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News Release

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## **OFS LABORATORIES ANNOUNCES NEW RESEARCH IN ADVANCED CONCEPTS FOR EMERGING ALL-OPTICAL NETWORKS**

**OFC, Booth 4700, Anaheim, CA, March 20, 2002** - OFS, designer, manufacturer and supplier of leading edge fiber optic products, today announced research developments from OFS Laboratories that further advance fiber optic technology. There are 25 OFS-authored papers, including four post-deadline papers, as well as four additional system papers enabled by OFS fiber that are being presented at OFC 2002. These highlight advanced concepts in microstructure optical fiber and devices, signal conditioning and monitoring, Raman amplification and discoveries which will increase the capacity and distance of transmission systems.

"The recent developments will enable users to further reduce cost in emerging optical networks and allow for more efficient transmission of data through fiber," said Ken Walker, 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."

### **Microstructure Optical Fiber**

A new fiber design, this sophisticated waveguide medium allows integration of new materials into the fiber that interact with the light signal. This provides additional flexibility for controlling and dynamically tuning different characteristics of the optical signal, such as power, polarization and pulse duration. An example of the new fiber design is the introduction of the first demonstration of a tunable photonic bandgap fiber. This novel approach demonstrates OFS' expertise and creativity in all aspects of materials and optics.

"The potential for microstructure photonic bandgap is quite significant," added Walker. "Our research indicates that photonic bandgap fibers will provide extremely exciting possibilities in the realm of active fiber devices."

## **Signal Conditioning and Monitoring**

As all-optical networks become a reality, it becomes increasingly important to monitor and correct signal quality. Building on existing foundations, OFS Laboratories is in final development on products that monitor and condition the optical signals in new and innovative ways. These advances will improve quality by aiding in reduction of residual compensation, as well as in pulse re-shaping

Walker added, "The developments go above and beyond anything seen today by not only monitoring signal quality, but to correct signal impairments. Once dispersion is corrected, system reach increases, the ultimate goal in all-optical networks."

## **Complementary Research Leads to Raman Amplification and Increased Reach**

### **Advances**

OFS Laboratories continues its history of delivering the most advanced fiber and dispersion compensation technology in the world by demonstrating both ultra-wideband and ultra-long haul telecommunication systems.

OFS fiber and device scientists, working with Furukawa's complementary world-class R&D capabilities have shown several recent advances in Raman amplification and dispersion compensation. For example, OFS demonstrated cost-effective Raman amplification in the S-band, increasing the number of transmission channels by 50%.

OFS and Furukawa have also presented an OFC post-deadline paper showing 3.2 Terabit per second transmission with Raman amplification over 2000 km of TrueWave REACH fiber using simultaneous dispersion compensation of the C and L bands with a single module.

### **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. Examples of recent commercialization of patented breakthroughs include TrueWave REACH fiber (U.S. Patents 5,878,182; 5,905,838; 6,011,892) and AllWave fiber (U.S. Patents 6,131,415 and 6,205,268).

Scientists with OFS Laboratories have been responsible for many innovative fiber-optic technology inventions, now ubiquitous in the industry, such as nonzero 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](http://www.ofsoptics.com).

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