



# Münchner Physik- Kolloquium

at home!  
Winter  
2021/22

## Theodor-Hänsch-Promotionspreis 2021

### Development and application of smart DNA probes for super-resolution microscopy

Dr. Florian Schüder, *Yale University*

Monday, 7 February 2022, 17:15 h

<https://tum-conf.zoom.us/j/93234766313> Meeting-ID: 932 3476 6313 Password: Kolloquium  
Please install the software in advance.

Fluorescence microscopy, an important and widely used tool in biological research, has witnessed a true renaissance since the invention of methods circumventing the so-called diffraction limit, namely super-resolution techniques. In 2014 the Nobel Prize in Chemistry was awarded for this breakthrough. In resonance with these exciting advancements, my PhD work combines advanced high-resolution microscopy with novel approaches from the field of DNA Nanotechnology to push the limits of light microscopy and apply it to cell-biological research. In this presentation, I will describe current advances of DNA-based super-resolution microscopy regarding novel immuno-labeling strategies, proximity detection, spatial imaging range (from close to the coverslip to whole cells and potentially tissues), and image acquisition speed.

