

## New NanoMarkets Report States That Printed and Organic Sensor Market to Reach \$2.3 Billion

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GLEN ALLEN, Va., **Sept. 12** /PRNewswire/ -- **The market for printed and organic sensors will reach \$2.3 billion by 2015, according to a new study from NanoMarkets LC, an industry analyst firm based here.** The report is the next in the firm's ongoing coverage of thin film, organic and printed electronics. Additional details can be found at <http://www.nanomarkets.net/>. Members of the press can request an executive summary from the report.

NanoMarkets believes that sensors represent an especially attractive opportunity for printed and organic electronics firms because unlike displays and RFIDs, printed and organic sensors are areas relatively underserved by existing manufacturers. In addition to their attractive price points, printed and organic sensors manufactured on flexible substrates provide the means for new markets to be developed in medical, architecture and construction, protective clothing, smart labels and packaging, robotics, aerospace, national defense and automotive applications.

Key findings of the report include: -- Environmental monitoring needs accurate and inexpensive long-term monitoring of environmental contaminants. Biosensors created with printed electrodes or organic transistors could offer an inexpensive solution and electronic noses using conductive polymers could provide real-time identification of contaminants. By 2015, environmental monitoring will be the largest single segment of the printed and organic sensor market at \$925 million. -- Genetic testing, forensics, pharmaceutical manufacture and a broad range of academic disciplines have exploded following the completion of the Humane Genome Project. As a result there is a surging demand for microarrays and biochips, which are expected to reach \$413 million by 2015. Agilent is already inkjet printing all of its microarrays. -- The lowered costs associated with printing and organic electronics is also accelerating the trend towards replacing expensive centralized diagnostic equipment with lower cost point-of-care and home testing. Biosensors are a major part of the trend as are printed touch sensors which can be used to diagnose muscular and bone diseases. By 2015 the printed/organic medical diagnostic and therapeutic sensor market (microarrays and biochips excluded) will reach \$414 million. -- Smart textiles offer considerable potential for sensors. Applications include garments that adapt to changing temperature and body suits that monitor human physiological state and communicate to a central system. Smart fabrics would better allow the military to communicate, respond to emergencies and achieve informational and situational awareness advantages. The value of printed and organic sensors used in smart textiles is expected to reach \$226 million by 2015. About the report:

NanoMarkets' new report provides a complete analysis of the commercial opportunities for sensors that utilize printed and organic electronics. Applications covered included biomedical and genetic applications, homeland security, environmental sensing, robotics, pervasive computing, smart packaging and smart textiles. The report also includes detailed eight-year (volume and value) forecasts of these markets for as well as strategic profiles of leading firms developing and marketing this emerging technology.

Among the firms and research centers mentioned in the report are **Acrongenomics**, Affymetrix, Agilent, Alpha MOS, AromaScan, BioDot, Bio Sensor Technologies, Cypak, Drop Sens EcoBioServices, ExonHit Therapeutics, Gas Sensor Solutions, GeSiM Infotonics, MeadWestvaco, **Molecular Vision**, National Centre for Sensor Research, NanoIdent, NASA, Nokia Research Center, Novartis, Ohmcraft, Osmatech, Pearson Matthews, Peratech, PerkinElmer, Rusens LTD, Sensible Solutions, Smiths Detection, Stora Enso, TagMaster, Tekscan, VTT, Yubico, Zyomyx and Windsor Scientific.

About NanoMarkets:

NanoMarkets tracks and analyzes emerging market opportunities in electronics created by developments in advanced materials. The firm has published numerous reports related to organic, thin film and printable electronics materials and applications. The firm also publishes a blog found at <http://www.nanotopblog.com/>. NanoMarkets research database is the industry's most extensive source of information on TOP electronics. Visit the firm's website at <http://www.nanomarkets.net/> for a full listing of coverage.

NanoMarkets

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original link: <http://www.sys-con.com/read/428255.htm>

## **Printed and Organic Sensor Markets: 2007-2015**

The emergence of printed and organic electronics as an industry holds considerable promise for the sensor sector. Printing can help bring down costs of sensors and may also be the ideal way for creating multi-layered sensor products such as "electronic noses." The introduction of new organic materials increases the choices for sensor manufacturers. Finally, the ability of printed electronics to create large arrays of sensors on flexible substrates opens up possibilities for entirely new products such as sensors for biohazard detection, wearable computing or robotics. Nonetheless, printed and organic sensors are just beginning their commercial evolution.

This NanoMarkets report analyzes the printed and organic sensor markets to show where such sensors can make their biggest contribution. As part of this analysis, the report assesses appropriate production technologies, system architectures and communications interfaces, as well as performance requirements and achievements for printed and organic sensors (switching speeds, sensitivity, flexibility, etc.) It also discusses important product types such as electronic noses, labs-on-a-chip, biochips and smart dust, for which organic materials and printing may make a considerable contribution.

Applications of printed and organic sensors covered in the report include smart packaging, smart textiles and uniforms, medical diagnostics, genomics and proteomics, large area sensing for security apps, water and other environmental testing, robotics and smart skins. Eight-year forecasts are provided for printed and organic sensors in each of these applications. The report also provides market projections by type of sensors, e.g. gas sensors, temperature sensors, motion sensors biosensors, etc., along with an analysis of current activities of both commercial firms and major research groups at universities and research institutes.

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