Opto-Quantum System

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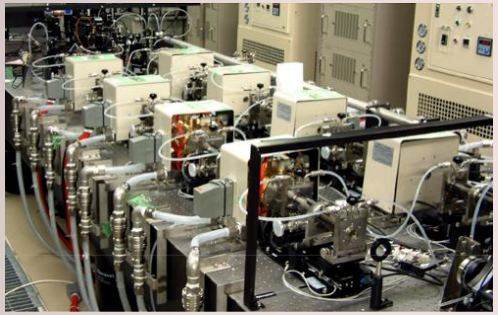
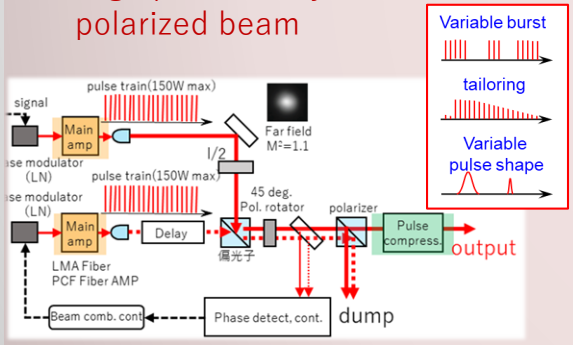
2022-2026 For the Next 50 YEARS

Optical power system development & advanced applications
⇒ POWER PHOTONICS

Development of ultra high-power laser system

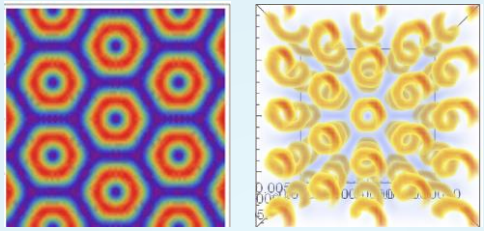


High power axisymmetric polarized beam

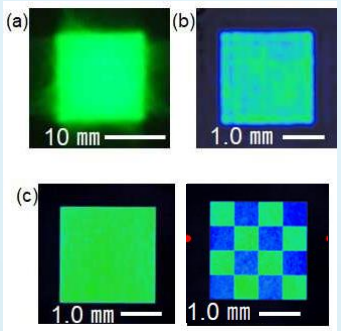


GHz variable burst laser

Precision control of light structures in spatio-temporal domain

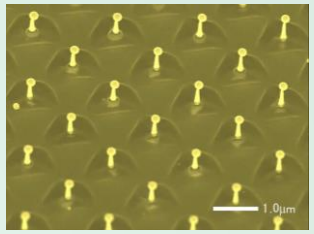


Mega-optical vortex and optical tornado

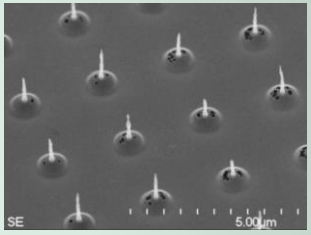


Ultra-high precision beam shaping using phase gratings and 4*f* optics

Fabrication of nanomaterials by ultra-short laser pulse laser processing

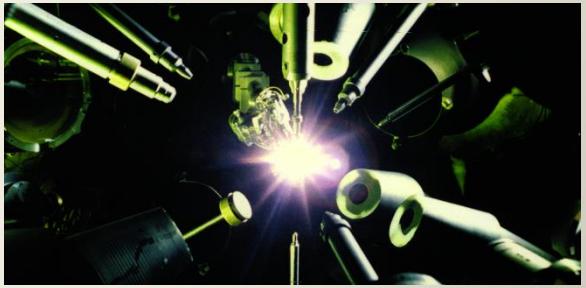


Gold nanodrop matrix



Gold nanowhisker matrix; world finest structure by laser processing

Laser fusion plasma and ultrafast plasma measurement and control



We aim to construct power photonics systems that integrates power lasers and ultra-precision control. As for power lasers, we are developing ultrashort pulsed lasers, GHz burst lasers, axisymmetric polarized beams, and precision control technology of light in the spatio-temporal domain. On the other hand, we are conducting a wide range of research applications on the fabrication of nanomaterials, plasmonic applications, and measurements of laser fusion plasmas.