

COMPANY PRESENTATION

March 29, 2023

Dr. Mikko A. Juntunen

CAPTURING EVERY RAY OF LIGHT



ELFys provides light sensors with

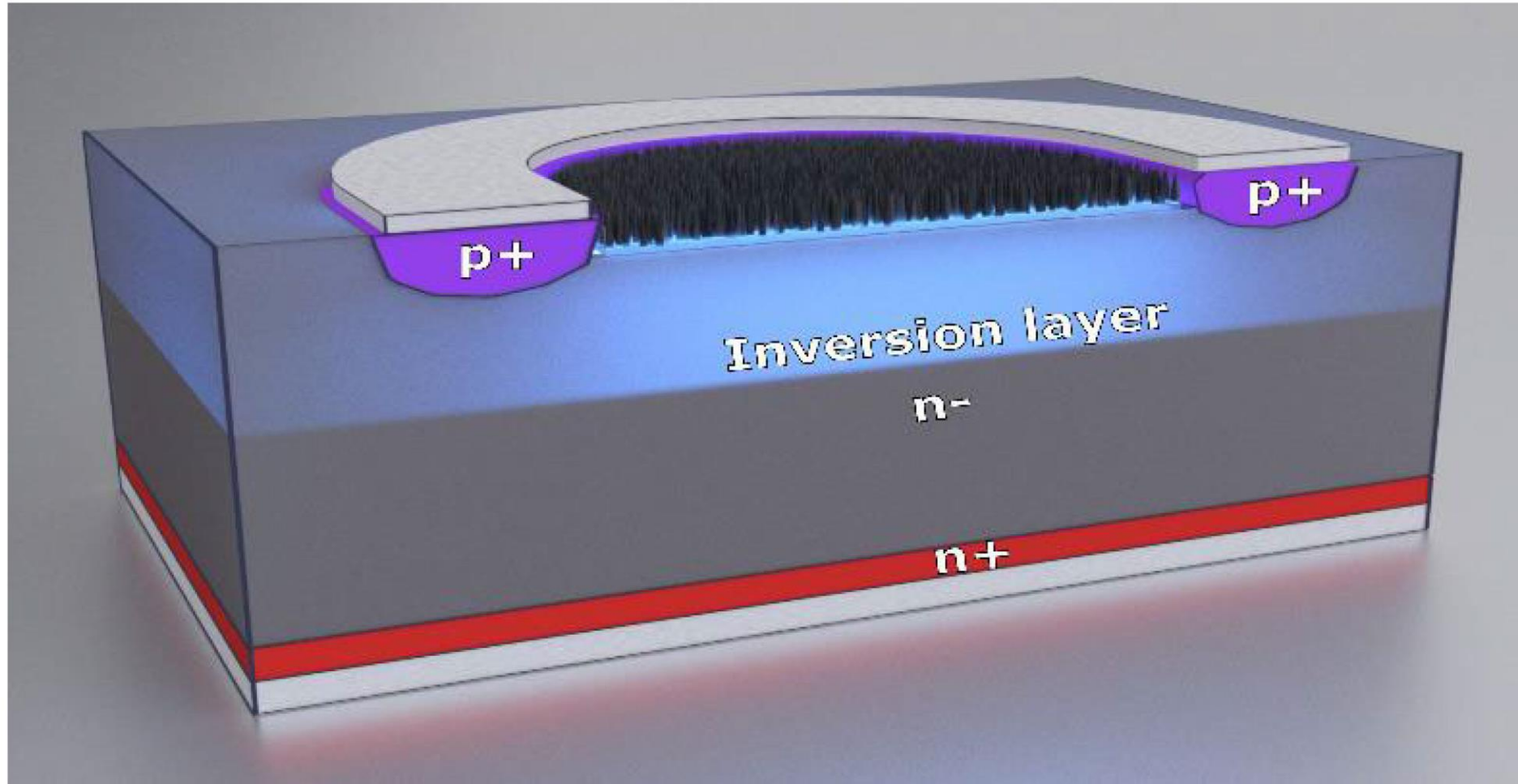
- Sensitivity exceeding anything seen before**
- Patented nanotechnology**
- Application proven performance**
- High volume in the near-future**

