CTL CENTER FOR TECHNOLOGY LICENSING AT CORNELL UNIVERSITY

CORNELL UNIVERSITY FOUNDED A.D. 1865

THE TECHNOLOGY

Cornell's carbon nanotube saturable absorber is the first practical saturable absorber incorporating carbon nanotubes. Cornell's carbon nanotube saturable absorber offers an all-fiber, in-line alternative to other saturable absorbers, which are complex, expensive, and often contain mirrors requiring cumbersome alignment. Its advantages include construction in an in-line fiber format which allows the construction of all-fiber lasers, a large operating wavelength range, and the simplicity of its fabrication process. In addition, its geometry distributes the absorption of light and the heat generated by that absorption, allowing reliable operation at much higher power. Cornell's saturable absorber can improve the performance of sub-picosecond fiber lasers across a broad range of wavelengths, enabling lasers with short pulses of high energies for applications in sensing, medicine, precision cutting, guidance systems, high-speed measurements, and terahertz systems.

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Inventors	Khanh Kieu & Frank Wise
Licensee	Kphotonics, LLC

THE PRODUCTS

Educational Ultrafast Fiber Laser Kit

The Educational Ultrafast Fiber Laser Kit contains all the necessary components (except the 980nm pump laser) to build an all-fiber mode-locked laser oscillator. Students can build their own mode-locked fiber laser using the carbon nanotube saturable absorber.

CNT-1550-TK Series

The CNT-1550-TK compact femtosecond fiber laser is a mode-locked oscillator using fiber taper embedded in carbon nanotube saturable absorber. Femtosecond pulses are delivered at the flip of a switch. This is the first mode-locked laser powered by battery on the market. It is very compact and inexpensive.