



*dr. Lennart de Vreede*

- **MESA+** founded in June 1990 – a 30 years track record in micro- and nanotechnology ~600 fte
- Application areas: Health - Climate - Security
- Infrastructure: Nanolab with high-end lab equipment and cleanroom facilities. ~100M€ on cleanroom equipment and analysis tools
- Centres:
  - Organ on chip
  - **Quantum- materials, electronics and photonics**
  - **Integrated photonics**
  - Brain inspired computing
  - Molecules
  - Batteries
  - Low energy data centre

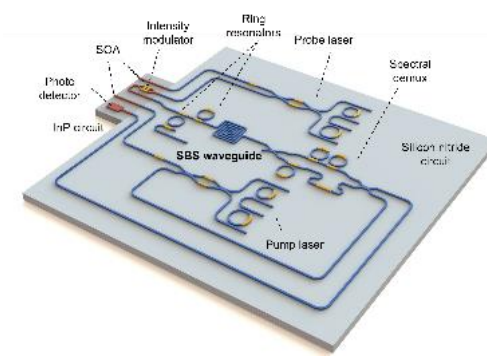
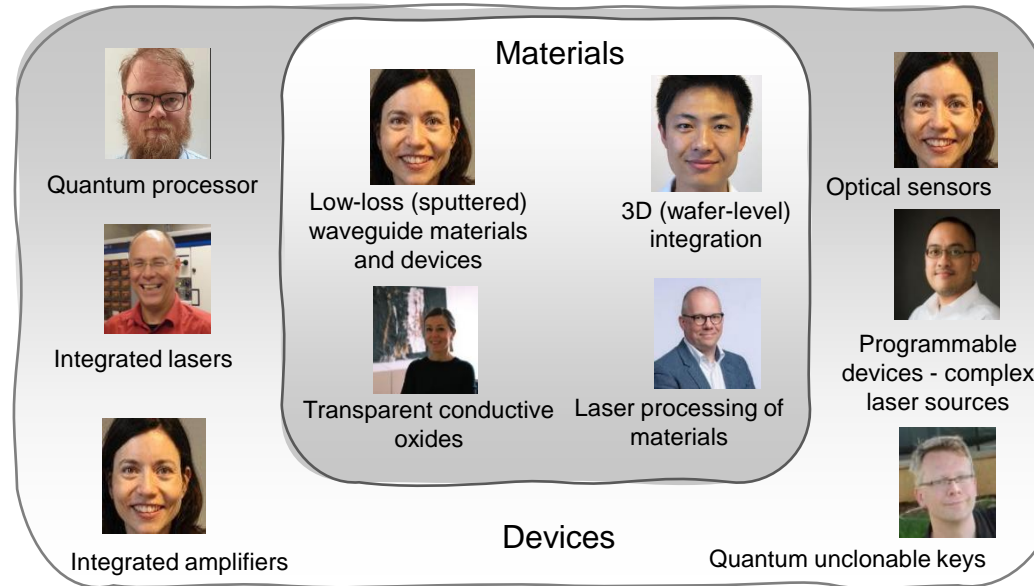
- Facilitating both academic research and industrial development





dr. Lennart de Vreede

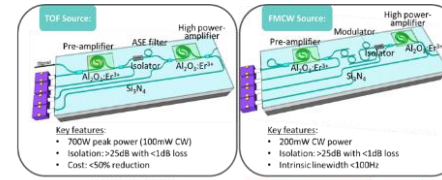
- **MESA+** founded in 1990 – a 30 years track record in micro- and nanotechnology ~600 fte
- Application areas: Health - Climate - Security
- Infrastructure: Nanolab with high-end lab equipment and cleanroom facilities. ~100M€ on cleanroom equipment and analysis tools
- Centres:
  - Organ on chip
  - **Quantum- materials, electronics and photonics**
  - **Integrated photonics**
  - Brain inspired computing
  - Molecules
  - Batteries
  - Low energy data centre
  - Chip Tech Twente



Brillouin gain in Si<sub>3</sub>N<sub>4</sub>



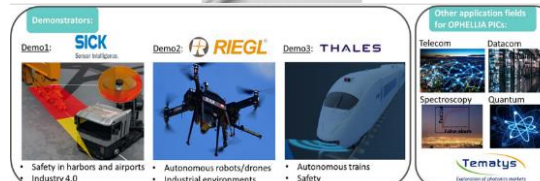
Quantum processing



PIC/packaging partners: UNIVERSITY OF TWENTE, Lion, KEOPYS INDUSTRIES, vanguard AUTOMATION



Building blocks: Pre-amplifier, High power amplifier, Isolator



Integrated LIDAR systems



# Open access Pure play PIC foundry:

To empower the ecosystem in Twente and expand on chip technologies: R&D, chipdesign, chip production, back-end & application

**NEW  
ORIGIN**  
HIGH TECH FOUNDRY

## Motivation:

- Photonics, Electronics and Microfluidics are Key Enabling Technology
- The Netherlands is ahead in integrated photonics
- Twente has a leading position for Silicon Nitride production and IC chip design



UNIVERSITY  
OF TWENTE.

MESA+  
INSTITUTE

*dr. Lennart de Vreede*

ASPIRE

先端国際共同研究推進事業

Adopting Sustainable Partnerships for Innovative Research Ecosystem

日本語

English



国立研究開発法人  
科学技術振興機構

事業について

公募情報

お問い合わせ・アクセス

## 2023年度 先端国際共同研究推進事業（ASPIRE）研究提案の募集について

JSTトップ > 先端国際共同研究推進事業 > 2023年度 先端国際共同研究推進事業（ASPIRE）研究提案の募集について

令和5年6月6日

先端国際共同研究推進事業（ASPIRE）研究提案の募集を開始します。

▶ [Link to English page for 2023 open call](#)

JSTは、我が国の科学技術力の維持・向上を図るため、優秀な若手研究者等の科学技術先進国への渡航や海外からの若手研究者の招聘、トップレベルの国際共同研究を通して、最先端の研究開発に繋がるネットワークを構築しつつ、国際的にリードしていく研究者の育成に資する課題提案を募集します。

UNIVERSITY  
OF TWENTE.

MESA+  
INSTITUTE



Dr. ing. Lennart de Vreede

Impact Development Manager

SBD | MESA+ institute for Nanotechnology

+31 (0)53 489 9267

+31 (0)6 3860 7649

[l.j.devreede@utwente.nl](mailto:l.j.devreede@utwente.nl)

[www.utwente.nl](http://www.utwente.nl)