Light gets lost in here – reflection is virtually zero
BLACK



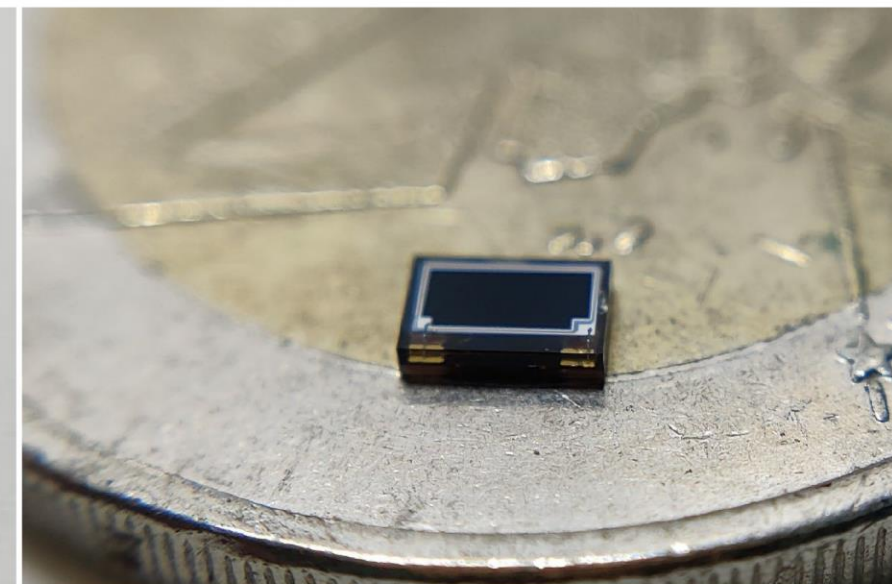
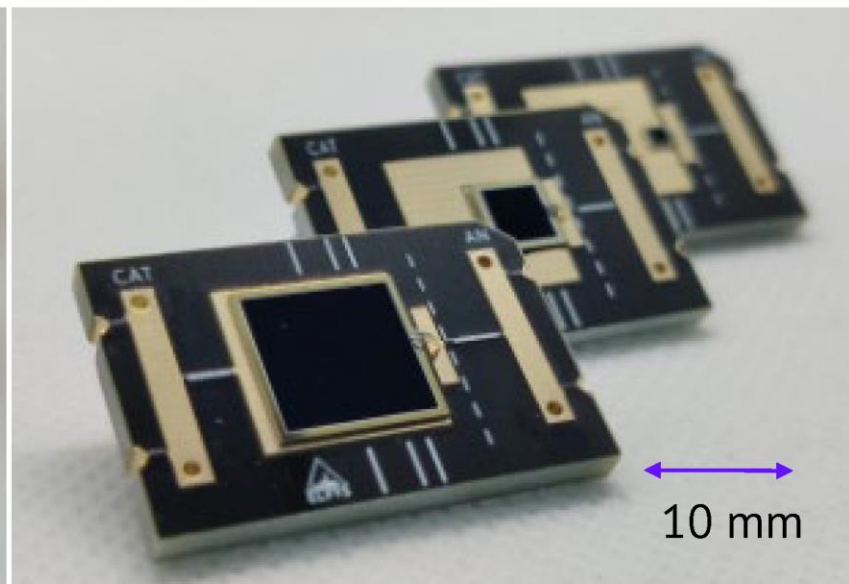
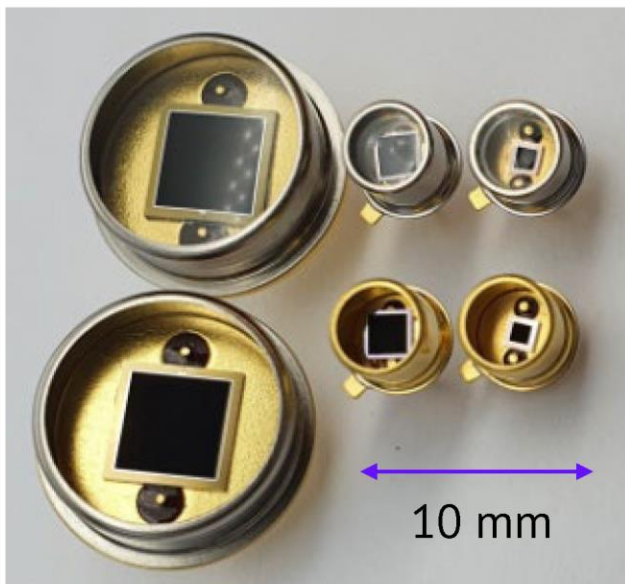
And with ALD Al_2O_3 we can collect all the charges with
INDUCED JUNCTION

