# 第1926回 雑誌会

#### Zasshikai No. 1926 since 1890

東京大学理学部化学教室

2024/3/19(Tue) 13:00~14:30

### 5F Auditorium, Chemistry Main Bldg.

# **Prof. Jens Limpert**

Institute of Applied Physics, Friedrich Schiller University Jena



## "High performance coherently

### combined ultrafast fiber laser systems"

Abstract :

Fiber lasers enjoy an excellent reputation as power-scalable diode-pumped solid-state laser concept. Their immunity against thermo-optical issues is combined with efficiency and high performance in fiber-based amplification. In recent years intense laser pulses have found applications in various industrial and scientific areas. Significant progress has been made in scaling the energy of the pulses as well as the average power. However, different amplification schemes have been pushed to their specific limits, caused by detrimental nonlinear effects, by damage or by the occurrence of thermo-optical effects. New concepts have to be considered to address these issues and to enable new application fields. In that context, I will review the basics, achievements and newest developments of coherent combination of amplified pulses, a concept which has already out-performed single aperture femtosecond laser systems and which allows for a scaling to unprecedented performance levels.

\*This department seminar is jointly organized by Institute for Attosecond Laser Facility (I-ALFA) and Advanced Laser Innovation Center (ALICe).

#### Prof. Kaoru Yamanouchi (ext.24334), Department of Chemistry, School of Science