

The background features a large, light blue watermark of the Yonsei University logo. The logo is circular with the text 'YONSEI UNIVERSITY' around the top and '1885' at the bottom. In the center is a shield with a book, a lamp, and a central circle.

2023 Workshop

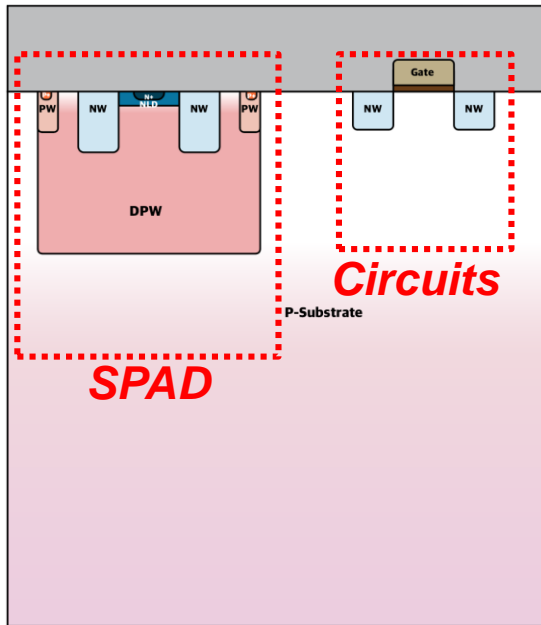
Eunsung Park

**High-Speed Circuits & Systems Lab.
Dept. of Electrical and Electronic Engineering
Yonsei University**

2023-1 Works

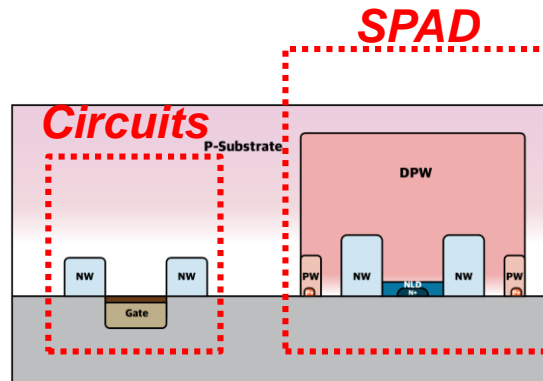
Research - Visible ~ NIR Wavelength

Frontside Illumination



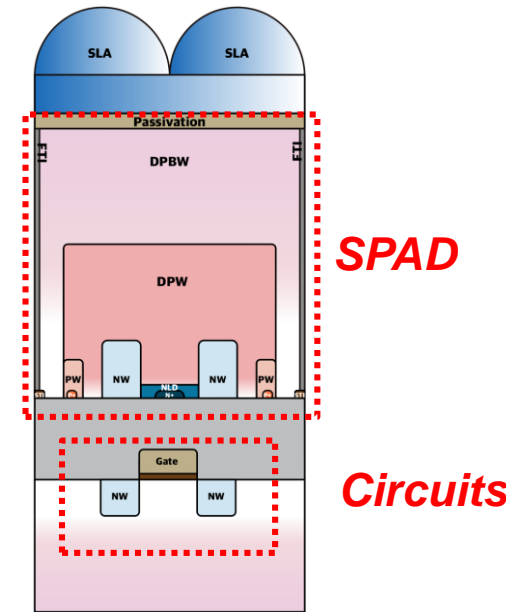
>> *Measurement*

Backside Illumination



>> *Measurement*

3D Stacked SPAD Array

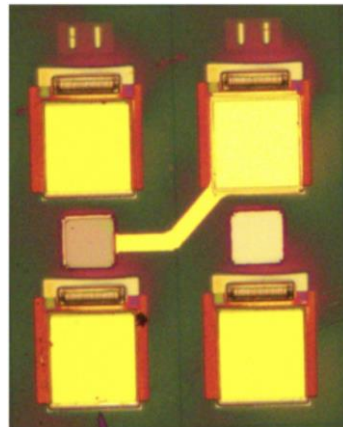
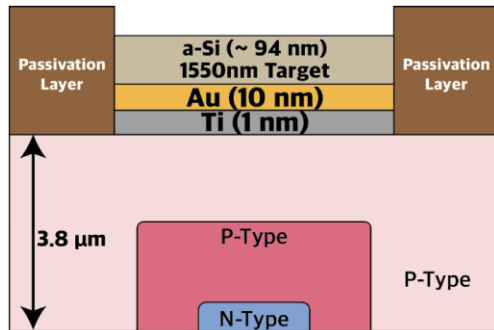
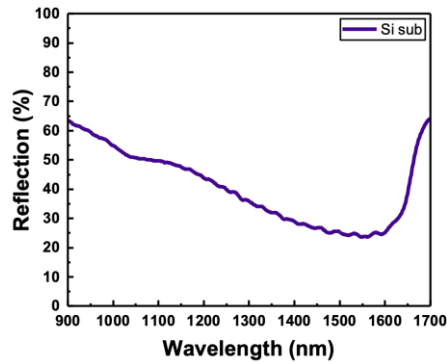
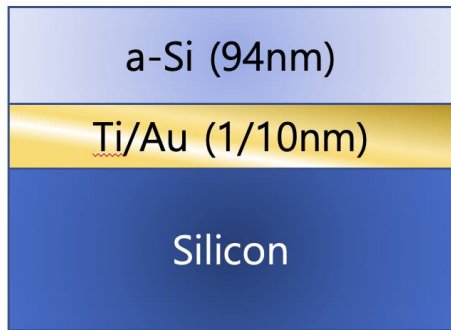


