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OS15-09 Sensitivity improvement of an optical head for measurement of the pitch deviation of a diffraction grating based on angles of diffraction of diffracted laser beams Tomoki Kitazume, Yuya Yamazaki and Yuki Shimizu **OS15-10** Development of a modified optical head for measurement of the pitch deviation of a diffraction grating having a pitch narrower than laser wavelength Yuya Yamazaki, Tomoki Kitazume and Yuki Shimizu Hokkaido University **OS15-11** Expansion of measuring range of optical angle sensor with light source having multiple longitudinal modes Keita Nakaoka and Yuki Shimizu OS15-13 Roundness Metrology of Small Cylinders with a Developed Non-contact Precision Two-dimensional Coordinate Measuring Device Qiaolin Li, Chuang Zeng, Borong Wu, Xiaohao Wang and Xinghui Li Tsinghua University OS15-14 Sub-micrometer scale pulsed laser ablation in water and nanofluids medium using position controlled photonic nanojet Reza Aulia Rahman, Tsutomu Uenohara, Yasuhiro Mizutani and Yasuhiro Takaya Osaka University OS15-15 A compact non-orthogonal Lloyd's interferometer for fabrication of two-axis scale gratings Satoshi Kodaka, Chenguang Yin, Ryo Sato, Hiraku Matsukuma and Wei Gao Tohoku University **OS15-16** Absolute Grating Encoder with Nano-level Precision on Meter-level Measurement Range Shengtong Wang, Feifan Cao, Linbin Luo, Yifeng Wang and Xinghui Li Tsinghua University OS15-17 Form deviation measurement of probe tip ball for CMM using a rotatable ring gauge

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