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News Release

OFS LABORATORIES ANNOUNCES NEW RESEARCH IN ADVANCED CONCEPTS FOR MANIPULATION OF LIGHT USING OPTICAL FIBERS

OFC 2007 Accepts 14 Papers from OFS Laboratories Reinforcing the Company's Strength as the Global Leader in Innovation

OFC/ NFOEC 2007, Booth 1711, Anaheim, CA, March 27, 2007 — OFS, designer, manufacturer and supplier of leading edge fiber optic products, today announced research developments from OFS Laboratories that further advance fiber optic technology. The 14 papers being presented at OFC 2007, March 27-29, highlight advanced concepts in optical fiber design, femtosecond fiber lasers and new light sources.

“The recent developments can enable users to further reduce cost in optical networks and allow for more efficient transmission of data through fiber,” said David DiGiovanni, President, OFS Laboratories. “We have a long track record of turning science into practical, real world solutions, many that are ubiquitous in the industry today. It's no different with these latest advances, all slated for development in the near future.”

Specialty Optical Fiber Design and Applications

Specialty optical fiber remains a robust field for innovation in both telecom and nontelecom applications. Application-specific fiber can enable or benefit a wide array of functions such as simply transporting light between two points, amplifying light, processing signals, sensing environmental characteristics and even transporting particles.

This work illustrates the potential of manipulating light using basic principles of waveguide propagation. By exploiting concepts developed over the past few decades, innovative approaches to fiber and photonic device design can create new optical functions with applications in a wide array of industries.

Novel Fibers for Ultrashort and High Power Pulses

Conventional optical fiber approaches have been adapted to the generation and transport of high power pulses for use in a wide array of applications, such as materials processing, imaging and medicine. These approaches, however, have reached fundamental roadblocks. OFS has devised and demonstrated a simple method to overcome these limitations: use of higher-order modes of light. By converting the fundamental single mode to another mode, new regimes of propagation are possible. Several papers at the conference demonstrate the benefits in allowing significantly higher peak power pulses and control of pulse characteristics not possible before in an optical fiber. These discoveries can enable superior, lower cost laser tools for science, manufacturing and medicine.

“These developments go above and beyond anything seen today in fiber laser technology,” added DiGiovanni. “Despite tremendous advances in fiber laser performance, further improvement is necessary and this is the only proposed solution to overcoming fundamental roadblocks impeding widespread adoption of fiber lasers in a broad array of applications.”

FBG Based Distributed Lighting for Sensing Applications

An efficient, distributed light source has been developed for line scan sensing. The source is based on diffracting light from a highly blazed Bragg grating written in the core of a single mode fiber. Using grating expertise developed for telecommunications applications, this light source offers key improvements in illumination size, brightness, thermal management and lifetime for sensing applications spanning a wide range of industries. Applications include detection of impurities or pesticides in foodstuffs, and inspection of articles such as recyclables, currency and paper. Working with researchers at Princeton Lightwave, key limitations of current illumination and detection methods have been overcome.

These achievements leverage innovations in fiber design, photonic devices, systems engineering, and close partnering with strategic customers, all core strengths of OFS Laboratories.

About OFS Laboratories

OFS Laboratories is a world class Center of Excellence for optical innovations, complemented by Furukawa’s own first-rate R&D capabilities. OFS Laboratories generates commercially viable technology breakthroughs that the four OFS divisions take to market quickly.

Scientists with OFS Laboratories have been responsible for innovative fiber-optic technology inventions, now ubiquitous in the industry, such as non-zero dispersion fiber, submarine optical fiber and polarization maintaining fiber. Based in Murray Hill, NJ, OFS Laboratories will continue to push the boundaries of optical science.

About OFS

OFS is a world-leading designer, manufacturer and provider of optical fiber, optical fiber cable, connectivity, FTTx and specialty photonics solutions. Our marketing, sales, manufacturing and research teams provide forward-looking, innovative products and solutions in areas including Telecommunications, Medicine, Industrial Automation, Sensing, Government, Aerospace and Defense applications. We provide reliable, cost effective optical solutions to enable our customers to meet the needs of today's and tomorrow's digital and energy consumers and businesses.

OFS' corporate lineage dates back to 1876 and includes technology powerhouses such as AT&T and Lucent Technologies. Today, OFS is owned by Furukawa Electric, a multi-billion dollar global leader in optical communications.

For more information, please visit www.ofsoptics.com.

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