

Monthly newsletter from the editors of Photonics Spectra, with features, popular topics, new products, and what's coming in the next issue. Manage your Photonics Media membership at [Photonics.com/subscribe](http://Photonics.com/subscribe).



**The New Collar Workforce**  
by Sarah Boisvert

An Insider's Guide to Making Impactful Change in Manufacturing and Training

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**Manufacturing** is changing dramatically.

Who's ready to work?

### Photonic Technologies Energize Sustainability

It could be a greener world, thanks to photonic technologies. That's the conclusion of a 2020 study forecasting that photonics could eliminate 3 billion tons of CO2 emissions annually by 2030.

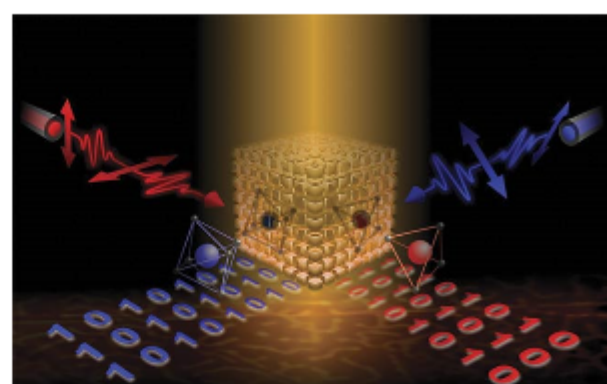
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### All-Optical Switching Alternatives for Data Processing

For decades, computer technology has steadily achieved astonishing gains in performance, but it is becoming increasingly unclear how much longer this rapid progress can continue without considerable technological innovation.

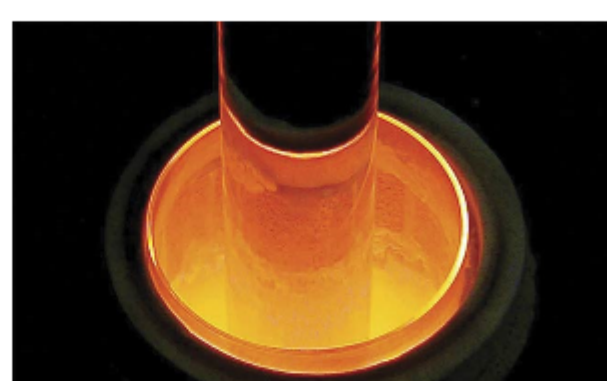
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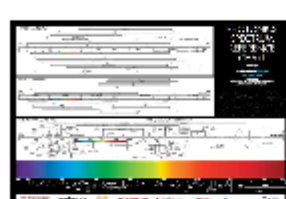
### Optical Materials Bending the Rules, Shaping Our World

From the emergence of diverse 2D materials (perovskites for efficient solar cells) and twisted bilayer graphene (superconductive at a "magic angle") to the boom in polymer science and the promise of quantum photonics, materials science is rapidly evolving.

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## Featured Products



### Photonics Spectrum Reference Chart

#### Photonics Media

This full-color, 30 x 20.5-inch poster of the photonics spectrum displays the major commercial laser lines, detectors and optical materials in the ultraviolet to the far-infrared and beyond. The chart was updated in 2018 to reflect the changing technologies in the photonics industry.

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### Glass Processing & Automation

#### NYFORS Teknologi AB

The NYFORS SMARTSPLICER is a CO2 laser glass-processing system designed for the production of high-power and sensitive photonic components. It offers contamination-free end-capping, splicing, tapering, bundling, and many other glass-shaping processes. NYFORS provides auto-mated high-precision solutions for fiber...

