

PhD positions

Laser modification of materials at micro- and nanoscale for photonics and information technology

High-power ultrafast lasers enable the new technique of direct optical writing for patterning waveguides and nanostructures in three dimensions, to provide entirely new functionalities. Three-dimensional photonic structures will allow significant increases in the scale of integration in optical information processing and data storage opening tantalizing possibilities in the fields of photonics and information technology including recent demonstration of **5D data storage**.

This project explores a variety of advanced ultrafast laser material processing techniques, the ultrafast physics of femtosecond photosensitivity and applications of 3D photonic structures.

About ORC

The ORC is the leading photonics research institute in Europe. PhD here has enabled our past graduates to make successful careers in academia, in national scientific laboratories, and as scientists or business leaders in industry. Our research papers, patents, spin-off companies and these successful alumni taken together place Southampton amongst the top institutes worldwide.

Key facts

Entry requirements: *first or upper second-class degree or equivalent*

Duration: *typically four years (full-time)*

Funding: *full tuition plus stipend*

Please send your CV to Professor Peter G. Kazansky (pgk@soton.ac.uk)