>> *Design & Measurement*

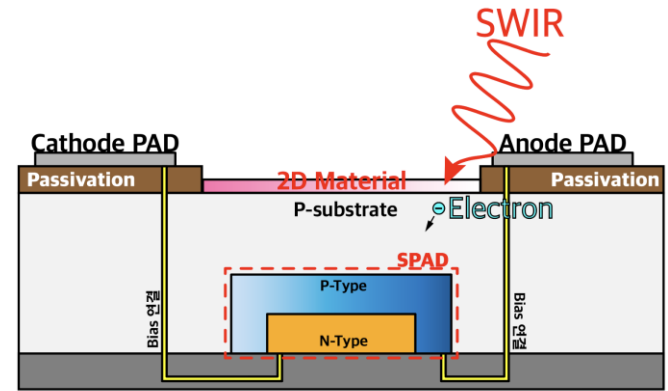
2023-1 Works

Research - SWIR Wavelength

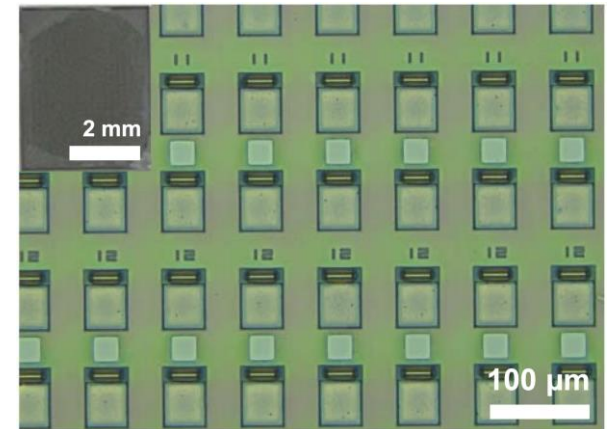
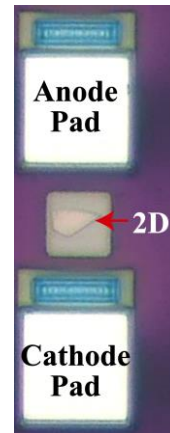
CMOS SPAD + Nano Photonics



CMOS SPAD + 2D Materials



2D Material Integration



2023-1 Works

Paper - 월간 박은성

Month	Topic	Remarks	Publication
1	CMOS SPAD - World record PDP (NP Type)	SKH 40 nm	SoVC (VLSI)
2	CMOS SPAD - World record PDP (PN Type)	SKH 40 nm	JSTQE
3-4	CMOS SPAD - World record PDP (PN Type)	SKH 40 nm	JSTQE (Under revision)
5-6	<i>Symposium on VLSI Circuit and Technology (VLSI) - Presentation</i>		
7	CMOS SPAD - World record Timing Jitter (BSI)	SKH 40 nm	IEDM (Under review)
8	CMOS SPAD - Timing performance analyze	TSMC 45 nm	EDL(-ing)
9	CMOS SPAD (APD) + Nano photonics (Plasmonic)	amorphous-Si	-
10	CMOS SPAD	DB 110 nm	-
11	CMOS SPAD or IEDM Presentation	GF 55 nm	-
12	CMOS SPAD (APD)	w/ 2D Materials	-

2023-2 Plan

- **Design & Measurement**

- Design - Globalfoundries 130 nm BCD Lite (Oct. 20)
- Measurement
 - CMOS SPAD (SK40nm, GF55nm, DB110nm)
 - CMOS SPAD + Nano photonics & 2D Materials
 - LiDAR System - 3D Stacked SPAD Array

- **Conference**

Conference	Date
International Electron Device Meeting (IEDM)	Dec. 2023
Symposium on VLSI Technology (SoVC)	Jan. 2024
International Image Sensor Workshop (IISW)	May. 2024
International SPAD Sensor Workshop (ISSW)	Jun. 2024
Single Photon Workshop (SPW)	Nov. 2024