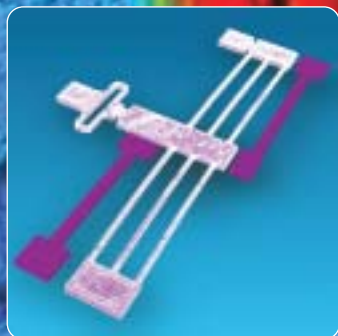


CEMMNT

THE CENTRE OF EXCELLENCE IN METROLOGY
FOR MICRO AND NANO TECHNOLOGIES

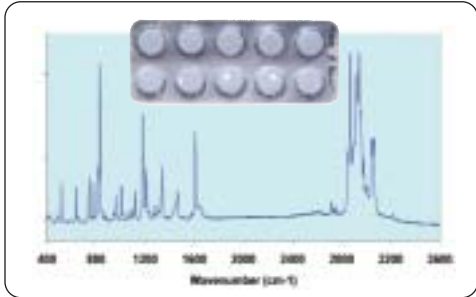
Measurement and characterisation for your critical products and processes

- Unrivalled measurement, characterisation and analytical services
- Unique multi-disciplinary expertise across all industry sectors
- Rapid bespoke solutions, outsourcing and contract research
- Problem solving from world-class experts

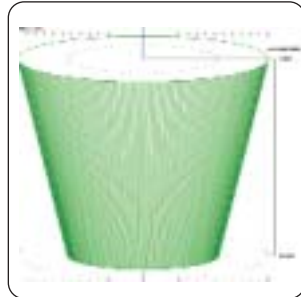


Accelerating development of components, products and processes across all industries

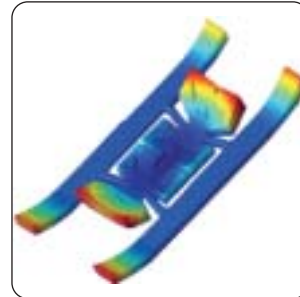
Systematic analysis at the micro and nano scale is now accelerating innovation across all industrial sectors. The cost benefits of measurement, characterisation and systems engineering for organisations commercialising products and processes are substantial. CEMMNT offers seamless access to the right equipment and expertise, eliminating your requirement for costly internal investment in instrumentation and trained staff. Whatever your business, from life sciences to semiconductors, and however large or small your challenge, CEMMNT will assemble a team from our network of industry leading partners to provide a fast, cost-effective solution.



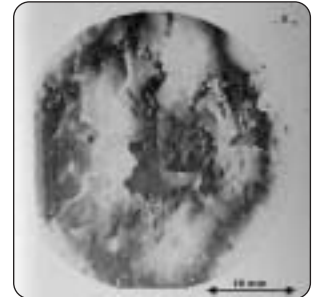
Pharmaceuticals
Micro-Raman spectroscopy for molecular fingerprinting (ibuprofen)



Medical Devices
Roundness measurement determines rigidity of hip replacement stem



