

Industry engagement and development of laser-driven beams for applications in medicine through to manufacturing



Dr. Ceri Brenner

Senior Application Development Scientist for High Power Lasers,
Central Laser Facility, Science and Technology Facilities Council, UK

The STFC operates the UK's large facilities for research and technology. It also has a business and innovation department that focuses on building relationships with industry to support their R&D activities and guiding research work from the laboratory through to commercialisation. My combined role as scientist within CLF and industry liaison with BID department means I can join together my expertise in laser plasma accelerators with my knowledge of business development to support the development of laser-driven beams for industrial applications.

In this seminar I will introduce the business and innovation model used by STFC that leads to many successful and high impact collaborations between academia and industry. I will then give an overview of the recent activity in the CLF around the development of laser-driven beams of ions, neutrons and x-rays for applications in medicine, security, nuclear waste assay and aerospace. A selection of demonstration experiments have led to projects that are driving forward the research towards commercial exploitation. The recent delivery of a 100 J, 10 Hz diode-pumped laser, the CLF's DiPOLE laser, means a deployable system is within reach.