

In the **Department of Materials Science** we aim for a fundamental understanding of the mechanisms governing **functional and structural properties of smart materials**. We combine innovative material synthesis and modification methods with state-of-the-art micro- and nanomechanical characterization to design future responsive materials.



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In situ & operando characterization of advanced materials

Correlative and AI enhanced data analysis

fs laser machining
FIB shaping
Two-photon lithography

Nanoindentation
In situ SEM/TEM
Extreme environments

AI aided image analysis
Correlative microscopy

High-throughput testing
Multi-fidelity data