



Advanced Materials
Research Center
Impact Lab

The First Impact Lab in the MENA Region

Innovation for a better world

About TII

Who we are?

The **Technology Innovation Institute (TII)** is an applied research center, based in UAE, dedicated to pushing the frontiers of knowledge. Our teams of scientists, researchers and engineers work in an open, flexible and agile environment to deliver discovery science and transformative technologies. Our work means we will not only prepare for the future; we will create it. Working together, we are committed to inspiring innovation for a better tomorrow.

Advanced Materials Research Center

The Advanced Materials Research Center (AMRC) is an emerging center of global excellence in materials science in the Middle East and North Africa. We attract leading innovators and pioneers regionally and globally.

We conduct applied research on metals and composites, including meta, nano, smart, self-healing, energy absorbing and additive manufacturing materials. Through this work, we bring these advanced materials to a stage where they are ready for implementation by industry.

Facilities

Abu Dhabi's
Technology Innovation
Institute launches
MENA's first Impact
Lab for advanced
material research



Materials
Characterization



Structural
Impact Testing



Modelling
and optimization

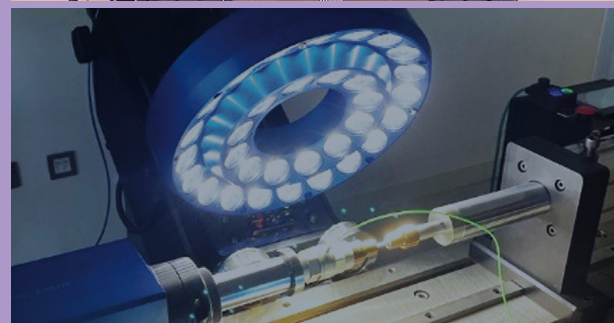
Materials Characterization



**Split Hopkinson
Pressure Bar**
Up 10000/s strain rate
High speed DIC
Up to 250°C
Direct impact capability



**Universal
Testing Machine**
Up to 100kN
Low and high
temperature



**Intermediate
Strain Rate**
Up to 10/s strain rate
High speed DIC

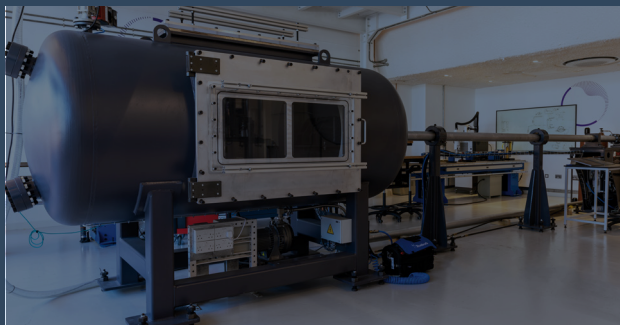
Impact testing



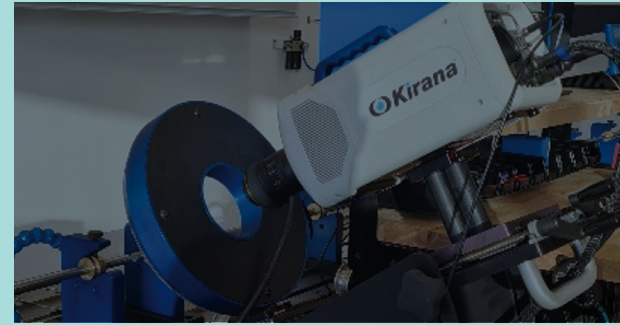
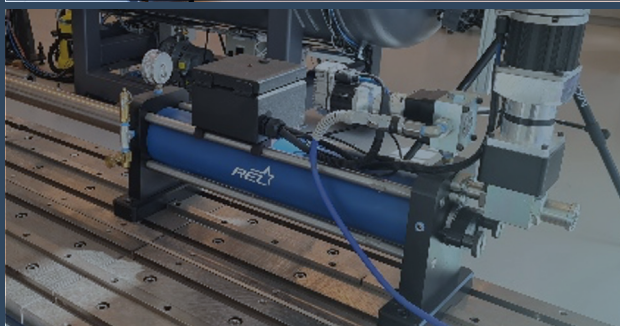
Drop tower
Low velocity impact
Up to 20m/s
Up to 70kg impact mass



Gas gun projectile launcher
High velocity impact
Up to 1000m/s impact



Direct Impact Hopkinson Bar
Impact up to 50m/s.