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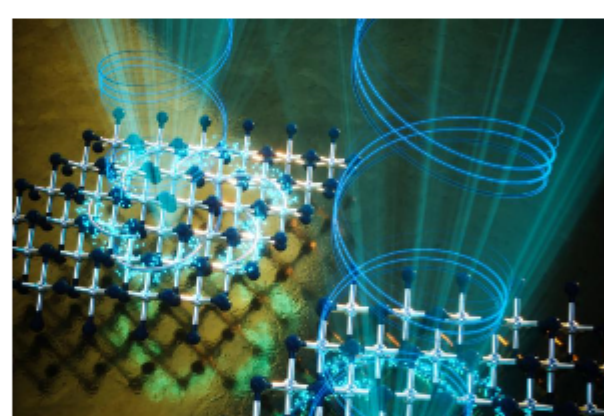


## In Case You Missed It

### 2D Material Takes on Chirality of Circularly Polarized Light

Physicists at MIT have uncovered a new way to test whether or not a material is chiral, and have also found a way to enhance the overall chirality in a large piece of material. The material they used, titanium diselenide, is a transition-metal dichalcogenide semimetal that has potential use in quantum devices.

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### Less Complex Approach to Laser Pulse Measurement Provides Precise Information

Until now, a complex experimental setup was required to measure the shape of a laser lightwave with a high degree of accuracy. This measurement can now be done using a small crystal with a diameter of less than 1 mm. The new method uses extremely short pulses, with a duration in the order of femtoseconds.

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### Blue-Emitting Diode Shows Limitations and Promise of Perovskite Semiconductors

Scientists at the University of California, Berkeley, have created a blue light-emitting diode from halide perovskite, a new semiconductor material said to be cheap and easy to manufacture, overcoming a barrier that had previously prevented the employment of the devices. However, in the process, the team also discovered a fundamental property of halide perovskites that may prove a barrier to their widespread use as solar cells and transistors.

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## Upcoming Webinars

### Beam Shaping: The Next Step for Ultrashort-Pulse-Laser-Based Processes

Thu, Jul 16, 2020 10:00 AM - 11:00 AM EDT

The use of ultrashort pulse (USP) lasers in industrial processes is growing, thanks to the high standard of quality that can be achieved. For widespread industrial use of USP lasers to be realized, however, two key challenges need to be solved: The yield has to strongly increase for the process to be cost-effective, and improvement in quality will lead to the processing of new materials and the development of new markets. This webinar will present how beam shaping can solve these two challenges, and how multi-plane light conversion (MPLC) can achieve yield and quality improvement while being compatible with industrial setups.



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## Next issue:

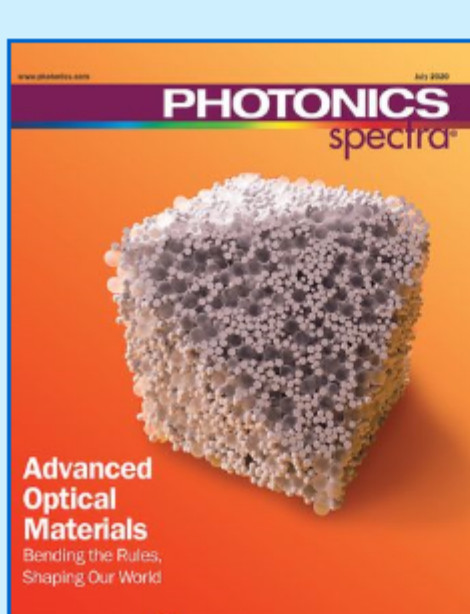
### Features

Hybrid III-V Materials, Ruby Laser, Robotics and e-Mobility, and more.

### Issue Bonus

**Photonics Media** is currently seeking technical feature articles on a variety of topics for publication in our magazine *Photonics Spectra*. Please submit an informal 100-word abstract to Daniel McCarthy, Senior Editor, at [Daniel.McCarthy@Photonics.com](mailto:Daniel.McCarthy@Photonics.com), or use our online submission form [www.photonics.com/submitfeature.aspx](http://www.photonics.com/submitfeature.aspx).

### About Photonics Spectra



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