

LOEWE Research Cluster STT

Sensors Towards Terahertz



Innovative technologies for the life sciences and process and environmental monitoring

Terahertz waves lie between microwaves and infrared waves. Compared with infrared waves, they penetrate many materials with a higher resolution than microwaves and thus enable the identification or contact-free characterisation and inspection of materials or biological tissue. The aim of the LOEWE research cluster is to conduct fundamental research for innovative terahertz technologies and sensor concepts. These make it possible, for example, to identify specific binding processes (antibody-antigen) by means of a spectral signature or to use imaging procedures to detect defects within or on the interfaces of a raw material or a workpiece without destroying it.

COORDINATOR

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LOCATIONS

Darmstadt
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SUBJECT AREAS

Physics
Electrical engineering
Information technology
Materials science
Chemistry

FUNDING PERIOD

Since 2013

COORDINATION OFFICE

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LOEWE and ProLOEWE

Since 2008 the German federal state of Hessen has been promoting outstanding research initiatives through its own excellence programme, LOEWE. To date, 11 LOEWE research centres and 35 LOEWE research clusters have been selected in a competitive process to receive funding.

ProLOEWE is the LOEWE research initiatives network: their common aim is to provide information about their activities, speed up access to their research and intensify their cooperation. The website www.proloewe.de/en provides an overview of the LOEWE research initiatives.