

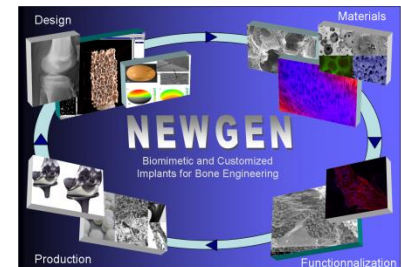


- **Complete denomination:** University of Malta
- **Location (city, country):** Msida, Malta
- **Rector:** Juanito Camilleri
- **Contact person in NEWGEN:** Dr Joseph Buhagiar
- **Working Group involvment:** MC Member; WG 4: In vitro testing
- **Staff:** Department of Metallurgy and Materials Engineering (8 Academic staff, secretary and 4 Technical staff)

- **Research topics:** Corrosion, Tribocorrosion, Material Characterisation, Austenitic Stainless Steel, Ti-alloys and Cobalt-Chromium Alloys and Surface Engineering.

- **Researchers expertises:** Degredation, Surface Engineering and Material Characterisation.

University of Malta
Department of Metallurgy and
Materials Engineering
MSD 2080, Msida, MALTA

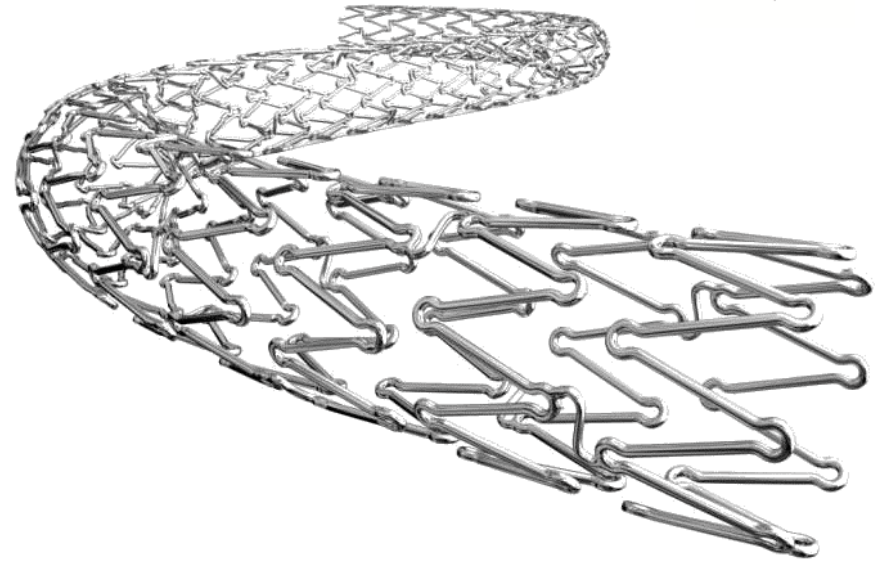


COST Action MP1301



Research Application Expertise:

- Metal-on-metal hip implants
- Stents
- Orthodontic arch wires and brackets
- Bone plates

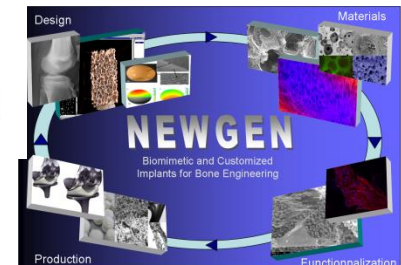


Materials Expertise:

- Stainless Steel
- Co-Cr-Mo
- Ni-Ti
- Ti-alloys

Expertise

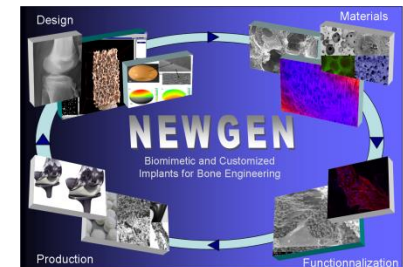
- Surface Engineering
- Tribo-corrosion
- Corrosion
- Material Characterisation





Material preparation:

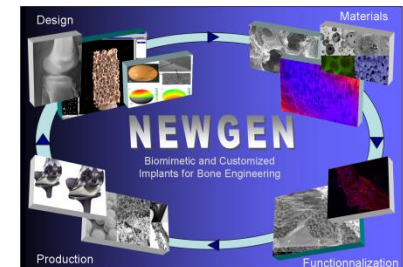
- Microtome cutter
- Sample mounting
- Grinding and polishing
- Electrochemical Polisher





Mechanical Testing:

