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PhotonicLab™ Platform, new disposable lab-on-a-chip systems

By Staff

The PhotonicLab™ Platform, from BIOIDENT Technologies Inc., combines printed organic semiconductor-based optoelectronics with microfluidics to create a new class of disposable lab-on-a-chip systems, which enable mobile, real-time and multi-parameter detection of chemical and biological substances.

With BIOIDENT, end users have a cost-effective solution that eliminates the need for expensive, bulky readout systems. This results in significant cost savings and provides immediate test results on mobile devices, such as laptop computers, PDAs and smart phones. Now, by leveraging the latest in nanotechnology and materials science, the BIOIDENT Platform uses organic semiconductor-based technology to print light emitting and detecting capabilities directly on to any surface, including polymers and glass, enabling on-chip detection and analysis capabilities, thereby removing one of the biggest obstacles in the wide-spread adoption of microfluidic applications.

By combining printed optoelectronics with microfluidics—the science of formulating devices that deal with nanoliter or picoliter volumes of fluid—BIOIDENT can deliver lab-on-a-chip systems that can conduct multiple tests simultaneously and at the point of use for real-time analysis. These capabilities will enable new applications in analytics, bio/chemical defense and medical diagnostics markets. For example, water is commonly tested for chemical and biological contaminants. Today, tests are usually conducted with kits that are sent to labs, which takes time and can result in user error. With BIOIDENT technology, a single lab-on-a2/chip can be developed to support multiple tests simultaneously and in-the-field, which reduces the potential for user error, increases testing efficiencies and reduces testing costs.

“BIOIDENT’s PhotonicLab™ Platform is poised to revolutionize water and food analysis, chemical and biological agent detection and in-vitro diagnostics,” said Dr. Wasiq Bokhari, CEO for BIOIDENT. “Imagine: instead of waiting for days for water or blood test results from a lab, with BIOIDENT technology, we can have multi-parameter results immediately, at the point of use.”