

# DELIVERING FOR INDUSTRY EBLANA PHOTONICS



## INDUSTRY PROBLEM STATEMENT

Eblana Photonics is an Irish company, founded in 2001, that designs and manufactures laser diodes emitting at near-infrared wavelengths for high speed optical communications, sensing, measurement and other applications.

Eblana has developed a proprietary method for the manufacture of multi-quantum well laser diodes using etched photonic interfaces at a sub-micron scale. Capabilities for in-depth physical and elemental analysis of these features as well as of the layer structure of the laser are key to ongoing product development at Eblana.

## CRANN VALUE ADD

Eblana has adopted a fabless manufacturing model and has strategic alliances with partners of proven excellence allowing the company to focus on its key areas of expertise. To support its commitment to quality products, Eblana leverages the device analysis capabilities available at CRANN.

CRANN possesses a world leading microscopy facility that has a unique combination of advanced analysis techniques. CRANN staff provided Eblana with training on how to use the required equipment to a high standard. Eblana engineers and scientists have thus become self-sufficient users who can book and use the required equipment as needed. This arrangement has enabled speed of response to the acquisition of device details, while also ensuring confidentiality.

Eblana currently uses the facilities to image and generate elemental composition maps of very small structures in the laser emitting diode.

## CRITICAL CRANN ENABLERS

- Scanning electron microscopy (SEM).
- Energy Dispersive X-ray Spectroscopy (EDS).
- Dual beam Focussed ion beam (FIB).
- Training of industry staff.
- Access to expensive instrumentation.

## INNOVATING NANOSCIENCE