

Phalafel INFN Project

WP 2 Silicon Photonics

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WP 2 Silicon Photonics

WP2 (Silicon Photonics) It will develop the SiPh building blocks.including RM, MZM,bus waveguides, optical couplers and splitter, integrated thermal heaters. It will submit the MPW of a mini-block chip (2.5x~5 mm²). The fabricated mini-block will be characterised, providing information for the design and fabrication of the second full block chip (5x~5 mm²) that will be tested allowing the final integration with EIC.

D2.1 SiPh submissions for the MPW run of the first miniblock including the building blocks (SSSA, INFN PI, UNIPi, UNIMI) (T0+7)

D2.2 SiPh submission for the MPW run full final block (SSSA, INFN PI, UNIPi, UNIMI) (T0+19)

D2.3 SiPh final PIC characterization (SSSA) (T0+31)

MPW run deadline for the first year

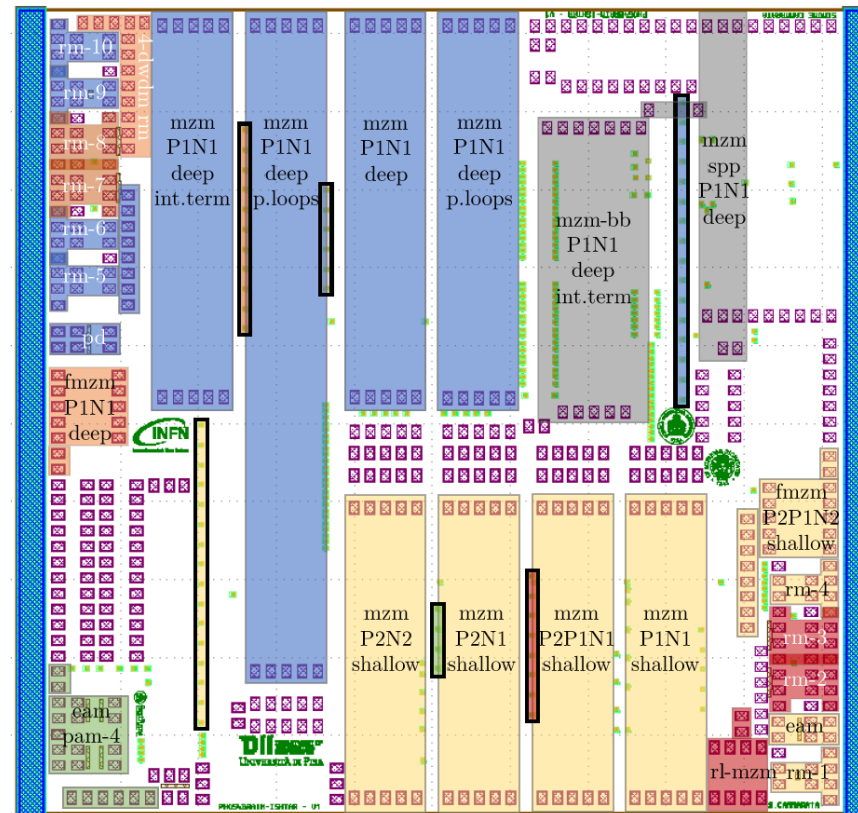
SiPh submissions for the MPW run of the first miniblock

2021 IMEC MPW run schedule

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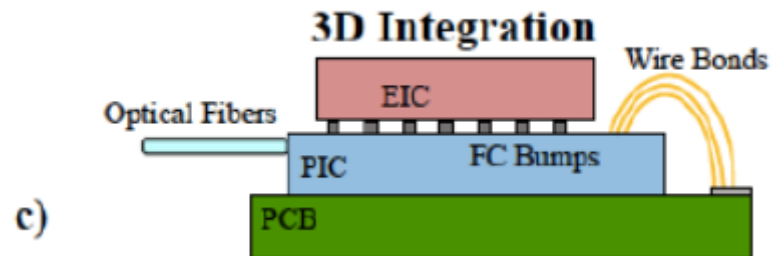
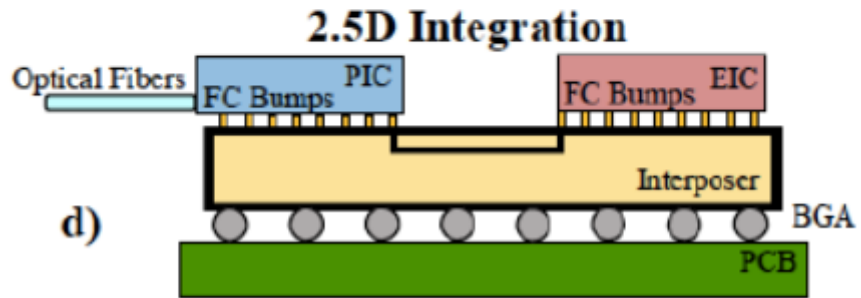
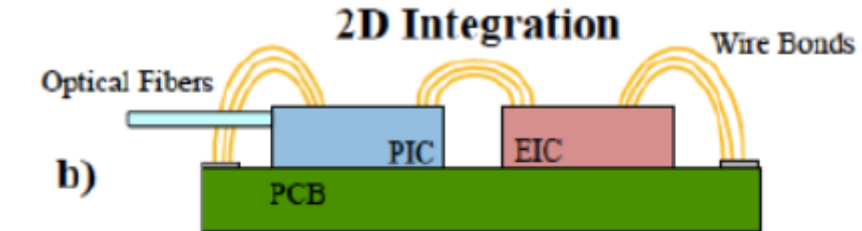
Phos4Brain Chip

April-May 2021 (??) chip of the IMEC MPW run; the characterization of the chip will give us feedback for the new design



Tape Layout of the submitted design (June 2020)

Packaging



Packaging Facilities : Inphotec, Tyndall, UPV

Definition of the packaging requirements for the given system specifications

Packaging issues related to the photonic and electronic packaging

AdR Recruitment

Table 6. Requested AdR. Type: Junior (J) / Senior (S)

AdR #	Type	Unit	Months	Research Topic
1	J	PI	30	PIC design and test. PIC-EIC integration and test
2	S	PI	24	Driver design. PIC-EIC integration and test
3	J	PI	18	PLL/CDR design and test
4	J	PV	30	DAC design and test
5	S	PV	24	FE design, test and integration in the demonstrator
6	J	PD	24	Irradiation tests and analysis

Possible PhD position partially dedicated to the Phalafel project 30 /36 months

- We could include a PhD position in the PhD announcement 2021
- PhD without Sant'Anna Scholarship but INFN AdR

Main issue: 3 years PhD program will start the 1st of October 2021