Invention: black silicon induced junction photodiode



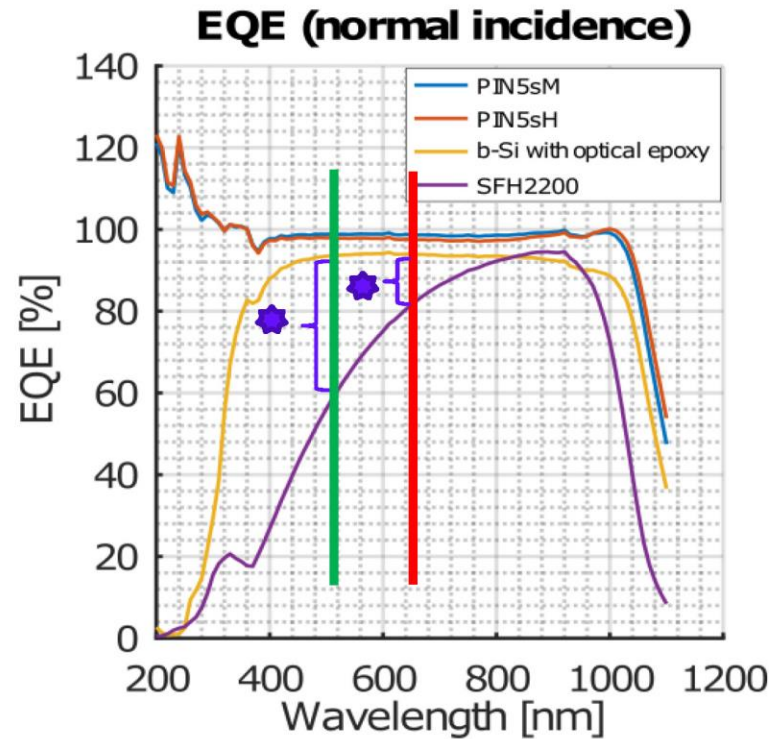
Juntunen, et.al., *Nature Photonics* 10, 777-781 (2016)

ELFys products



- ELFys has raised €6M during 2021-2022 for scaling up production
- Investors include Samsung and founders of Oura ring

