



**For immediate release: October 31, 2011**

## **Zecotek Announces Superior Test Results for LFS-8 Crystals**

**Singapore, October 31, 2011 - Zecotek Photonics Inc. (TSX-V: ZMS; Frankfurt: W1I)**, a developer of leading-edge photonics technologies for medical, industrial and scientific markets, today announced the successful testing of its newest version of Lutetium Fine Silicate (LFS) scintillation crystals by the University of Washington and by researchers affiliated to the European Organization for Nuclear Research (CERN). Test results show Zecotek's LFS-8 crystals have achieved an extremely fast decay constants ranging between 15 and 25 nanoseconds depending on chemical compositions with energy resolutions between 7 % and 9 %. Competing lutetium oxide crystals have structural decay times of no less than 40 nanoseconds, making the LFS-8, by far, the fastest existing scintillation crystal based on lutetium oxide material. This patented formulation is of significant importance to OEM's developing time-of-flight positron emission tomography (PET) scanners for high accuracy imaging. Zecotek's LFS crystals are also characterized by high radiation hardness, making the LFS a prime candidate for high energy physics experiments. Furthermore their superior manufacturing output make LFS very cost competitive.

"We have been very pleased with the performance of Zecotek's LFS scintillation materials," said Dr. Thomas Lewellen, Professor of Radiology and Director of Physics and Instrumentation Development in Nuclear Medicine at the University of Washington. "The improved characteristics of this new version of LFS will allow for faster timing for applications like time-of-flight positron emission tomography detectors. Such applications are critically dependent on high light output and fast decay."

"High density, fast scintillating crystals that are radiation resistant against hadron irradiation, are key properties in the ongoing High Energy Physics experiments," said Prof. Valentin Kozlov from the Lebedev Physical Institute, Moscow. "Extensive testing and research programs have been carried out on Zecotek's new scintillating LFS crystals. It was found, that these bright and fast crystals are an excellent candidate for the, Electromagnetic Calorimeter at High Luminosity Large Hadron Collider (LHC), one of the main project at CERN."

"The results obtained by the University of Washington and researchers associated to CERN have shown the performance efficacy and effectiveness and cost competitiveness of our patented LFS-8 scintillation crystal and its variations," said Dr. A.F. Zerrouk, Chairman, President, and CEO of Zecotek Photonics Inc. "This is a welcome and important result for medical imaging and high energy physics applications. The competitive advantages of Zecotek's patented LFS technology set them apart from any competing scintillation material."

Scintillation crystals play a vital role in industrial, medical, fundamental research, and security, where they are used to convert high-energy photons into visible light. Zecotek's scientists have pioneered research in high-performance scintillation detectors and maintain a comprehensive research program which has resulted in development of the patented LFS scintillation material with all its variants. This very bright and very fast scintillation material was developed specifically for use in medical imaging systems, high-energy physics experiments, and other industrial and security applications.



In addition to their crucial function in medical PET machines, scintillation crystals are extensively used in particle physics experiments and in other environments where the detection hardware is exposed to very large doses of ionising radiation. Improvements in radiation hardness directly translate into fewer replacements of detector blocks and less frequent recalibration of detection systems. Zecotek's LFS manufacturing technologies also permit the growth of very large-diameter boules with uniform properties and without cracking (a problem with many other competing scintillation materials), which secures a consistent and high element yield which also provides for lower unit costs, critical for the sale of PET scanners and meeting budgets for High Energy Physics experiments such as the one conducted at the Large Hadron Collider, CERN.

-30-

### **About Zecotek**

Zecotek Photonics Inc (TSX-V: ZMS; Frankfurt: W1I) is a photonics technology company developing high-performance crystals, photo detectors, medical lasers, optical imaging and 3D display technologies for commercial applications in the medical diagnostics and high-tech industry. Founded in 2003, the company has three distinct operating divisions: medical imaging, medical lasers and 3D display and labs located in Canada, Singapore and Russia. Zecotek commercializes its novel, patented and patent-pending bio-photonics technologies directly and through strategic alliances and joint ventures with multinational OEMs, distributors and other industry leaders. For more information, please visit [www.zecotek.com](http://www.zecotek.com).

*This press release may contain forward-looking statements that are based on management's expectations, estimates, projections and assumptions. These statements are not guarantees of future performance and involve certain risks and uncertainties, which are difficult to predict. Therefore, actual future results and trends may differ materially from what may have been stated.*

### **For Additional Information Please Contact:**

Zecotek Photonics Inc.  
Michael Minder  
T: (604) 783-8291  
[ir@zecotek.com](mailto:ir@zecotek.com)

CHF Investor Relations  
Julia Clark, Account Manager  
T: (416) 868-1079 x236  
[julia@chfir.com](mailto:julia@chfir.com)

*Neither the TSX Venture Exchange nor its Regulation Service Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of the content of this news release. If you would like to receive news from Zecotek in the future please visit the corporate website at [www.zecotek.com](http://www.zecotek.com).*