

PUBLICATIONS

Welcome New Editors

We are happy to announce that **Yanqing Lu** of Nanjing University, China, was recently appointed as deputy editor for *Optical Materials Express*. **Sergei Turitsyn** of Aston University, United Kingdom, has recently joined the editorial board of JOSA B. We would also like to thank **Guohai Situ** of the Shanghai Institute of Optics and Fine Mechanics, China, for agreeing to serve as an editor for *Applied Optics*.

Finally, we extend our gratitude to the following individuals for agreeing to serve second three-year terms as editors: **Svetlana Lukishova** of the University of Rochester, U.S.A. (*Optics Letters*), **Robert Kaindl** of Lawrence Berkeley National Laboratory, U.S.A. (JOSA B), **Julio Gutiérrez-Vega** of the Tecnológico de Monterrey, Mexico (*Optics Express*), and **Niels Asger Mortensen** of the Technical University of Denmark.

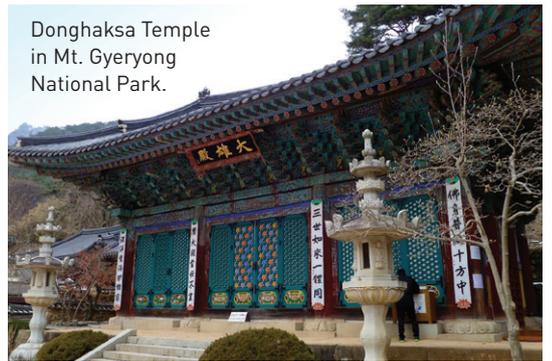
GLOBAL NEWS

OSA VP Attends OSK Annual Meeting

OSA Vice President **Philip Russell** attended the Optical Society of Korea (OSK) Winter Annual Meeting in Daejeon, South Korea, from 18-20 February 2013. He gave a talk and presented the OSA-OSK Student Travel Prize to **Jong-ryul Choi**, Yonsei University, Korea, for his paper "In Situ Fluorescence Optical Detection Using a Digital Micromirror Device for 3-D Cell-based Assays." Russell and OSK President **Tae-Hoon Yoon** also signed a memorandum

of understanding to continue OSA-OSK collaborations.

In addition, Russell visited the Donghaksa Temple in the Mt. Gyeryongsan National Park. The mountain's name means "Rooster-Dragon," because the main ridge looks like a dragon's body, while the sharp peaks resemble a cockscomb when viewed from a distance.



Meredith Smith



Russell and Yoon signing a memorandum of understanding.

Meredith Smith



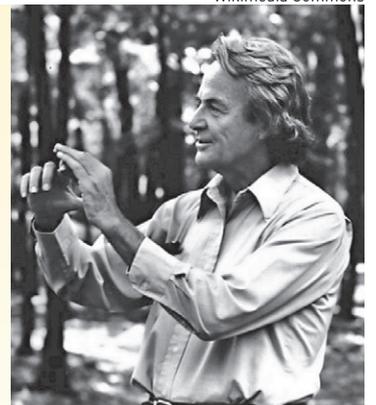
Russell presenting Jong-ryul Choi with the the OSA-OSK Student Travel Prize.

HISTORY

Thank You, Mr. Feynman

This month marks the 15th anniversary of **Richard Feynman's** death (1918-1988). He was a talented theoretical physicist best known for his work in quantum mechanics and quantum electrodynamics. His famous theoretical double-slit experiment, which illustrates light's wave-particle duality, was finally realized this year by researchers at the University of Nebraska-Lincoln (U.S.A.). According to OSA 2005 President **Susan Houde-Walter**, "Feynman exhibited an unusual ability to manipulate vivid imagery of physical relations in his thinking." A renowned orator, author and musician, Feynman will also be remembered as an unconventional thinker and popularizer of physics. Here are a few of our favorite quotes from this multi-faceted individual:

- “To those who do not know mathematics, it is difficult to get across a real feeling as to the beauty, the deepest beauty, of nature ... If you want to learn about nature, to appreciate nature, it is necessary to understand the language that she speaks in.”
- “On the infrequent occasions when I have been called upon in a formal place to play the bongo drums, the introducer never seems to find it necessary to mention that I also do theoretical physics.”
- “I learned very early the difference between knowing the name of something and knowing something.”
- “It is not unscientific to make a guess, although many people who are not in science think it is.”