Ultra-high speed cameras h high speed DIC
Up to 7M frames per second



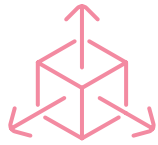
High speed cameras
Up to 1M frames per second

High speed thermal cameras
Up to 600°C and 20,000 frames per second

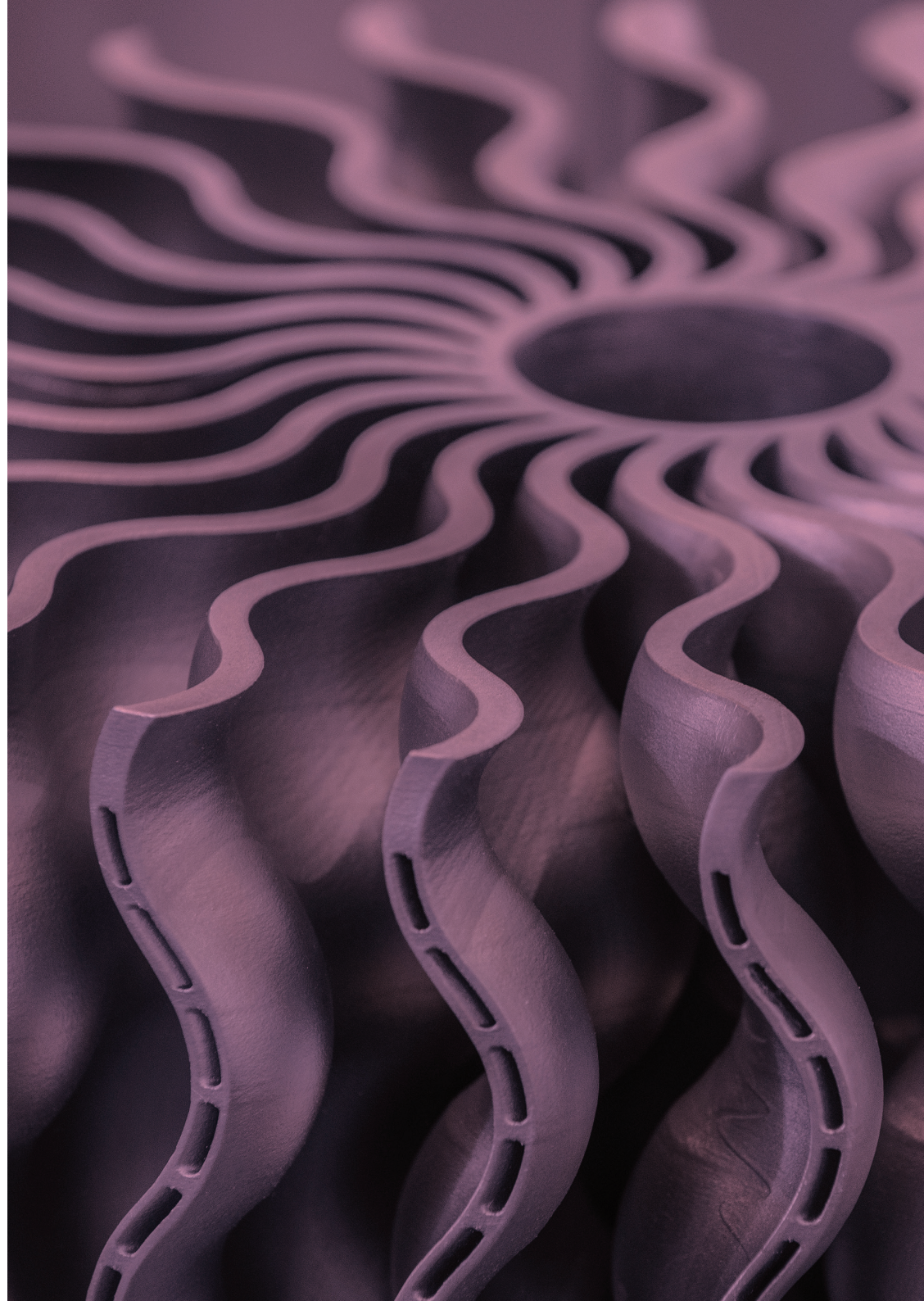


Digital Image Correlation (DIC)
Contactless 3D strain field measurement
Low and high speed

Modelling and optimization



nTopology



Advanced Materials Research Center

To know more please
visit us on: www.tii.ae



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