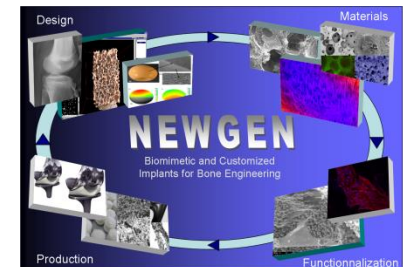
- Tensile / Compression
- Micro, Macro and Shore hardness
- Nano-indentation and –scratch
- Impact Tester (Polymers)





Degradation Testing:

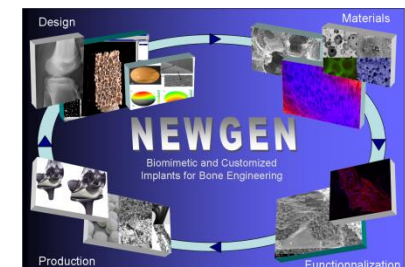
- Electrochemical Impedance Spectroscopy
- Polarisation (Corrosion)
- Tribocorrosion
- Salt Spray Corrosion Testing
- Tribology
- Nano-scratch

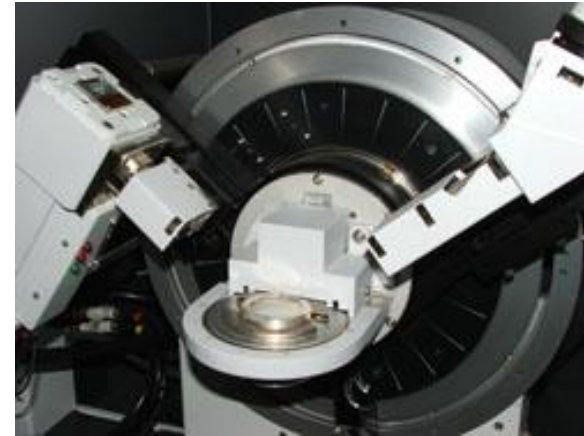
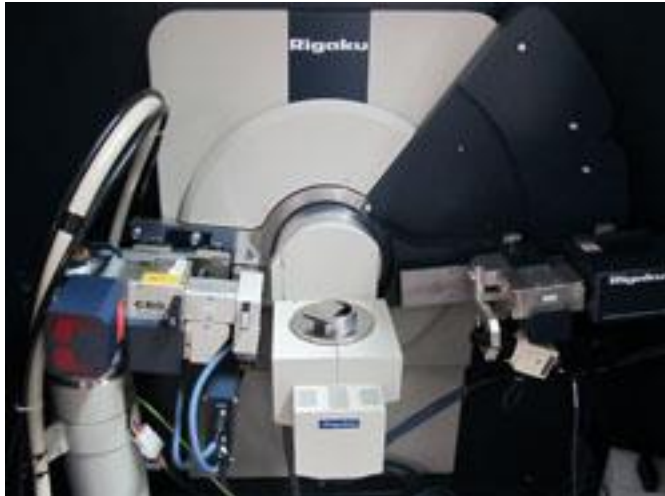




Microscopy:

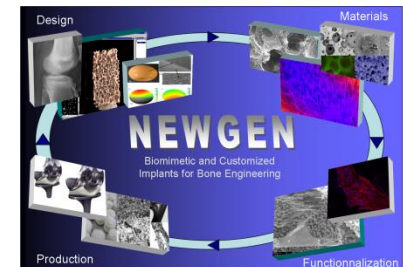
- FE SEM
- Confocal Microscope
- Reflected light Optical Microscope
- Stereo Microscope





X-Ray diffraction:

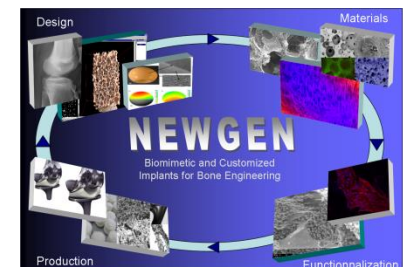
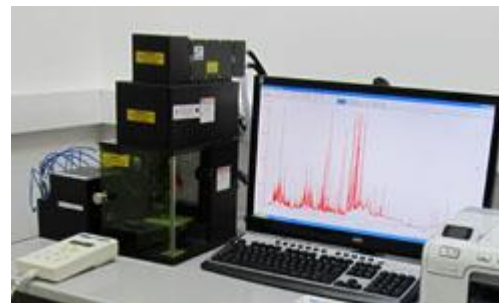
- Grazing Angle
- Phase Analysis
- Hot Stage





Material Characterization:

- LEED
- XPS
- SIMS
- LIBS





Processing (Industrial)

- EB PVD
- 9 kW CO₂ Laser
- Vacuum Furnace
- Gas Nitriding