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HONORS AND AWARDS

Member Nabs NSF Grant

OSA member **Baohong Yuan**, a bioengineering professor at the University of Texas at Arlington, U.S.A., recently received an early career development grant of more than \$400,000 from the National Science Foundation. Yuan will use the funds to continue work on his hybrid imaging system, which uses light and sound to produce images of deep tissue.

Magnus Bergström



L'Huillier

Congratulations to Zeiss Research Award Recipient

Attosecond pioneer **Anne L'Huillier**, Lund University, Sweden, has won this year's Carl Zeiss Research Award, one of the most renowned honors in optics. L'Huillier is being recognized for her work in the field of high harmonic generation, which has laid the foundation for the generation of attosecond impulses and enabled key advances in attosecond physics.

Nominate Your Favorite Team for New Engineering Award

OSA is pleased to announce its new **Paul F. Forman** Engineering Team Excellence Awards, which recognize teams of engineers who have made major contributions in the field of optical engineering, including technical achievements and contributions to society.

Get in the team spirit! You can nominate a group through 2 July. The award will be presented in Orlando, Fla., U.S.A., during the October Frontiers in Optics meeting. Contact OSA's awards team for more information (awards@osa.org or +1.202.416.1960).

POLICY

OSA Members—and CEO—Take on Capitol Hill

In mid-March, OSA members joined the 11th annual Science, Engineering and Technology working group for Congressional Visits Day (CVD), an event designed to bring scientists and engineers to Washington, D.C. The group explained the importance of science funding in the U.S. federal budget, focusing on the agencies that fund optics and photonics research.

Alket Mertiri (Boston University), **Ivy Jones** (Hampton University), **Jie Qiao** (University of Rochester) and **Jung Park** (Intel) visited 18 congressional offices. Many members of Congress recognized the importance of science and technology to job creation and the economy. Rep. Slaughter (D-N.Y.) was so impressed by Qiao's work to promote women in science that she posted an article about the visit on her blog.

In a separate Hill visit, OSA CEO **Elizabeth Rogan** called for sustained federal investments in R&D funding for the National Institute of Standards and Technology (NIST) and the National Science Foundation (NSF). "NIST and NSF are two agencies critical to strengthening the optics and photonics industry," Rogan said. "Both make significant investments in the field and we're already seeing the benefits."



IN MEMORY

Herbert Graf, Beloved Optician

Herbert (Herb) H. Graf of Rochester, N.Y., U.S.A., who worked as an applied research optician at the University of Rochester for 43 years, died suddenly on 14 January 2013. He was 89.

Graf's career began as an optician for local companies, but



Univ. Rochester

he found his true calling in 1943 when he was hired to work with faculty and students at Rochester's Institute of Optics. During his 43 years in the optics shop, he played a critical role in supporting faculty and student research by fabricating unique optics for hundreds of projects. He made lenses for the **Robert E. Hopkins** stereoscopic camera, finished surfaces for **Mike Herscher's** ruby laser rods and produced large quantities of prisms and neodymium-doped glass laser slabs for the early fusion laser systems at the laser energetics lab.

Graf was a people person with a wry sense of humor. **Dave Stoltzman**, a former student, shares: "In the '70s, I told Herb that I wanted to make a 12.5" paraboloid telescope mirror ... I mentioned that I only needed a 55-gallon barrel to walk around for grinding and polishing out the blank. He looked up from the glass part he was working on and told me that, at the Institute of Optics, people had figured out how to motorize the 'barrel' so that it spun instead of me."

