

Sitoga

SILICON CMOS COMPATIBLE TRANSITION METAL OXIDE TECHNOLOGY FOR BOOSTING HIGHLY INTEGRATED PHOTONIC DEVICES WITH DISRUPTIVE PERFORMANCE

SPECIFIC TARGETED RESEARCH PROJECTS

Deliverable D7.4 Industry dissemination workshop

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ABSTRACT

This report describes the chosen workshop to disseminate the technology developed in the SITOGA project to industry players. Our contribution will focus on the integration process of the BaTiO₃ with the silicon photonic technology fabricated in the foundry BiCMOS process of IHP.

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1. Introduction

The deliverable reported here summarizes the work performed within the task 7.3. Dissemination to the industry is indeed an important task and must be completed with the appropriate timing and format, depending on the progress accomplished during the project.

As a first step for the dissemination towards the industry, we decided to present the project and its outcome during the post-ECOC workshop organized this fall. The following section provide a short description of the workshop and of its agenda.

2. Workshop description

The European Conference on Optical Communication (ECOC) is the largest conference on optical communication in Europe and one of the largest and most prestigious events in this field worldwide. In September 2016 the 42nd edition of ECOC will take place in Düsseldorf, Germany. The post-ECOC-Workshop has been established several years ago, and is organized by a Japanese technology development program together with institutions from the host-country of ECOC. The workshop is typically held in close conjunction with ECOC, and is setup at a location which is in easy reach for ECOC participants. Examples of post-ECOC-Workshop venues are University Southampton 2013, Barcelona 2015. The 2016 edition of the post-ECOC workshop will take place in Karlsruhe. The purpose of the workshop is to stimulate interaction between industry and research in areas that typically show little overlap but where a more in-depth discussion of the needs of industry might foster new technological developments that would be beneficial for established or anticipated exploitation routes. ECOC has been chosen by Japanese scientist due to the scientific reputation of the conference.

In order to illustrate the relevance of the workshop, the table below summarizes the tentative agenda for 2016, with the SITOGA contribution in bold. The actual program hold in 2015 is also copied in the following page. It shows the strong representation of industries, and confirms the relevance for the dissemination action of SITOGA.

	Session	Topic
10:00	Network systems	Access
10:30		Core-Metro
11:00		Optical Interconnects for the future datacenter
11:30		Low energy NW architecture
13:45	Photonic devices	BTO integration on SiGe platform
14:15		Multi-chip assembly for Si photonic platform
14:45		III-V integration on Si photonic platform
15:15		Si Photonic ASIC
15:45	15 min. Break	
16:00	Transmission Technology	DSP
16:30		Nonlinear compensation
17:00		SDM
17:30		Future Transmission technology, From Devices to Systems



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“Celebrating the International Year of Light and Light-based Technologies”

VICTORIES – UPC (ETSETB) Post-ECOC Workshop on Photonic Technologies for Telecommunications

October 2nd and October 3rd, 2015, Barcelona, Spain

Time	Activity October 2 nd
08:00-09:00	Registration (Telecom-Square Entrance Floor, Building B3)
09:00-09:10	Welcome and opening by UPC and ETSETB (TelecomBCN)
09:10-09:20	Vice-President for Knowledge Transfer: Esther Real & Dean of ETSETB : Ferran Marqués
09:20-10:20	Opening by AIST, Plenary Talks (Public in General) “Flexible high capacity optical transport system: enabling technologies for 100G and beyond”, <i>Kiyoshi Fukuchi (NEC)</i> “ICFO’s Program Light for Information”, <i>Sergi Ferrando (ICFO)</i>
10:20-10:25	Coffee break (1 st Floor)
Technical Session – PHOTONIC IC’s Aarón Albores-Mejía (AIST-JP) Presider	
10:30-10:50	“Advancing Silicon Photonics into Next-Generation Computing Systems”, <i>Ashkan Seyedi (HP-USA)</i>
10:50-11:10	“Photonic integrated circuit for fast reconfigurable network”, <i>Guilhem de Valicourt (Bell Labs-USA)</i>
11:10-11:30	“Development of Silicon Photonic Hybrid Ring-Filter External Cavity Wavelength Tunable Lasers”, <i>Kenji Sato (NEC)</i>
11:30-11:50	“Integrated Optical Circuits and Devices for Communications and Sensing”, <i>Iñigo Molina (U. Malaga)</i>
11:50-12:05	“The Fabless Photonic Integration Model”, <i>Iñigo Artundo (VLC photonics)</i>
12:05-13:05	Lunch (Telecom-Square Entrance Floor)
Technical Session - NETWORKS --- Gabriel Junyent (UPC-Spain) Presider	
13:10-13:30	“Cavity-Soliton Kerr Frequency Combs and their applications”, <i>Michael Geiselmann (EPFL)</i>
13:30-13:50	“Nyquist OTDM transmission”, <i>Toshihiko Hirooka (Tohoku)</i>
13:50-14:10	“Optical Networks and Systems Research at CTTC”, <i>Josep M. Fàbrega (CTTC)</i>
14:10-14:30	“Flexible optical networks research using high resolution spectroscopy”, <i>Juan Ignacio Garcés (U. Zaragoza)</i>
14:30-14:50	“Extremely broadband, low-energy, and low latency optical networking for future infrastructure”, <i>Kiyo Ishii (AIST-JP)</i>
15:20-16:00	Lab. Tour ICFO
16:20-17:00	Lab. Tour CTTC
17:10-	“Gaudi” Cultural Tour (group photo)
Time	Activity October 3 rd
Technical Session - CAPACITY Takashi INOUE (AIST-JP) Presider	
9:00-9:20	“Photonic Technologies and Sustainable Networks”, <i>Jose A. Lazaro (UPC)</i>
9:20-9:40	“Optical Networks and technologies”, <i>Jose Capmany (UPV)</i>
9:40-10:20	Lab. Tour UPC
10:30-10:35	Coffee break (1 st Floor)
10:40-11:00	“Photonic bandgap fibres for low-latency data transmission”, <i>Francesco Polletti (SOTON)</i>
11:00-11:20	“Coupled-Core Multi-Core Fibers: High-Spatial-Density Optical Transmission Fibers with Low Differential Modal Properties”, <i>Tetsuya Hayashi (Sumitomo)</i>
11:20-11:40	“SDM techniques for Data Center Applications (tentative)”, <i>Roland Ryf (Bell Labs)</i>
11:40-12:00	Closing Remarks (UPC-AIST)