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LASERS Tech Pulse

PHOTONICS MEDIA

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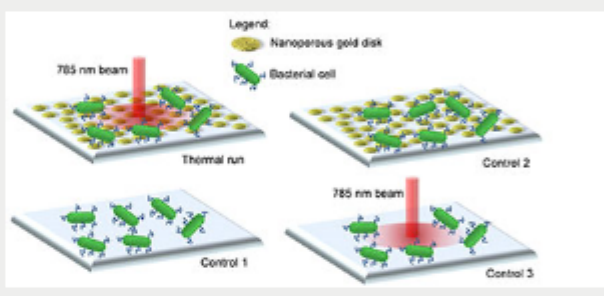
Lasers Tech Pulse is a special edition newsletter from Photonics Media and Bristol Instruments covering key developments in laser technology.

NIR Light, Gold Nanoparticles Combine to Inactivate Bacteria



A rapid photothermal technique has been developed that irradiates near-infrared (NIR) light to inactivate bacterial cells, such as E. coli, deposited on surfaces coated with gold nanoparticles. The method could one day help hospitals treat some common infections without using antibiotics, which could help reduce antibiotic resistance.

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Laser Spectroscopy Assesses Perishable Products Quickly, Accurately

A technique referred to as tunable diode laser absorption spectroscopy (TDLAS) enables fast, accurate and noninvasive measurement of bacteria levels in food, blood supplies and other products derived from living matter. "One major advantage TDLAS offers is its ability to achieve very low detection limits, on the order of parts per billion," said Jie Shao, associate professor at the Institute of Information Optics, Zhejiang Normal University, Jinhua, China.

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IRT Nanoelec Integrates Laser, Modulator Directly on Silicon

Information and communications R&D consortium Nanoelec Research Technological Institute (IRT), has reported cointegration of a III-V/silicon laser and silicon Mach Zehnder modulator demonstrating 25 Gbps transmission on a single channel, a transmission rate usually achieved using an external source over a 10-km single-mode fiber.

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UK Researchers Prove Eye-Safe Laser Aircraft Tracking Concepts

A tracking system based on eye-safe lasers could enable aircraft, unmanned aerial vehicles (UAVs) and orbiting satellites to transmit vital data to ground stations more securely, quickly and efficiently. A proof-of-concept system has been successfully tested in-flight, and ongoing work is underway to extend the system's current 1-km range.

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NKT Photonics Acquires Fiber Laser Firm Fianium for $30M

NKT Photonics (NKT Holding A/S) said it has signed an agreement and closed the transaction to acquire Fianium Holdings Ltd., a global supplier of ultrafast, high-power laser systems, headquartered in Southampton, England. The transaction price amounts to £21 million (about $29.8 million).

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