Comparison ELFys vs. competition



At green

92% vs. 60%

=> 50% improvement

At red

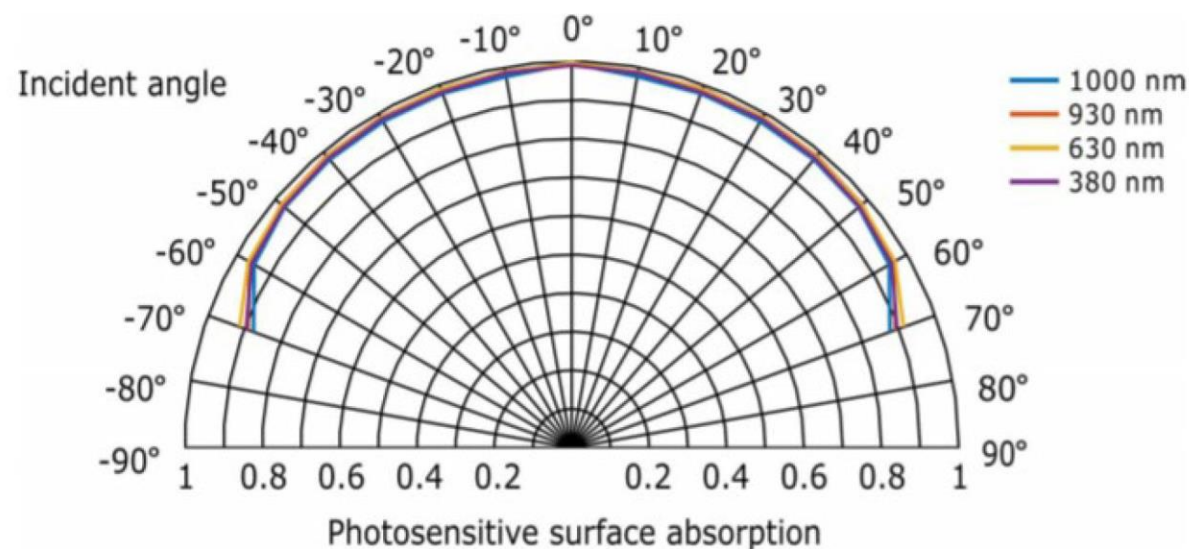
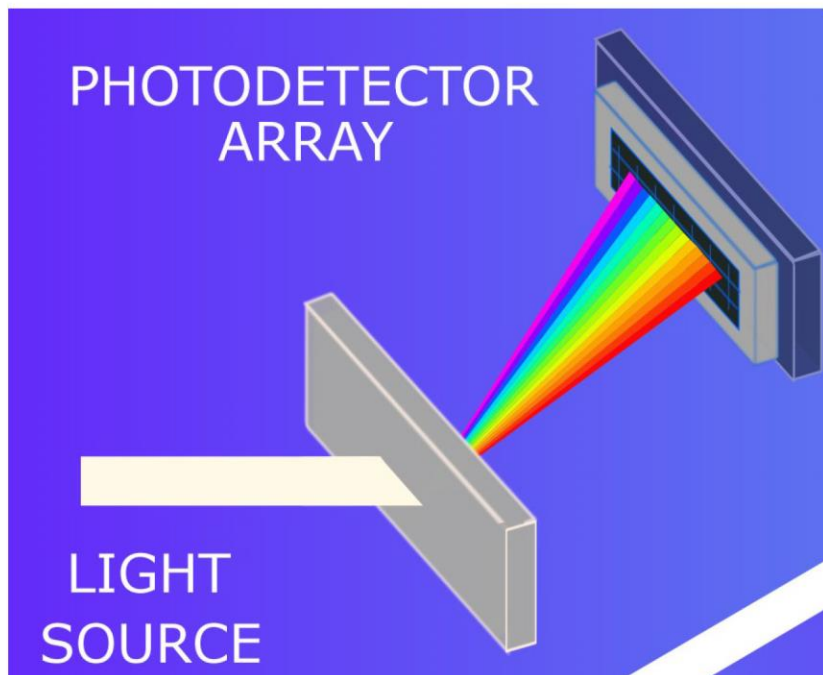
92% vs. 80%

=> 15% improvement

- More accurate data with higher efficiency – improved performance, new parameters and features
- Less power needed to achieve same signal as before – extended battery life
- Smaller diode can be made to obtain same signal as before – smaller device, design freedom
- Similar benefits apply to any light sensing application

Wide effective sensing angle

Ultra large effective incident angle, **90% @ 70°**



- Higher photosensitivity across whole Si spectrum
- Simple optical system design without reflection

ELFys team



15 full time, 2 part time personnel

- 7 women
- 5 nationalities
- 7 native languages (+ English)

M.Sc. Daria Kriuvova
Test Engineer

M.Sc. Mikko Rasa
Manager, Sales and Marketing

D.Sc. Ji Fan
Program Manager

B.Sc. Laura Tervo
Process Engineer

M.Sc. Michael Serue
Project Engineer

D.Sc. Juha Heinonen
Manager, Operations

D.Sc. Toni Pasanen
Project Engineer

M.Sc. Susanna Heinlahti
Controller

M.Sc. Sanni Lassila
Process Engineer

D.Sc., MD Antti Haarahiltunen
CTO, board member

D.Sc. Mikko Juntunen
CEO

Lic.Sc. Timo Koljonen
VP Operations

Not in the picture:

