

■ Invited speaker

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The 10PW Laser Facility and the 100PW project at Shanghai

Abstract

First I will introduce recently implemented 10 PW laser facility at Shanghai, the Shanghai Superintense Ultrafast Laser Facility (SULF) contains 2 ultra-intense laser beamlines, the 10 PW laser running at 1 shot/min and the 1 PW laser running at 0.1 Hz. The last amplifier before the pulse compressor delivers an output pulse energy higher than 400 J. The best compressed pulsed duration is about 22 fs. The highest peak power is high than 12 PW. The experimental results using the SULF facility will be presented. In early 2018 Shanghai High repetition rate XFEL and Extreme light facility (SHINE) was officially kicked off. A 100 PW laser facility is the main equipment of the Station of Extreme Light (SEL), which is one of the stations of SHINE. I will present some latest progress of the 100 PW laser facility.

References

- [1] Z. Gan et al., Opt. Express 25, 5169-5178 (2017).
- [2] W. L et al., Optics Letters 43, 5681-5684 (2018).
- [3] R. Li, 10 PW and 100 PW lasers: paving the way for exploring the next frontier of high field physics (plenary talk), OPTICS & PHOTONICS International Congress 2019, Yokohama, Japan, 2019, April 22-27.

About the Author

Prof. Ruxin Li got his Ph.D from Shanghai Institute of Optics and Fine Mechanics (SIOM), Chinese Academy of Sciences in 1995, and conducted his post-doctoral research in Uppsala University (Sweden) and the University of Tokyo (Japan) from 1996 to 1998. Since 1998 he has been working at SIOM. He was elected as the OSA Fellow in 2014 and elected as the academician of Chinese Academy of Sciences in 2017. He is the vice chairman of the Chinese Optical Society and he was the chairman of the Asian Intense Laser Network during 2010-2014. He is the committee member of the International Committee on Ultra-Intense Lasers (ICUIL). He is the Project Leader of SULF and the Chief Scientist of SHINE for SEL.