



# Advanced Materials Characterization in Oil and Gas Industry

## Challenges and Opportunities

Workshop hosted by **HBKU Materials Characterization Core Labs**

November 11<sup>th</sup> and 12<sup>th</sup> 2024

## Workshop Highlights

The workshop aims to provide an overview of major analytical techniques for materials characterization in the HBKU Materials Characterization Core Labs (MCL), with a focus on practical applications in the oil and gas fields. Additionally, the workshop seeks to foster new, interdisciplinary, collaborative research initiatives for the coming years. This event will help establish a platform to initiate communication and knowledge-sharing among experts from academic institutions, research centers, and industry in the Gulf region. To stimulate discussion, a group of scientists active in related fields, both from the MCL and external organizations, will share their latest discoveries and experiences related to oil and gas topics.

We hope this opportunity will highlight the importance of materials characterization and failure root cause analysis in understanding and solving problems, and in suggesting scientific solutions that have a direct impact on the oil and gas industry.

Dr. Said Mansour  
Core Labs Director  
[smansour@hbku.edu.qa](mailto:smansour@hbku.edu.qa)



## HBKU Materials Characterization Core Labs

Qatar's world class materials characterization facility for all your characterization needs.

From the **DRILL** to the **LAB!**



## HBKU Materials Characterization Core Labs Overview

At HBKU MCL, our mission is to empower researchers, scholars, and industry professionals by providing unparalleled resources and services, driving innovation and facilitating the pursuit of knowledge. Our state-of-the-art facilities, outfitted with the latest cutting-edge technologies, enable users to explore a vast range of scientific disciplines and achieve groundbreaking results. Our dedicated team of experts is available to guide and support you throughout your research journey, ensuring you have access to the best tools, techniques, and expertise. Our expert team is available to assist you in selecting the most appropriate techniques and methodologies for your research needs. In addition to offering access to our state-of-the-art equipment, we provide comprehensive training, consultation, and technical support to ensure the highest quality results.



# Workshop Topics

- Demonstration of HBKU Materials Characterization Core Labs capabilities
- Principles and Methods of Failure Analysis
- Case studies of failures in the Oil and Gas industry
- Microscopic Investigation of failure mechanisms in engineering materials (metal, alloys...)
- Analysis of material failure associated with environmental damage, such as **Corrosion, high-temperature compounds and material compatibility issues**.
- Other topics of interest to industry

## Time

November 11<sup>th</sup> and November 12<sup>th</sup>, 2024



## Location

HBKU Researchery  
Materials Characterization Core Labs



## For more information

Email: [smansour@hbku.edu.qa](mailto:smansour@hbku.edu.qa)

Website: [research.hbku.edu.qa/core-labs/material/services](https://research.hbku.edu.qa/core-labs/material/services)

