



# **INDTECH2018**

## **Innovative industries for smart growth**

29-31 October, 2018  
Vienna, Austria

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**PILLAR 2**

**Session 2.2**

**Cost-effective micro-structuring technologies for devices aimed to improve clinical diagnostics**

**Anneliese Pönninger**

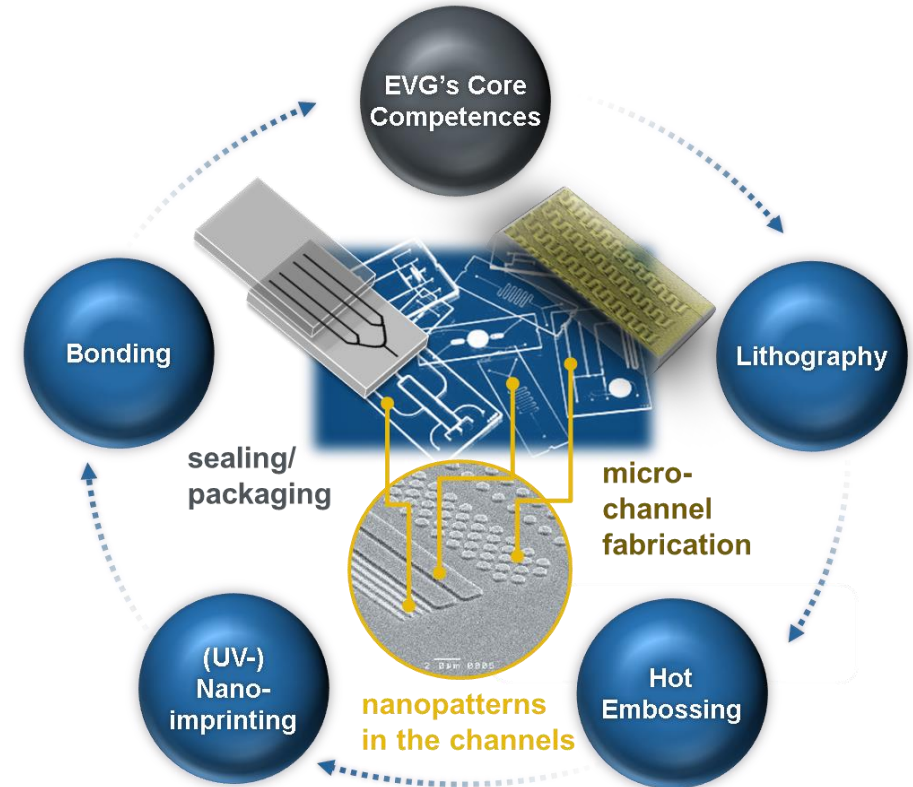
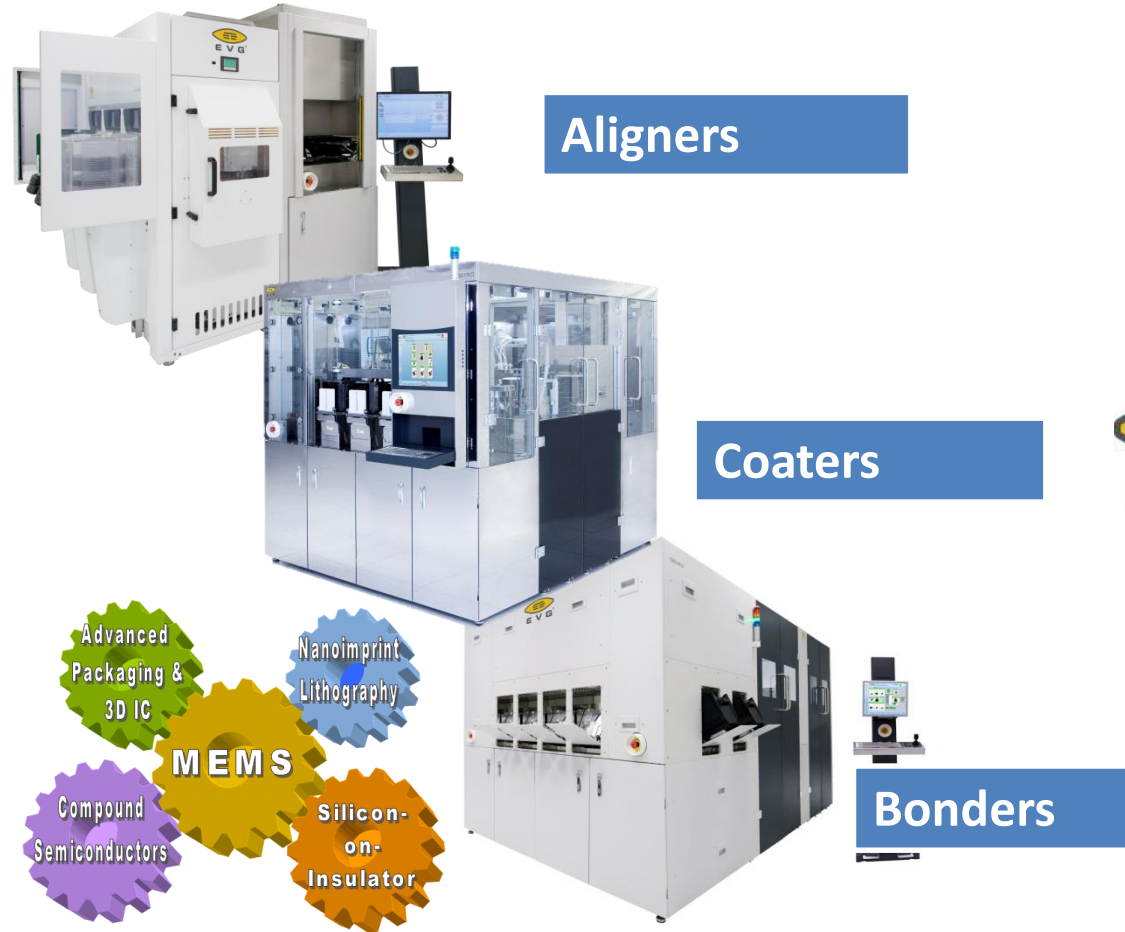
**EV Group**

