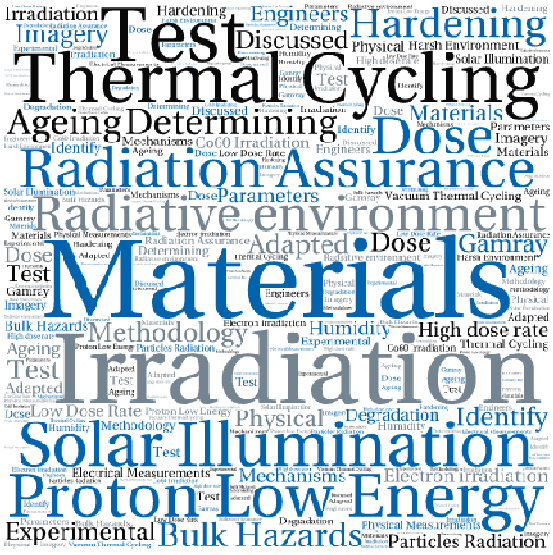
Material Qualification & Characterization

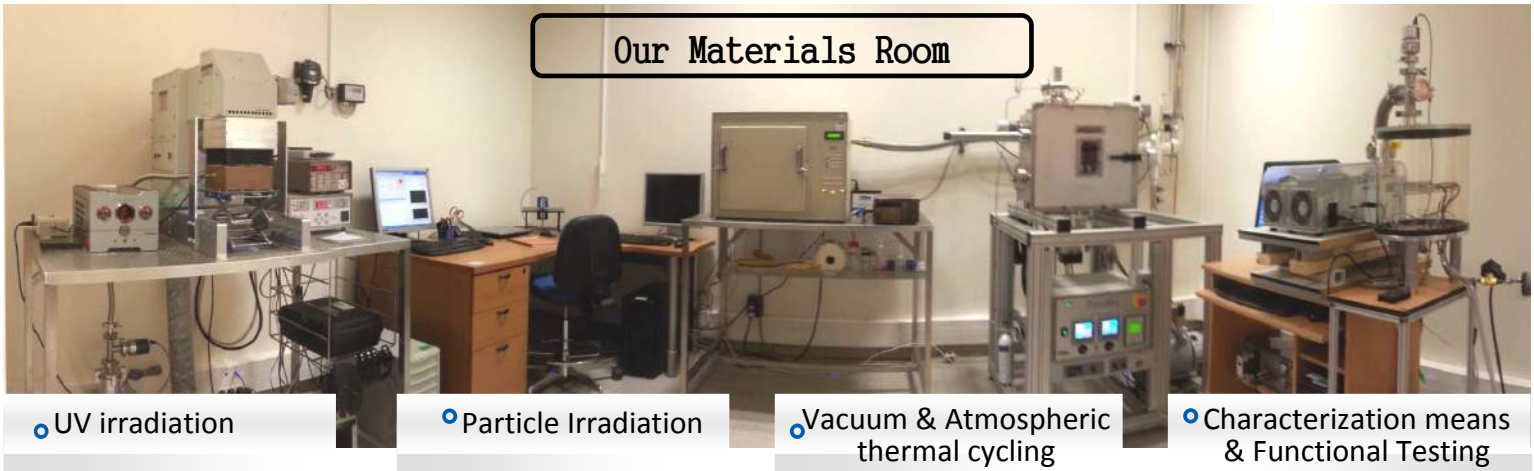
TRAD Tests & Radiations provides a unique expertise to assist companies in predicting and minimizing radiation effects on their products and systems.

Our qualified staff has gained a tremendous experience in assessing surface and bulk hazards of materials in harsh environment.



We offer a complete range of tests including:

- Particles & UV Radiation, Thermal cycling, UV ageing
- Electrical tests, Optical measurements, visual inspection, physical analysis, etc.



UV irradiation

- In accordance with ECSS-Q-ST-70-06C
- UV spectrum – up to 15 suns (ASTM E490 - available)
- In-situ monitoring of the UV flux and the sample temperature

Keeping material in UV (200-400 nm) for validation of thermo-optical, coatings, adhesives, glass, etc.

Particle Irradiation

- Protons from a few keV to 6 MeV
- Electrons from 100 keV to 10 MeV
- Cobalt 60
- VEISPA: electrons up to 4 MeV (End of 2014)

To solve problems of coatings, films and composites qualification … (In accordance with ECSS-Q-ST-70-06C)

Vacuum & Atmospheric thermal cycling

- In accordance with ECSS-Q-ST-70-04C
- Vacuum Facility
  - Pressure down to 1e-6 mbar
  - Temperature from -180°C to +200°C
  - Dimension: 2 plates of 15 X 30 X 24 cm
- Atmospheric Facility
  - Inert atmosphere-N,Ar,He
  - Temperature from -170°C to +400°C
  - Chamber dimensions : 35 X 33 X 33 cm

Characterization means & Functional Testing

- *Microscopic Investigation*
  - Optical microscope
  - SEM & Xray analysis
- *Optical measurements*
  - Transmission
  - Reflectivity / absorptivity
- *Electrical measurements*
  - Voltage tests
  - Insulation resistance (surface, transverse)
- *Mechanical testing*

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