

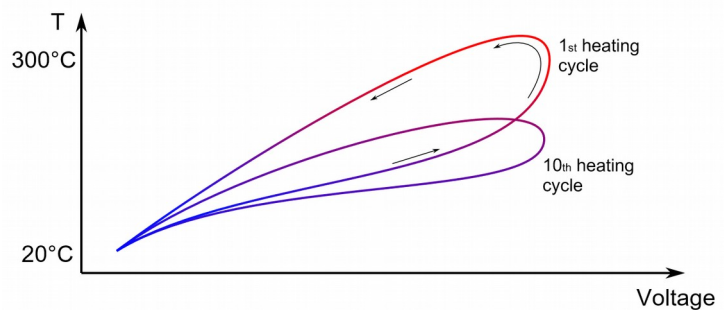
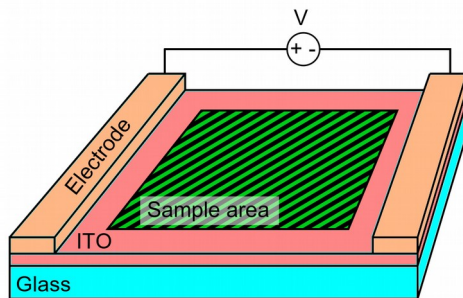


# Characterization of a Joule heating stage for in-situ spectroscopy

*Master / Bachelor research project*

## **Our idea:**

Controlled self-assembly (or crystallization) of organic molecules can significantly improve their optical and electronic properties, and is a crucial aspect for the fabrication of optoelectronic devices. To analyze the **(re-) crystallization** of organic materials, we designed a heating stage based on Joule heating of a transparent indium-tin-oxide (ITO) film, which readily integrates into a confocal spectroscopy setup. In this project, you will characterize the **properties of the heating stage**, such as temperature-stability, temperature-uniformity, and degradation over several heating cycles.



## **Your contribution:**

- Characterize the properties of a home-made Joule heating stage for microscopy
- Optimize heating/measurement protocols for repeatability and stability
- Perform temperature-dependent reference measurements on organic nanostructures
- Operate state-of-the-art equipment for spatially- and time-resolved spectroscopy



## **Contact us:**

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