



## Identification of the installation/facility :

Country: Ireland  
Location (city): Limerick  
Name of the facility: Materials and Surface Science Institute (MSSI)  
Date of construction or of acquisition or of main refurbishment: 1998  
Owner: University of Limerick  
Contact point: Tel: +353-61-213127

Internet site: [www.ul.ie/mssi](http://www.ul.ie/mssi)

## Technical characteristics:

### 1 - Type of infrastructure

Wind tunnel	<input type="checkbox"/>
Propulsion bench	<input type="checkbox"/>
Structures facility	<input type="checkbox"/>
Material facility	<input checked="" type="checkbox"/>
Simulator (ex. Flight simulator, tower, ...)	<input type="checkbox"/>
Flight test bed (aircraft, embedded facilities, ...)	<input type="checkbox"/>
Supercomputers	<input type="checkbox"/>
Other	<input type="checkbox"/>

### 2 - Main technical characteristics

The **Materials & Surface Science Institute** was established in 1998 with the mission to provide a centre of excellence generating state-of-the-art fundamental research on topics of industrial significance in the fields of surface science and materials. The Institute houses a multidisciplinary team of scientists (chemistry, materials science, physics and biochemistry) and engineers (mechanical, aeronautical, biomedical, manufacturing and electronic) who undertake research focused on the design of materials for (i) **Health**, (ii) **Transport**, (iii) **Energy** and (iv) **Clean Technology**.

MSSI's research activities are underpinned by core capabilities in modelling, synthesis and characterisation of materials over a range of length scales supported by state of the art infrastructure and facilities. MSSI comprises 39 members who supervise 158 PhD and 36 postdoctoral researchers with a number of visiting researchers (total of 233 researchers).

### 3 - Research domains which can be addressed (refer to ACARE taxonomy)

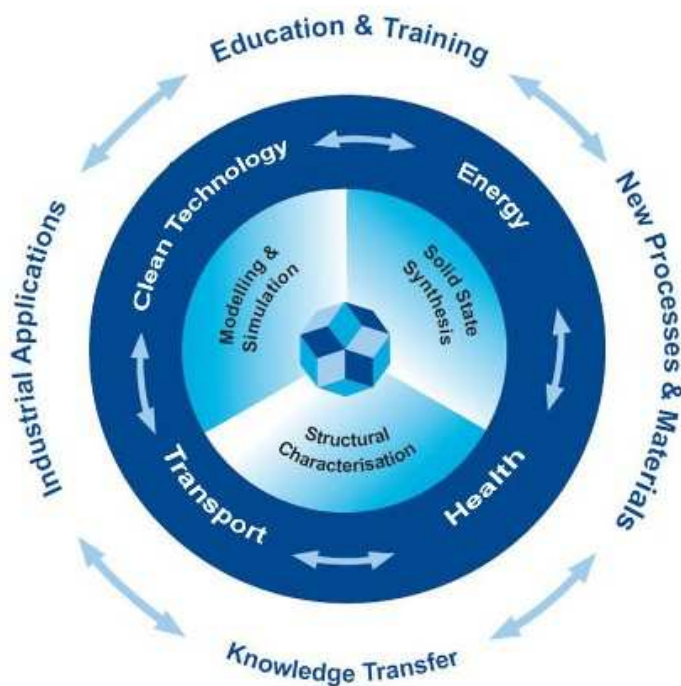
All aspects of Materials research

### 4 - Main (or specific) associated measurement techniques



<a href="#">Atomic Force Microscopy</a>	<a href="#">Dr. Gordon Armstrong</a>
<a href="#">Transmission Electron Microscopy</a>	<a href="#">Dr. Calum Dickinson, Dr. David Tanner</a>
<a href="#">Scanning Electron Microscopy</a>	<a href="#">Dr. Calum Dickinson, Ms. Gaye Hanrahan, Ms. Paula Olsthoorn</a>
<a href="#">Focussed Ion Beam Milling</a>	<a href="#">Dr. Serguei Belochapkin</a>
<a href="#">Computational Modelling Facility</a>	<a href="#">Mr Drahomir Chovan</a>
<a href="#">Particle Size Analysis</a>	<a href="#">Dr Calum Dickinson</a>
<a href="#">Mechanical Testing Facility</a>	<a href="#">Dr. Trevor Young</a>
<a href="#">Spectroscopic Ellipsometer</a>	<a href="#">Dr. Gordon Armstrong</a>
<a href="#">Raman Spectrometer</a>	<a href="#">Dr. Gordon Armstrong</a>
<a href="#">Differential Scanning Calorimetry/TGA</a>	<a href="#">Dr. Wynette Redington</a>
<a href="#">Gas Chemisorption / Physisorption</a>	<a href="#">Dr. Serguei Belochapkin</a>
<a href="#">X-ray Photoelectron Spectroscopy</a>	<a href="#">Dr. Fathima Laffir</a>
<a href="#">X-ray Diffraction</a>	<a href="#">Dr. Wynette Redington</a>
<a href="#">Sputtering Deposition Systems</a>	<a href="#">Dr. Serguei Belochapkin</a>
<a href="#">Laser Scanning Confocal Microscopy</a>	<a href="#">Dr. Anna Piterina</a>
<a href="#">Vibrating Sample Magnetometer</a>	<a href="#">Dr. Zakia Rahman</a>
<a href="#">Spark Plasma Sintering</a>	<a href="#">Dr. Tofail Syed</a>
<a href="#">Hot Drape Former</a>	<a href="#">Dr. Trevor Young</a>
<a href="#">Composites Autoclave</a>	<a href="#">Dr. Trevor Young</a>
<a href="#">Digital Image Correlation Camera</a>	<a href="#">Prof. Noel O'Dowd</a>
<a href="#">Contact Angle</a>	<a href="#">Dr. Gordon Armstong</a>
<a href="#">Circular Dichroism Spectrometer</a>	<a href="#">Dr. Fathima Laffir</a>
<a href="#">Optical Microscopy</a>	<a href="#">Dr. Gordon Armstrong</a>

5 - *Operational status*  
- Fully operational -



6 - picture

**Financial elements:**

Replacement cost (M€uros)

- Less than 10
- 10 to 30
- 30 to 60
- 60 to 100
- More than 100

**Practices concerning:**

Access policy

<b>Telephone:</b>	+353-61-213127
<b>Fax:</b>	+353-61-213529
<b>Website:</b>	<a href="http://www.ul.ie/mssi">www.ul.ie/mssi</a>

Support: National

**Origin of information** ('signature'): Dr. Paul Butler – Enterprise Ireland 11/11/11