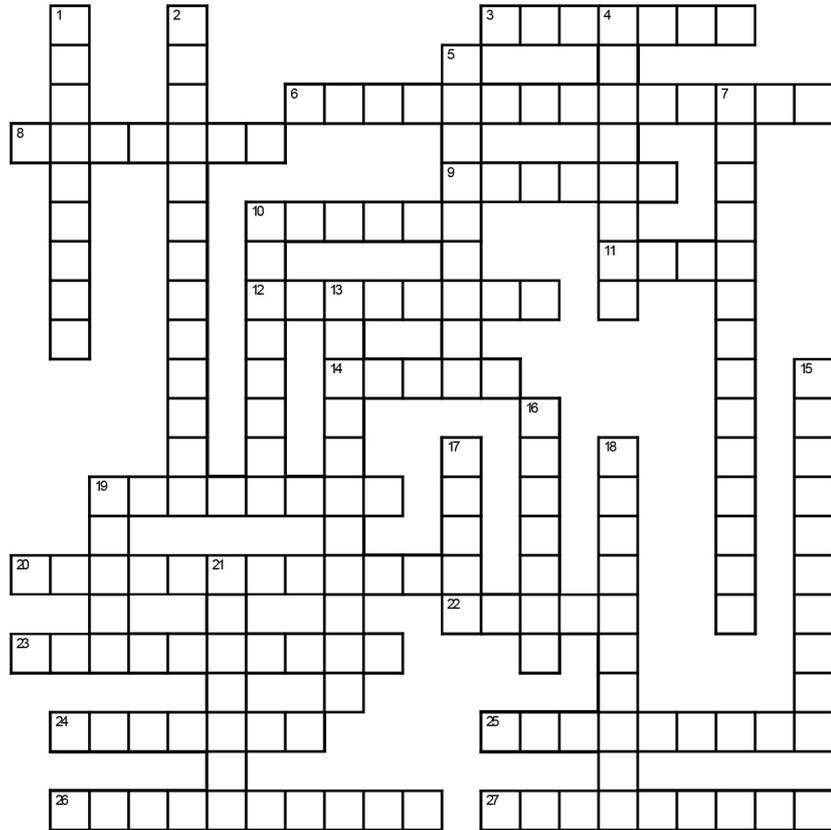
This obituary was contributed by Stephen D. Jacobs, Duncan Moore and James Sydor.

If you would like to make a memorial donation to the OSA Foundation in honor of Herbert Graf, please visit www.osa-foundation.org/give.

PUZZLER

CROSSWORD CHALLENGE

Myles Mellor and the Stanford University Student Chapter have devised this crossword challenge to test your knowledge of optics. Do you know the difference between an excimer and an etalon? For the answer key, visit www.osa-opn.org/home/puzzle_solution/. Additional puzzles are posted at www.opticslatinamerica.org/crosswords.



Across

1. SI unit of luminous intensity (7)
6. A structure with periodic dielectric constant (8,6)
8. A type of lens made of two layers with different refractive indices (7)
9. Two parallel mirrors used to delay light (6)
10. A way of representing something that oscillates with a complex number (6)
11. Adjustable aperture (4)
12. Energy per unit area per solid angle (8)
14. Used in telecom to guide and transport light (5)
19. Apparent displacement of an object along two different lines of sight (8)
20. Device used to split light (12)
22. Light that constructively interferes has the same ____ (5)
23. General term used to describe imperfections in an image (10)
24. The type of laser used in the first LASIK eye surgeries (7)
25. A type of laser that produces ultrashort pulses by changing the resonant cavity quality factor (9)
26. The ____ coefficient is the imaginary part of the index of refraction (10)
27. The $1/e$ loss distance for a wave in a conductor. (4,5)

Down

1. A device used for measuring orientation (9)
2. Good resonators have a large _____. (7,6)
4. An optical device that can split beams of light into two different wavelengths (8)
5. Same frequency, phase, and direction (9)
7. A mathematic tool used to analyze cascaded optical elements (8,6)
10. Small angle approximation for Gaussian optics (8)
13. Multiple-wave interference (11)
15. A technique that induces a fixed phase relationship between a laser's cavity modes (10)
16. Region of forbidden wave propagation (7)
17. A signal in which the frequency increases or decreases with time (5)
18. Separation of different frequencies of light (10)
19. A wave with infinite parallel fronts is a ____ wave. (5)
21. Collective electron oscillations (7)

Puzzle courtesy of the Stanford University Student Chapter. If you would like to submit a puzzle, please email opn@osa.org.

CALENDAR

OSA Optics and Photonics Conferences and Meetings

2013

**CLEO: 2013—Laser Science to
Photonic Applications (CLEO)**

9–14 June 2013
San Jose, Calif., U.S.A.
www.cleoconference.org

Optical Interference Coatings

16–21 June 2013
Whistler, British Columbia, Canada
www.osa.org/oic

Imaging and Applied Optics Congress

23–27 June 2013
Arlington, Va., U.S.A.
www.osa.org/Imaging_Congress

- ▶ Imaging Systems Applications (IS)
- ▶ Applied Industrial Optics: Spectroscopy, Imaging & Metrology (AIO)
- ▶ Hyperspectral Imaging and Sounding of the Environment (HISE)
- ▶ Adaptive Optics: Methods, Analysis and Applications (AO)
- ▶ Computational Optical Sensing and Imaging (COSI)
- ▶ Fourier Transform Spectroscopy (FTS)
- ▶ NEW! Propagation through and Characterization of Distributed Volume Turbulence (pcDVT)
- ▶ NEW! Quantitative Medical Imaging (QMI)

Advanced Photonics Congress

14–19 July 2013
Rio Grande, Puerto Rico, U.S.A.

