



Integrated Single Grating Compressor for Variable Pulse Front Tilt in Simultaneously Spatially and Temporally Focused Systems

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Summary: A multipass chirped pulse amplification system for simultaneous spatially and temporal focusing

Description: A $\text{Ti:Al}_2\text{O}_3$ multipass chirped pulse amplification system is outfitted with a single grating, simultaneous spatially and temporal focusing compressor platform. This novel design has the ability to easily vary the beam aspect ratio of a spatially and temporal focusing beam, and thus the degree of pulse front tilt at focus, while maintaining a net zero-dispersion system. Accessible variation of pulse front-tilt gives the full spatio-temporal control over the intensity distribution at the focus. Variation of the pulse front tilt provides another degree of freedom for materials modification based on scan direction.

Main Advantages of this Invention

- Allows for smooth variation of pulse front tilt
- Easy to apply and has the potential for automation

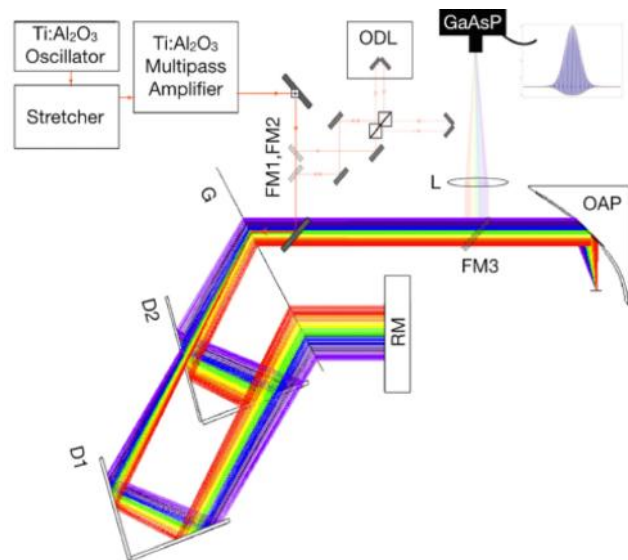
Potential Areas of Application

- Nonreciprocal writing
- Micromachining

ID number: 15012

Intellectual Property Status: US Pat. Appl. No. 14/968,633

Opportunity: We are seeking an exclusive or non-exclusive licensee for marketing, manufacturing, and sale of this technology.



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