



THE BRIDGE

MATERIALS ANALYSIS eNEWSLETTER
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Material Analysis in the News

September 26, 2013. A new [Global and China XRF Industry Report](#) focuses on development policies and plans for the industry as well as a consideration of a cost structure analysis. Capacity production, market share analysis, import and export consumption and price cost production value gross margins are discussed.

September 26, 2013. A new XRD Industry report provides a basic overview of the industry including definitions, applications and industry chain structure. [Global market analysis and Chinese domestic market analysis](#) are provided with a focus on history, developments, trends and competitive landscape of the market. A comparison between the international and Chinese situation is also offered.

September 30, 2013. Scientists have been able to generate an [X-ray beam with a diameter ten thousand times thinner than hair](#). It is barely 5 nanometers and was created by researchers from Gottingen. The lead scientists of the study, Professor Tim Salditt from the Institute of X-ray Physics and Professor Hans-Ulrich Krebs from the Institute of Materials Physics of University of Gottingen, used a Fresnel lens instead of common lenses to achieve the result.

October 11, 2013. In [MeadWestVaco Corp. v. Rexam Beauty and Closures, Inc.](#), the Federal Circuit upheld the admissibility of expert XRD testimony: "crystallinity as measured by x-ray diffraction (XRD) using at least the XRD characterization parameters identified in the '132 patent." However, the parties also agreed that those parameters do not fully describe all details of an XRD test, such as the "sample-to-detector distance" or "software for the analysis of the XRD data and the calculation of the XRD crystallinity."

October 17, 2013. Morpho (Safran), through its subsidiary Morpho Detection, Inc., announced it has received a contract valued at approximately \$10 million from the U.S. Department of Homeland Security (DHS) Science and Technology Directorate (S&T) for the development of a next-generation checked baggage explosives detection system (EDS). Under terms of the contract, Morpho will deliver a [prototype EDS based on advanced X-ray diffraction \(XRD\) technology](#) in 2015. By utilizing advanced XRD technology to detect liquid and homemade explosives and IEDs in checked baggage, Morpho's next-generation EDS will give airports the detection and operational capabilities needed to meet emerging threats while accommodating anticipated growth.

October 25, 2013. According to news originating from Shanghai, People's Republic of China, via NewsRx correspondents, "Spindle-like ZnSe and Mn:ZnSe [quantum dots \(QDs\) were formed via an optimized greener approach](#), which may be attributed to the amine ligands adhering asymmetrically to the crystal facets. Powder X-ray diffraction (XRD) patterns revealed that the ZnSe and Mn: ZnSe QDs have a zinc blende cubic crystal structure."