



2026

陳守信中子科技與應用榮譽講座

Sow-Hsin Chen Distinguished Lectureship on Neutron Science and Technology

Speaker :

Dr. Wei-Ren Chen

- Affiliation : Neutron Scattering Division / Oak Ridge National Laboratory to Neutron Scattering Division, Oak Ridge National Laboratory
- Research Field: Neutron Scattering Research of Soft Condensed Matter



Aug.

26

2026

(Wed) 10:30 AM – 11:20 AM

NSRRC 活動中心D260
(300新竹市東區新安路101號)

Complex Wave Fields for Structural Inversion of Soft Materials

Abstract:

Many soft materials possess complex mesoscale structures that cannot be described by conventional analytical scattering functions. This presentation introduces a new framework based on statistically constrained complex wave fields for structural inversion directly from scattering experiments. Recent applications to distorted lamellar phases and polyelectrolytes demonstrate that the method enables quantitative reconstruction of morphology without requiring explicit analytical models. The approach provides a general foundation for data-driven scattering analysis of complex soft materials.



National Tsing Hua University



College of Nuclear Science, National Tsing Hua University



National Synchrotron Radiation Research Center