**Sankt Florian am Inn, AT**

**30 October 2018**



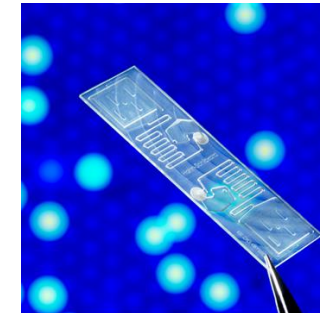
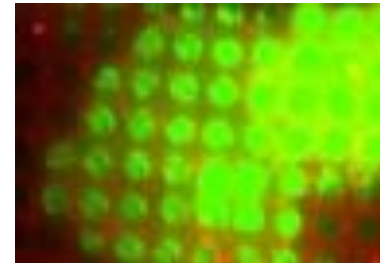
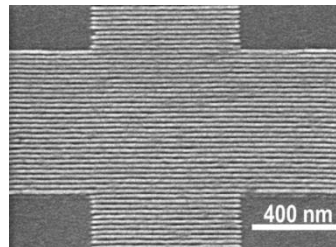
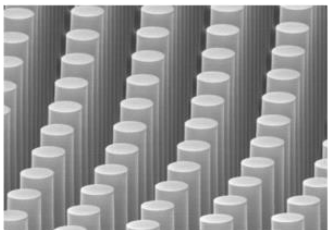
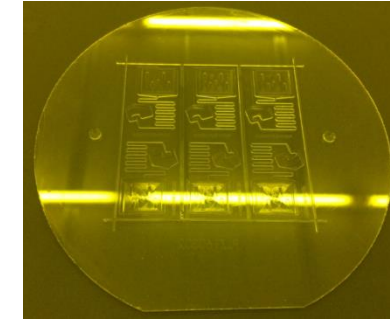
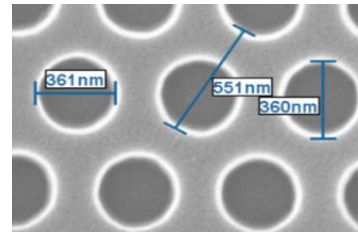
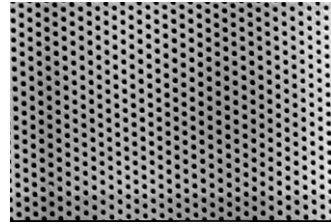
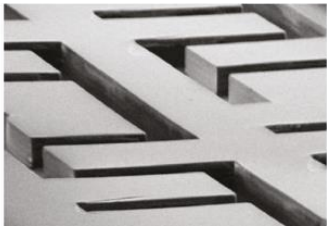
From micro-electronics to bio-medical applications?



## Technology transfer and adjustment

### FP 7- H2020- National Funding

Lab-on-Foil -ANGELAB- R2R Biofluidics- Saphely- Phocnosis- Holifab- StarPatt



## Challenges

### Traceability

- **Tracking of each single device**
  - Device specific ID
  - SAP database
  - Comprehensive documentation
  - Supplier compliance
- **Quality control**
  - 100% device inspection
- **Regulations**
  - FDA
  - MDR, IVDR

### Low Cost

- **Throughput**
- **Yield**
- **Equipment and operational cost**
- **Material cost**

#### New technologies required in the supply chain

- **Large area substrates (300mm round, >> panels)**
- **Patterning at decreasing pitch**
- **Fast processes and quality control**
- **Minimized material consumption**

### Bio-compatibility

- **Processing new materials**
- **Extend the Library of qualified materials for bulk devices**
- **Encapsulation process and material development for new requirements**

## Achievements

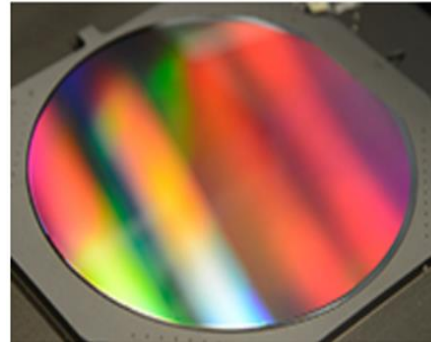


### EVG® HERCULES® NIL

HVM UV-NIL System 200 - Integrated pre-processing



- **Demonstration of patterning technologies for low cost products**



- **Semi-automated pilot-line in our cleanroom**



- **Joint Developments with customers on global level**
- **First audit survived**
- **R&D for in-vitro components initiated**

**Demo Processing at EVG: UV-NIL on Gen2 substrates (370 x 470 mm)**

And now?

## More challenges

- **Fragmented and volatile market**
- **Interdisciplinary approach**
- **Fragmented scientific community**
- **Big players not settled**
- **Foundry business not established**
- **Frontrunners are in US, China and other Asian regions**

## Gaps in Europe

### Focus in R&D

- **Hidden in ICT, NMBP and ECSEL**
- **Fragmented in EU, national and regional levels**

**Interdisciplinary communication**

**Link between the „silos“**

**Implementation of H2020 results in production and exploitation in business cases**