

Seminar

SPARXS: Single-molecule Parallel Analysis for Rapid eXploration of Sequence space

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When

Monday 19 June 2023
14:00-15:00 hrs

Location

Figdor Lecture Theatre
Research tower 8th floor
Route 289
M850.08.024

Host

Pascal Miesen
Medical Microbiology

Abstract

Single-molecule fluorescence studies reveal valuable structural and functional information on biomolecules. However, conventional single-molecule methods have limited sequence diversity due to time, effort and cost constraints. To overcome this, we combine surface-based single-molecule fluorescence with next generation sequencing, enabling massively parallel single-molecule experiments for millions of sequences. Our technique provides sequence-dependent biophysical and biochemical properties at the single molecule level, advancing our understanding of molecular structures and functions and enabling more accurate models in biomolecular engineering.