

# LOEWE Research Cluster SOFT CONTROL

Switching Surface Properties with Stimuli-responsive Soft Matter



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## Intelligent synthetic films

Intelligent synthetic films consist of macromolecules that react to external stimuli such as light or electrical or magnetic fields, for example by making dynamic, reversible changes to their form or structure. If these molecules are applied to interfaces in very thin layers, they can be used in a targeted manner to switch the surface properties of substrate materials. The LOEWE research cluster SOFT CONTROL is conducting investigations to find out which polymers can be switched as homogeneously, quickly and efficiently as possible through external stimuli and hence to explore new application possibilities – for example, in printing technology, the management of chemical reactions or in medicine. SOFT CONTROL's objective is to continue its research in a DFG Collaborative Research Centre and will be preparing a full proposal in 2015.

SOFT  CONTROL

**COORDINATOR**

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**LOCATION**

Darmstadt

**SUBJECT AREAS**

Chemistry  
Biology  
Physics  
Biotechnology

**FUNDING PERIOD**

2011 to 2014

**COORDINATION OFFICE**

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## LOEWE and ProLOEWE

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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](http://www.proloewe.de/en) provides an overview of the LOEWE research initiatives.