

# Plenary Speakers



## Laura Na LIU

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### BIOGRAPHY

Prof. Laura Na LIU received her Ph. D in Physics at University of Stuttgart, Germany. She then worked as a postdoctoral fellow at the University of California, Berkeley and as a Texas Instruments visiting professor at Rice University, respectively. Before she became a professor at the Kirchhoff Institute for Physics at University of Heidelberg in 2015, she had worked as an independent group leader at the Max-Planck Institute for Intelligent Systems. In 2020, she joined University of Stuttgart and became the Director of the 2. Physics Institute.

### FUNCTIONAL DNA-BASED CYTOSKELETONS FOR SYNTHETIC CELL

Building synthetic cytoskeletons that mimic key features of their natural counterparts delineates a crucial step towards synthetic cells assembled from the bottom-up. To this end, DNA nanotechnology represents one of the most promising routes, given the inherent sequence specificity, addressability, and programmability of DNA. In this talk, we will present functional DNA-based cytoskeletons operating in microfluidic cell-sized compartments. The synthetic cytoskeletons consist of DNA tiles self-assembled into filament networks. These filaments can be rationally designed and controlled to imitate features of natural cytoskeletons.

### KEYWORDS:

DNA nanotechnology; Nanochemistry; Cell mimics; Self-assembly; Nanobiosciences

### REFERENCES

[1] Nature Chemistry 14, 958 (2022)