

DWI

Leibniz-Institut
für Interaktive Materialien

<i>Name</i>	DWI - Leibniz-Institut für Interaktive Materialien e.V.
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<i>Employees</i>	Approx. 200
<i>Founded (year)</i>	1952

Research at DWI – Leibniz-Institut für Interaktive Materialien e.V. (DWI – Leibniz Institute for Interactive Materials) focuses on the development of materials with active and adaptive properties, after being founded in 1952 with an original emphasis on keratin research and protein chemistry. The capability for active adaptation and interactivity is one of the most profound challenges of today's materials research and will ultimately lead to the evolution of structural via functional to intelligent materials. At DWI scientists with backgrounds in polymer sciences, biotechnology and chemical engineering closely collaborate on mastering this challenge.

The research approach at DWI is based on integrating molecular components, whose structure and dynamics are orchestrated by complex interactions on various length scales, into macroscopic materials, devices and in the end systems. For exceeding the passive functionalities of existing materials, DWI researches on switchable material properties, the application of memory effects, the integration of energy conversion systems, as well as on internal feedback mechanisms. Beyond materials aspects the DWI team aims at an integration of active characteristics into interacting material systems. The fields of application are diverse, dealing with surface finishing, biomedical technology, biotechnology and sustainable chemical engineering.