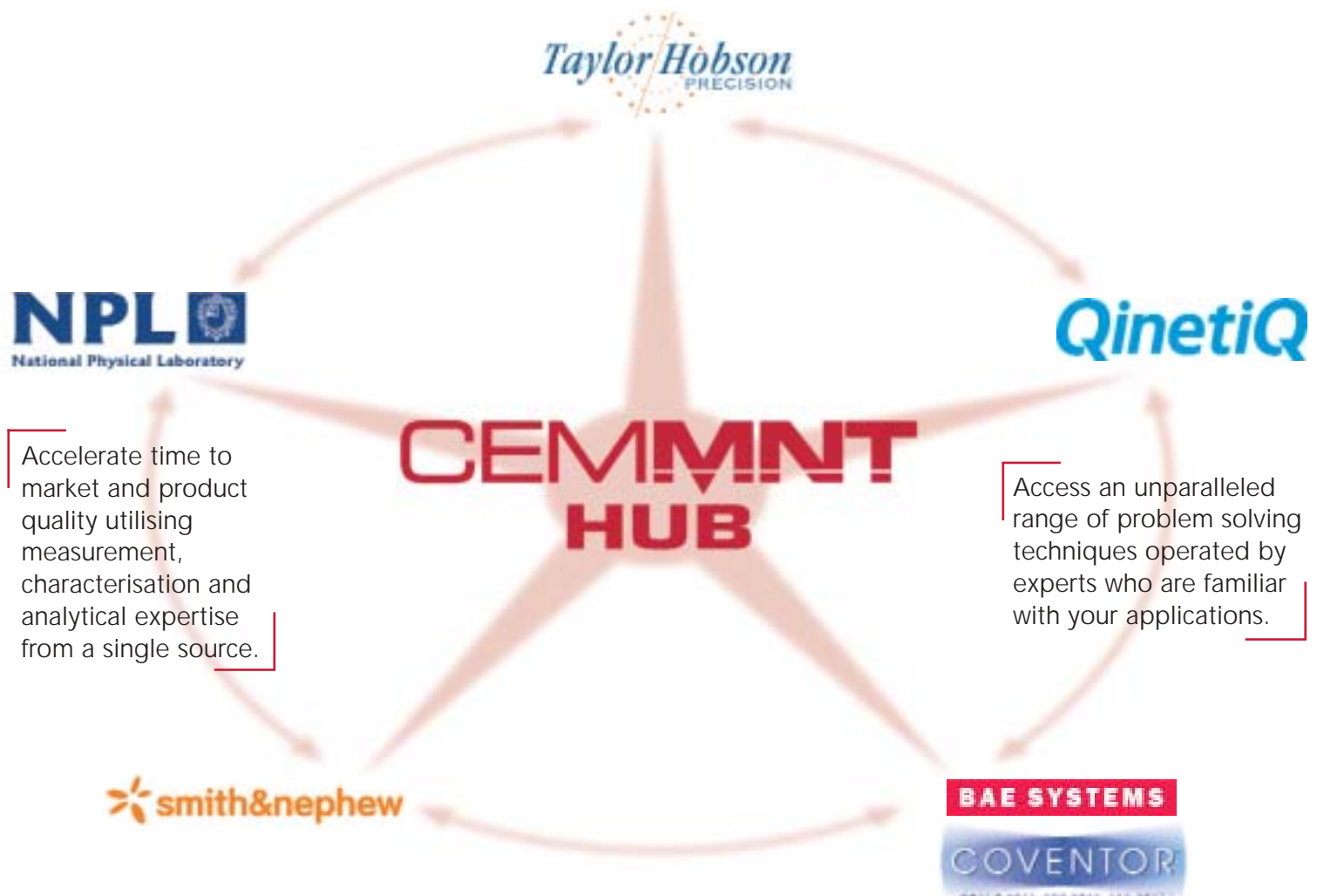
Automotive/Aerospace
Optical Profilometry verifies MEMS device dimensions meet design criteria



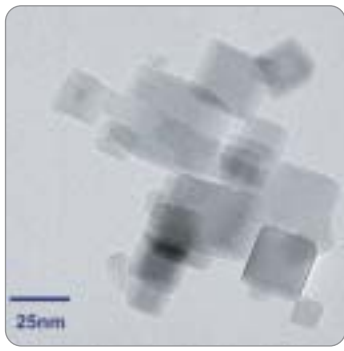
Semiconductor
X-ray Topography maps crystal defects in a silicon carbide wafer

World-leading micro and nano technology expertise

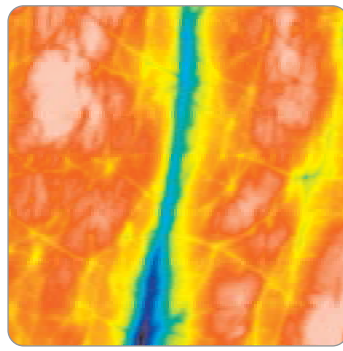
CEMMNT **saves you time and money** by providing a single contact point for delivery of rapid response solutions from our network of market-leading organisations. Our multi-disciplinary expertise addresses the entire product life-cycle from design concept through to manufacture.