M.Sc. Tapio Sulkava
Chairman of The Board

D.Sc. Juha Toivanen
VP Business Development

D.Sc. Chiara Modanese
Sr. Project Engineer

M.Sc. Camilla Koivu
Marketing

Prof. Hele Savin
Senior Scientific Advisor

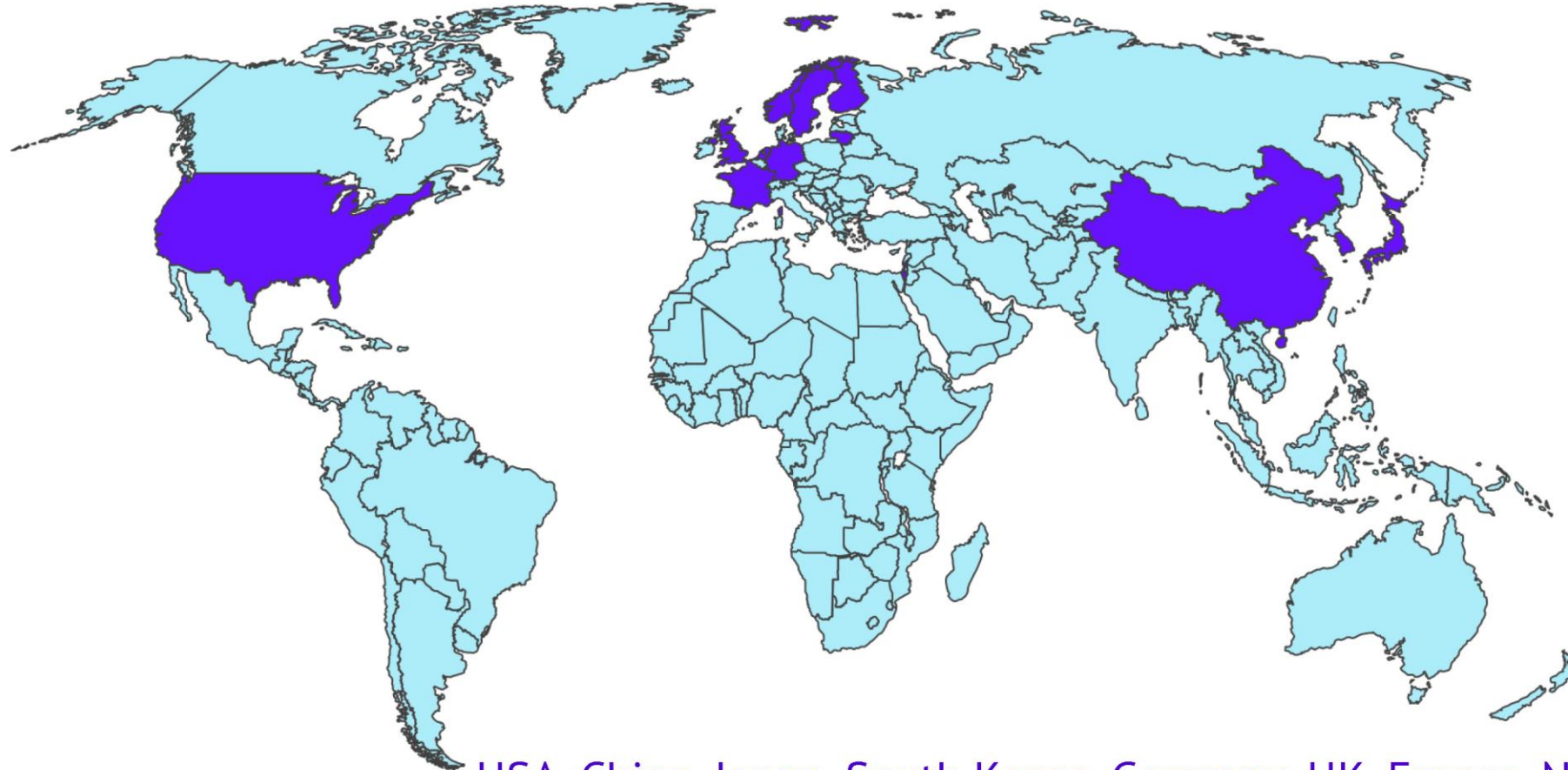
D.Sc. Ville Vähänissi
Project Engineer





Serving customers globally

>50 customers in 13 countries



USA, China, Japan, South Korea, Germany, UK, France, Netherlands, Israel, Sweden, Norway, Lithuania, Finland, and more to come!



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