- ▶ Integrated Photonics Research, Silicon and Nano-Photonics (IPR)
www.osa.org/ipr
- ▶ Optical Sensors (SENSORS)
www.osa.org/sensors
- ▶ Photonic Networks and Devices (NETWORKS)
www.osa.org/networks
- ▶ Signal Processing in Photonics Communications (SPPCOM)
www.osa.org/sppcom

Nonlinear Optics

21–26 July 2013
Kohala Coast, Hawaii, U.S.A.
www.osa.org/nlo

**Frontiers in Optics 2013/
Laser Science XXIX (FiO/LS)**

6–10 October 2013
Orlando, Fla., U.S.A.
www.frontiersinoptics.com

**Advanced Solid-State
Lasers Congress**

27 October–1 November 2013
Paris, France

- ▶ Application of Lasers for Sensing & Free Space Communication (LS&C)
www.osa.org/lsc
- ▶ NEW! Mid-Infrared Coherent Sources (MICS)
www.osa.org/mics

**Renewable Energy and the
Environment Congress**

3–7 November 2013
Tucson, Ariz., U.S.A.

- ▶ Optics for Solar Energy (SOLAR)
www.osa.org/solar
- ▶ Solid State Organic Lighting (SOLEL)
www.osa.org/soled
- ▶ Optical Nanostructures and Advanced Materials for Photovoltaics (PV)
www.osa.org/pv
- ▶ Optical Instrumentation for Energy & Environmental Applications (E2)
www.osa.org/e2

Got News? OPN is interested in sharing the achievements of your colleagues. Please help us celebrate careers, awards and other accomplishments. Send news to opn@osa.org.

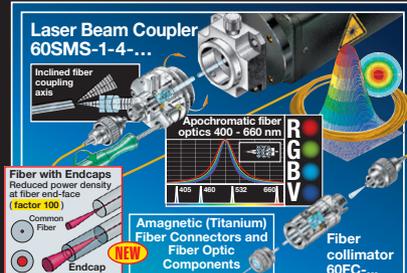
OSA BENEFIT HIGHLIGHT

Renew as a Multi-Year or Lifetime Member

OSA offers 3-, 5-, and 10-year membership options as well as lifetime membership. In addition to convenience and cost savings, these extended terms ensure that your active member status and benefits continue without interruption. Visit www.OSA.org/membership to learn more.

Hannah Bembia (hbembia@osa.org) is OSA's publications administrative assistant.

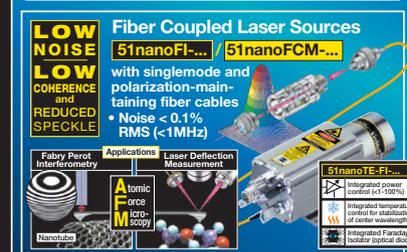
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Inclined fiber coupling axis
Apochromatic fiber optics 400 - 860 nm
Fiber with Endcaps
Reduced power density at fiber end-face (factor 100)
Common Fiber
Endcap
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Amagnetic (Titanium) Fiber Connectors and Fiber Optic Components
Fiber collimator 60FC-...

Fiber Optics, Components and Tools for
Fundamental Research
Quantum Optics - Biophotonics - Atmospheric Physics

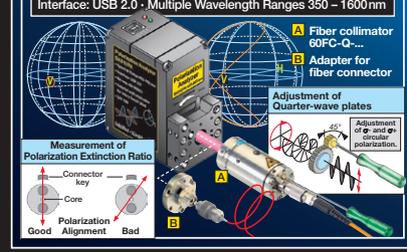
LOW NOISE Fiber Coupled Laser Sources
LOW COHERENCE and REDUCED SPECKLE 51nanoFL-... 51nanoFCM-...
with singlemode and polarization-maintaining fiber cables
• Noise < 0.1% RMS (<1MHz)



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Nanotechnology
51nanoTE-FI-...
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Measurement Systems

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Measurement of Polarization Extinction Ratio
Connector key
Core
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Bad

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