Ametek Taylor Hobson, BAE Systems, Coventor, National Physical Laboratory, and QinetiQ are CEMMNT core partners. Smith & Nephew Technical Services Group is an associate service provider.



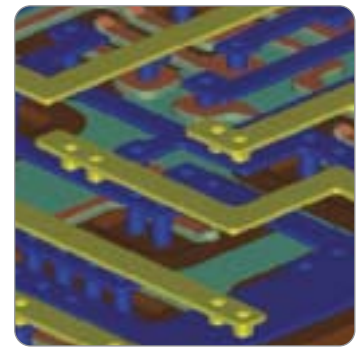
Transmission Electron Microscopy identifies size, distribution and form of nanoparticles



Confocal Scanning Profilometry characterises anti-ageing cream effects on a skin replica



Scanning Electron Microscopy visualises macrophage immune cell



Coventor software modelling of a semiconductor device

Measurement

Critical dimensions | roughness | surface form | particle size | film thickness | wear

Characterisation

Chemical and elemental | structural | defects | mechanical | optical | electrical | thermal | surface analysis

Design & Systems Engineering

Modeling | simulation | prototyping | training

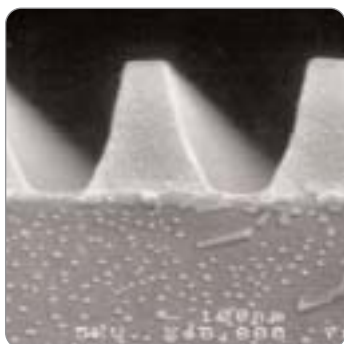
Enabling innovation and improving quality through macro, micro and nano scale analysis

Measurement

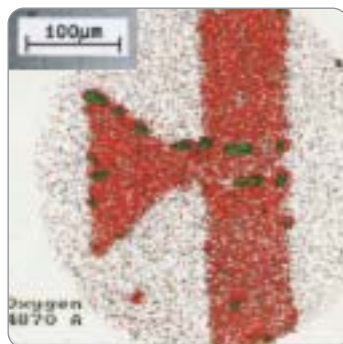
- Scanning Electron Microscopy
- Transmission Electron Microscopy
- Atomic Force Microscopy
- Optical Profilometry
- Optical Microscopy
- Confocal Microscopy
- Micro Focus X-ray Tomography
- Stylus Profilometry
- Roundness Measurement
- Coordinate Measuring Machines
- Ellipsometry
- X-ray Reflectometry
- Particle Sizing
- Dynamic MEMS Profilometry
- Vibrometry
- Stress Measurement

Characterisation

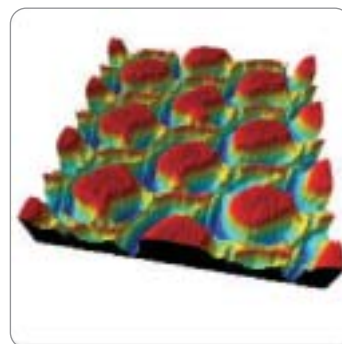
- Energy Dispersive X-ray Analysis
- Electron Backscatter Diffraction
- Secondary Ion Mass Spectrometry
- Auger Electron Spectroscopy
- X-ray Photoelectron Spectroscopy
- X-ray Diffraction
- X-ray Topography
- FTIR Spectroscopy
- Micro-Raman Spectroscopy
- Chromatography
- Spectrophotometry
- Nano-Indentation
- Calorimetry
- Thermal Imaging
- MALDI Mass Spectrometry
- Nuclear Magnetic Resonance



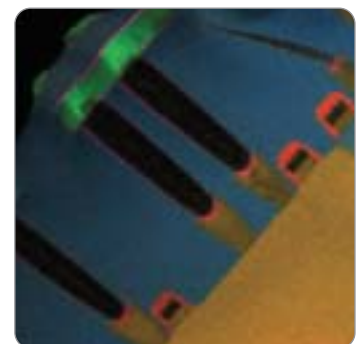
Scanning Electron Microscopy image from a cross-sectioned polymer grating



