



Two research pillars

Integrated Photonics



National Growth Fund
Integrated Photonics
(471 M€)

Quantum Technology



National Growth Fund
Quantum technology
(615 M€)



Integrated Photonics

Materials



- ➤ InP, IMOS, SiGe, 2D materials
- Strong-light matter interaction on structured surfaces
- ➤ <u>Plasma physics, atomic</u> scale processing

Devices



- PIC design for telecom, datacom, LiDAR, agrifood, OCT, neuromorphic
- Spintronics and magnetic properties
- ➤ JePPIX: MPW, pilot line, training, academic IMOS MPW
- > Automated testing

Systems



- ➤ <u>High-Capacity Optical</u> Transmission
- ➤ <u>Low-latency Interconnect</u> Networks
- ➤ Optical Access & Indoor Networks
- ➤ Terahertz Photonic Systems



We are looking for opportunities and partners

- ➤ Material & device development for co-integrated electronics and photonics: establishing *logic and RF platforms* together with photonics platforms (e.g. <u>WIPE project</u>)
- Advanced components for quantum key distribution (e.g. single photon emission/detection)
- ➤ Partners for novel pilot line produced PIC devices (JePPIX, 4" pilot line, academic IMOS MPW)
- Design and implementation of Ising solvers via coupled oscillatory neural networks; collaborations on Ising machine benchmarking

And more... Interested? Contact: m.trajkovic@tue.nl





