



For immediate release

New photonic integration platform available, combining InP and TriPleX™ technologies

January 28th 2015 –

A consortium of six international companies has demonstrated a new photonic integration platform that allows to embed complex optical systems into a miniaturized assembly. This platform combines the best features of two photonic IC (PIC) technologies: the low-loss and wide spectral range of TriPleX™, with the active functionalities of indium phosphide (InP).

The consortium is composed of several Dutch and Spanish companies covering the whole value chain for photonic integrated circuit prototyping: from software tools and Process Design Kits or PDKs (Phoenix Software), to photonic chip design services (VLC Photonics and BRIGHT Photonics), TriPleX™ and InP manufacturing foundries (LioniX and SMART Photonics respectively), and optical assembly and packaging (XiO Photonics).

This new heterogeneous integration platform presents several advantages versus single-material monolithic approaches. It adds the versatility of optical devices like lasers, high-speed modulators, amplifiers or photodiodes on InP, to the very low propagation loss of the waveguides in TriPleX™. The platform allows for high-density and high-port-count coupling between both material platforms, and the low-loss optical fiber matched spot-size converters in TriPleX™. These advantages prove to be critical for certain applications like sensing, biophotonics, telecom/datacom, or microwave photonics.

The platform, already available for external users to access, has been demonstrated through a combined assembly of several test structures. The demo will be presented at the Photonics West 2015 exhibition next February 10-12, at the Moscone Center in San Francisco, USA. Users will be able to see the wide range of offerings provided by the consortium, from the design tools and standard building blocks included in the platform's PDK, to custom designs and packaging options available too. The event is scheduled on Thursday 12th February at 01:30 PM in the Demo Area 2 of Hall D.

About BRIGHT Photonics B.V.

BRIGHT Photonics is a design house for photonic integrated circuits (PICs). Our mission is making Photonic ICs accessible to business and research, whether you are already experienced in PIC technology or not. Customize our assistance to where you need it: PIC Prototyping for companies, PDK development for foundries (custom and MPW), or design software and assistance for academic and other researchers. We support photonic technologies in over 15 foundries in Silicon, InP and SiN.

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About LioniX B.V.

LioniX is a leading co-developer, manufacturer and provider of products and components based on cutting-edge micro/nano technology for its original equipment manufacturer (OEM) customers. The main focus markets include Life Sciences, Telecom, Datacom, Industrial Process Control and Space.

LioniX provides design to manufacturing and 'horizontal integration' by partnering with foundries, suppliers of complementary technologies and R&D institutes. The company specializes in applications of integrated optics, microfluidics and optofluidics including surface functionalization. LioniX offers small volume manufacturing, second sourcing as well as transfer to medium and high volume manufacturing.

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About PhoeniX Software

PhoeniX Software is an independent high-tech company headquartered in Enschede (the Netherlands) developing, supplying and supporting world class software solutions for micro and nano technology corporations and institutes. PhoeniX Software is offering a unique fully integrated mask layout, process flow design and simulation environment and the only dedicated Manufacturing Execution System and Technology Knowledge Base for the industry. Furthermore PhoeniX Software is supporting Multi Project Wafer runs at various foundries with process design kits for InP, TriPleX and silicon photonics.

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About SMART Photonics B.V.

SMART Photonics, located in Eindhoven, The Netherlands, is a Pure Play Foundry offering III-V production services for Indium Phosphide (InP) based photonic components. We use our extensive photonics knowledge, many years of experience in III-V production and dedicated equipment to create and produce the photonic designs of our customers. We offer the complete creation process from Epitaxial growth, wafer processing, re-growth, polishing of wafers up to dicing and coating of the chip facets, from single process steps up to full production services.

Fast prototyping of PICs in InP on MPW runs. SMART Photonics has further developed its generic integration technology for integration of InP based photonic components. For this new technology, free access to the SMART Photonics design manual is offered to customers to design their own PICs. Designs can be easily, and cost effectively, tested in the SMART Photonics MPW runs which are offered on a quarterly basis.

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About VLC Photonics S.L.

VLC Photonics is a fabless design house which provides optical integration solutions and services. Its expertise in design of photonic components in multiple technology platforms, like silicon photonics, indium phosphide, PLC or TriPleX™, together with more than a decade long expertise in optical telecom and sensing systems, guarantee the optimal implementation of any photonic functionality on chip. VLC Photonics counts with an extensive network of foundries and packagers, and this experience with its partners allows VLC Photonics to lower the development time, cost and risk of any integration project.

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About XiO Photonics B.V.

At XiO Photonics we design and manufacture optical devices based on Photonic Integrated Circuits (PICs) for visible light and near infrared applications. Our capabilities are in optical chip design (for TriPleX™ technology) and in optical chip packaging solutions. The packaging solutions include fiber-chip coupling, chip-chip coupling and electronic integration concepts.

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