

*Im Rahmen des Projektseminars*

# Technische Physik

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*spricht*

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*über*

# Development of stretchable e-skin sensors

## **ABSTRACT**

Electronic skin (e-skin) has potential applications in healthcare monitoring and human-machine interaction due to its exceptional sensing capabilities, physical properties, and biocompatibility. Sensors for e-skins should be stretchable. A group developed e-skin sensors for force, humidity, and temperature using a hydrogel material, p(NVCL), cross-linked with DEGDVE. The sensors were deposited on polyethylene terephthalate (PET), which is not stretchable. This thesis aimed to deposit similar sensors on PDMS to achieve stretchability. The study explored different approaches to solve sub-surface diffusion problems and printed a nanostructured polymeric template using two-photon polymerization.