

Thermal Management in Photonics Packaging

Joint workshop of Swissphotonics NTN
(SPPL - Swiss Photonic Packaging Laboratory)
with CSEM SA

Stefan Mohrdiek, 03.04.2019

Why is this workshop different ?

Thermal Management in Photonics Packaging

- Design for optical, electrical, thermal, and mechanical integrity
- Key issues: heat dissipation and thermal stresses
- Selected solutions in various areas of applications

2

Your mission today

- Expand your view in the field of photonic packaging
- Discuss solutions in the networking environment provided
- Enjoy yourself 🤗

CSEM - Swiss Center for Electronics and Microtechnology

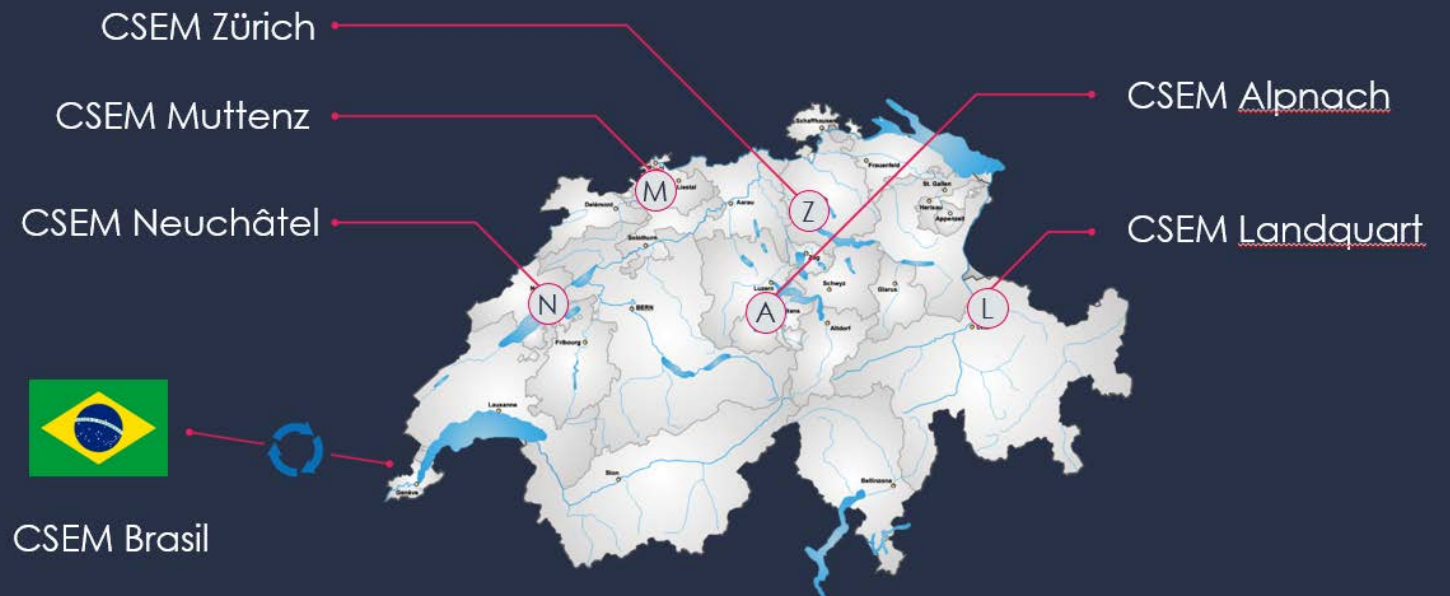
Our mission

Development and transfer of microtechnologies to the industrial sector

- :: Close to industry, leveraging Swiss academic research
- :: Cooperation agreements with established companies
- :: Encouraging the creation of start-ups

Non-profit organization

- :: Public private partnership
- :: 440 people



Swiss Photonic Packaging Lab (SPPL)

Aims to be a one-stop shop contact



to serve and support photonics packaging and related joining technologies

<https://www.swissphotonics.net/labs/packaging/sppl>

Partners

Centre Suisse d'Electronique et de Microtechnique



Institute for Micro- und Nanotechnology



Laboratory for Joining Technologies & Corrosion



Agenda: Thermal Management in Photonics Packaging

- 11:00 Welcome Dr.-Ing. Stefan Mohrdiek, Moderation, CSEM SA and SPPL
Dr. Christian Bosshard, Swissphotonics NTN
- 11:10 – 12:15 Labtour / Showroomtour CSEM; in 2 groups ½ hour each
- 11:45 – 13:00 Lunch, Sponsoring Swissphotonics NTN
- 13:00 – 13:20 Joël Grognez, CADFEM, Multiphysics numerical simulation for photonics packaging
- 13:20 – 13:40 Dr. Bruno Michel; IBM, Ultimately Dense and Efficient Future Computers
- 13:40 – 14:00 Dr. Antoine Müller; Alpes Laser, Thermal management of Packaged QCL
- 14:00 – 14:20 Dr. Johanna Wolf; II-VI Laser Enterprise, Actively Cooled Diode Laser Bars: Requirements and Assembly Technology
- 14:20 Networking Break
- 15:00 – 15:20 Prof. Dr.-Ing. habil. Jolanta Janczak-Rusch; Empa, Nanojoining technologies for miniaturized assemblies
- 15:20 – 15:40 Dietmar Bertsch; Institut für Mikro- und Nanotechnologie MNT, NTB, Cooling methods for high thermal load devices
- 15:40 – 16:00 Guido Spinola Durante; CSEM, Thermal Management Solutions for Optoelectronics Packages
- 16:00 Discussion of topics, all presenters, moderator with audience
- 16:30 Apéro riche, Sponsoring Swissphotonics NTN

Dr.-Ing. Stefan Mohrdiek
Head Packaging & Optics
Stefan.Mohrdiek@csem.ch

T +41 41 672 7528

M +41 76 364 8282

CSEM SA

Untere Gründlistrasse 1

CH-6055 Alpnach Dorf