Secondary Ion Mass Spectrometry maps oxygen contamination at an interface in a metallisation feature



Optical Profilometry determines roughness and morphology of textured steel

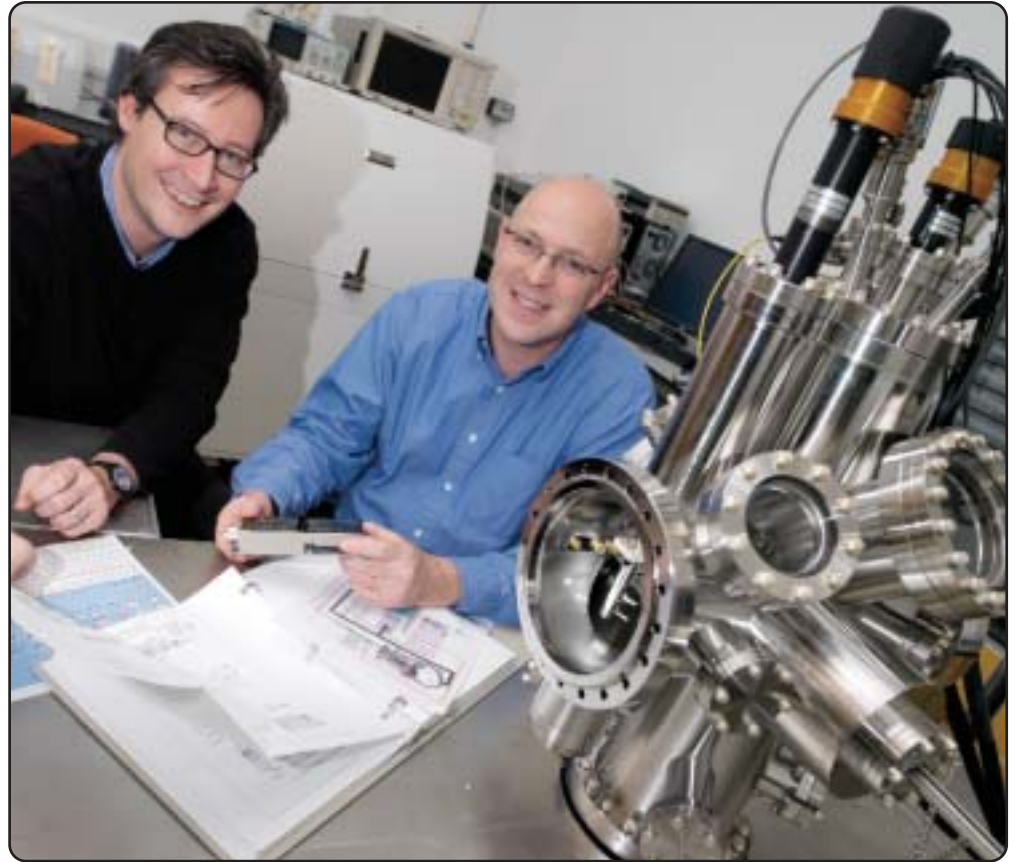


TEM and Electron Energy Loss Spectroscopy maps elemental distribution (N, Ti, O, Al, Si) on a semiconductor device

Your partner for collaborative projects and grant programmes

Our experience of collaborative research initiatives enables CEMMNT to both participate in and broker partnerships for grant programmes, offering:

- World class technology and expertise to deliver R&D project solutions
- Knowledge dissemination, technology transfer and training
- Extensive access to UK SME's and academic excellence



Applied Nanodetectors accelerate gas sensor development using CEMMNT's AFM expertise

Adding value through a complete range of services

Bespoke solutions: accelerate commercialisation and product performance using industry leading experts to solve your key challenges

Laboratory outsourcing: improve productivity, reduce cost and increase efficiency by outsourcing analytical testing and measurement services to world experts

Calibration services: comprehensive UKAS certified sample and instrument calibration in clean room laboratories

Expert witness: fully independent and confidential service to support product claims, patents, liability, counterfeiting through certified technology and consultancy

CEMMNT

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Back cover: NPL