



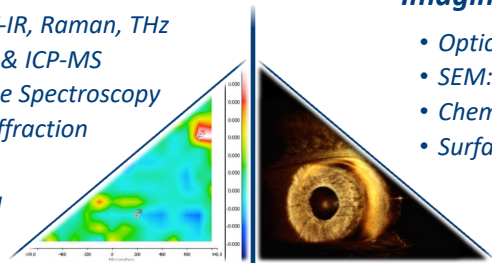
# Overview of Capabilities

## CAPPA Provides Photonic Solutions for:

<b>Research</b>	<ul style="list-style-type: none"> <li>• Semiconductor Light Sources</li> <li>• Dynamics of Complex Systems</li> <li>• Interaction between Light &amp; Materials</li> </ul>	
<b>Product Development</b>	<ul style="list-style-type: none"> <li>• New Semiconductor Materials &amp; Devices</li> <li>• Optical Test Equipment</li> <li>• Illumination for Industrial Applications</li> </ul>	
<b>Process Improvement</b>	<ul style="list-style-type: none"> <li>• Applied Spectroscopy for Process Control</li> <li>• Advanced Inspection Technologies</li> <li>• Analysis of Products &amp; Processes</li> </ul>	
<b>Consultancy</b>	<ul style="list-style-type: none"> <li>• Wide Array of Contract Services</li> <li>• Imaging: Optical, SEM, Surface Profiling</li> <li>• Identification: UV to IR, Mass Spec.</li> </ul>	

### Material Properties

- Optical: UV-Vis, NIR, FT-IR, Raman, THz
- Mass Spectrometry: LC & ICP-MS
- X-Ray: Energy Dispersive Spectroscopy
- Particle Sizing: Laser Diffraction & Imaging
- Physical: Tensile testing



### Imaging

- Optical: BF, DF, DIC & Fluorescence
- SEM: Large chamber environmental
- Chemical: Raman & FT-IR Imaging
- Surface Profiling: Contact Profilometry

### Design & Prototyping

- Optical design: Illumination, Fibre Coupling
- Device Simulation & Modelling
- 3D Print fast prototyping
- Equipment Control Software & Interfacing

### Photonic Integration

- Nanophotonic device fabrication
- MEMS/NEMS structures
- Ultrafast (fs) processes characterisation: pump-probe, TRPL