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“Generation of Ultrashort Laser Pulses - From Visible to Mid-IR”

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日 時: 2025年7月17日(木) 10:40~12:00

場 所: 理学部1号館3階380号室

【Abstract】

Ultrafast lasers have long been a key area of development due to their wide-ranging applications in both scientific research and industry. The significance of ultrashort pulses has been further highlighted by a recent Nobel Prize in 2023, reflecting their growing impact across multiple research disciplines. In the first part of this presentation, I will introduce a method developed at National Tsing Hua University for generating ultrashort pulses in the visible and near-infrared regions, known as the multiple-plate continuum (MPC). Improvements have been made to make the technique more useful and suitable for lasers with higher pulse energy. In the second part, I will discuss the generation of near-single-cycle mid-infrared pulses spanning 5–11 μm , powered by a 270-fs Yb-based laser. This system produces inherently phase-locked pulses with energies reaching up to 400 nJ.

使用言語 : 英語 (English)

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