



COVER IMAGE

3D map of an urban environment generated by Velodyne's high-definition LIDAR equipment. Image courtesy of Mandli Communications.

NPG ASIA-PACIFIC

Chiyoda Building, 2-37
Ichigayatamachi, Shinjuku-ku, Tokyo
162-0843, Japan.
T: +81 3 3267 8751
F: +81 3 3267 8754
naturephoton@nature.com

EDITORS

NADYA ANSCOMBE
OLIVER GRAYDON

PRODUCTION EDITOR

CHRIS GILLOCH

COPY EDITOR

JAMES BAXTER

ART EDITOR

TOM WILSON

SALES ACCOUNT MANAGER

KEN MIKAMI
T: +81 3 3267 8751

ADVERTISING DIRECTOR

GEORGE LUI
T: +1 415 781 3804

ADVERTISING MANAGER

SIMON ALLARDICE
T: +1 415 403 9034



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A sense of diversity

Of all the different industries that involve photonics, the sensor industry is surely the most interdisciplinary. Sensors have applications in almost every aspect of our lives — whether for detecting antigens (see page 433), measuring precise distances to objects (see page 429), analysing water for pollutants (see page 427), or monitoring oil pipes for leaks (see page 431).

Depending on the application, developing sensor technology often requires researchers from many different disciplines to work together. Biologists, materials scientists, chemists, physicists, electronics engineers and computer scientists must all communicate well in order to make devices that are well-suited to the task in mind. At the National Centre for Sensor Research (NCSR) in Ireland (see page 426), researchers from different disciplines share the same lab space, forcing them to physically work and interact together. This strategy has certainly worked for the NCSR, with many new sensor technologies currently being developed.

However, developing sensor technologies is not just about good science and engineering. Commercializing these technologies requires scientists and engineers to be knowledgeable about their market, and this can only be achieved by working closely with partners in industry. It is estimated that 70% of company failures in the sensors market are not down to the technology, but are because the manufacturer did not understand their market properly (see page 436).

The sensor market is an incredibly diverse and fragmented one, full of small companies who specialize in only one type of sensor technology for a single market. This is because each sensor technology is specific to its application, and adapting it for another market is often inappropriate.

It is hoped that through close collaboration between all stakeholders — researchers of all disciplines, industry experts and manufacturers — all the different photonic sensor technologies can continue to thrive well into the future.

Corrected online: 9 July 2010

CONTENTS

BUSINESS NEWS

Ultrahigh-temperature sensors, pipeline monitors and more **424**

RESEARCH HIGHLIGHTS

Our choice from the recent literature **425**

PROFILE

Working together **426**

INDUSTRY PERSPECTIVE

LIDAR: Mapping the world in 3D **429**
Brent Schwarz

Distributed fibre sensors: Depth and sensitivity **431**
Marc Niklès and Fabien Ravet

Bragg gratings: Optical microchip sensors **433**
Sam Watts

PRODUCT HIGHLIGHTS

Hot-spot monitoring, gyro-based measurements and more **435**

INTERVIEW

Know your market **436**
Interview with David Krohn

Correction

In the Technology Focus Industry Perspective 'LIDAR: Mapping the world in 3D' (*Nature Photon.* **4**, 429–430; 2010), the credit for the image on page 429 was incorrectly given to Velodyne. The image was courtesy of Mandli Communications, and should have been credited as such.

Similarly, in the Technology Focus Editorial 'A sense of diversity' (*Nature Photon.* **4**, 423; 2010), credit for the Technology Focus cover image should have been given to Mandli Communications. The HTML and PDF versions of both texts are correct.