          |          |          |
| MPW #9 - 220 nm SOI platform  | Actives   |          |          | Call announced → |          |          |          |          |          |          | ← Submission deadline |          |          |          |          |          |
| MPW #10 - 500 nm SOI platform | Passives  |          |          |                  |          |          |          |          |          |          |                       |          |          |          |          |          |
| MPW #11 - 220 nm SOI platform | Passives  |          |          |                  |          |          |          |          |          |          |                       |          |          |          |          |          |
| MPW #12 - 340 nm SOI platform | Passives  |          |          |                  |          |          |          |          |          |          |                       |          |          |          |          |          |
| MPW #13 - 340 nm SOI platform | Actives   |          |          |                  |          |          |          |          |          |          |                       |          |          |          |          |          |
| MPW #14 - 220 nm SOI platform | Passives  |          |          |                  |          |          |          |          |          |          |                       |          |          |          |          |          |

| Device type          | Design area:<br>11.47 mm<br>x 4.9 mm | Design area:<br>5.5 mm<br>x 4.9 mm |
|----------------------|--------------------------------------|------------------------------------|
| Active               | £35,000                              | £20,000                            |
| Passive with heaters | £10,000                              | £7,000                             |
| Passive              | £5,000                               | £3,500                             |

Free of charge for UK academia.

Please note that this information is subject to change.



**Contact us**  
Dr Callum Littlejohns  
Optoelectronics Research Centre  
University of Southampton  
Southampton, UK  
SO17 1BJ  
Email: [cornerstone@soton.ac.uk](mailto:cornerstone@soton.ac.uk)  
Phone: +44 (0)2380 592697