中央大學物理學系

Department of Physics, National Central University

Colloquium

Generation and Application of Ultrafast Laser Sources

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Date: 2024/04/30 (Tue)

Venue: S4-625

Time: 14:00-16:00

Abstract

Ultrafast lasers have been a focus of development for many years and find applications in both academic research and industrial settings. The recent Nobel Prize award further highlights the significance of ultra-short pulses. These extremely brief pulses serve various purposes across different research areas. In this presentation, I will talk about the generation of short laser pulses, including a novel pulse compression technique known as multiple-plate continuum (MPC), which we have developed over time. Additionally, I will explore the application of ultra-short pulses in spectroscopy, specifically transient absorption spectroscopy, and showcase results obtained using our custom-built ultrafast spectroscopic measurement systems. Lastly, I will present another application involving stimulated Raman scattering microscopy using the MPC light source.