



Single-molecule fluorescence microscopy



Dr. Xiaomin Liu, PhD

Group leader (PI) of Super-resolution Microscopy
Department of Molecular Spectroscopy
Max Planck Institute for Polymer Research (MPIP)

Date : 16 December 2022
Time : 5:00 pm
Zoom Link : <https://cuhk.zoom.us/j/93850399643?pwd=eGRPUzkyWm9sQjB0bUZ0bUxTTDlvZz09>
Meeting ID : 938 5039 9643
Passcode : 536373

Abstract

The research in my group focuses mainly on the development of single-molecule fluorescence microscopy techniques, based on advanced laser systems and new types of fluorescence dyes. Such microscopy techniques could not only provide optical super-resolution imaging with nanometer-scale resolution, but also enable 2D/3D molecular dipole direction probing. Many applications with single-molecule sensitivity, such as material and bio-imaging, surface reactivity and electrochemical reactions, and structure order/disorder/defects investigations, can benefit from it. In this seminar I will give a brief introduction of those related techniques and corresponding applications.

Biography

Dr. Xiaomin Liu studied electronic engineering at Zhejiang University in China. Then she joined the group of J. Lægsgaard and D. Turchinovich at the Technical University of Denmark for a PhD project in optical engineering and obtained her PhD degree at the end of 2011. Her PhD thesis focused on the development of optical femtosecond fiber laser. After the PhD, she continued to work in the same group as a PostDoc with a funded Danish FTP project. During this time, she built broadband wavelength tunable femtosecond fiber lasers. In 2015 she came to the MPI-P as a postdoc based on NIH funding and from 2017 she started independent research focused on optical super-resolution microscopy. Since 2021 she is a group leader in the department of Molecular Spectroscopy. Her current research focuses on super-resolution microscopy.

*** ALL ARE WELCOME ***