

DEPARTMENT OF CHEMISTRY  
OXFORD UNIVERSITY

PHYSICAL & THEORETICAL CHEMISTRY LABORATORY



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THE HINSHELWOOD LECTURES 2025

Professor Michael D Fayer

Stanford University, USA

Molecular Dynamics in Liquids Observed with  
Ultrafast Optical Nonlinear Experiments

- Lecture 1: Tuesday, 3 June:** Watching Ultrafast Molecular Motions – Ultrafast 2D IR Chemical Exchange Spectroscopy
- Lecture 2: Thursday, 5 June:** Dynamics of Water – Nanoscopic Confinement and Interfaces
- Lecture 3: Tuesday, 10 June:** Molecular Dynamics of Monolayers and Thin Films
- Lecture 4: Thursday, 12 June:** Direct Observation of Proton Hopping – Concentrated Acid and Salt Solutions
- Lecture 5: Tuesday, 17 June:** High Concentration Salt and Acid Solutions – Optical Heterodyne Detected Optical Kerr Experiments
- Lecture 6: Thursday, 19 June:** Lithium Ion Solvation Dynamics in Liquid Electrolytes and Gel Polymer Electrolytes

The Lectures ([generously sponsored by Refeyn Ltd](#)) will be presented in the PTCL Main Lecture Theatre at 11.15 am.  
They will be of particular interest to researchers and senior undergraduates.