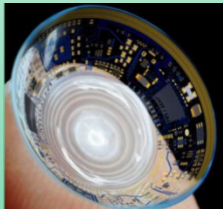
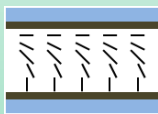
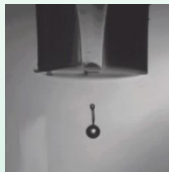


## Topic:



## „Development of light management structures using liquid crystals “

Liquid crystals are currently mainly applied in liquid crystal display technology (LCD). Thereby the liquid crystal is used in arrays of light valves forming the pixels of the display. But the controllability of the optical properties of liquid crystals allows for their use in light management structures for various further applications. Within the present research project new manufacturing technologies for the fabrication of liquid crystal light management structures shall be tested. For single manufacturing steps the applicability of printing technologies shall be analyzed and applied. The aim is to develop a multilayer printed system with integrated optical elements based upon liquid crystals.

The diverse options of student contribution reach from theoretical modeling and simulation, programming, layout and construction towards experimental setup and test of electr./mechan./optical properties of samples. Possible topics are e.g.

- Connection of single polymer layers
- Dimensioning of RC filter networks for control electrodes
- Analyzation and optimization of manufacturing processes
- Determination of process parameters
- Printing of transparent electrodes
- Analyzation of the economic potential using printing technologies to manufacture functional systems

Further information: <http://iai.kit.edu/www-extern/index.php?id=1767>

We are looking forward to your application!

## Contact:

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