

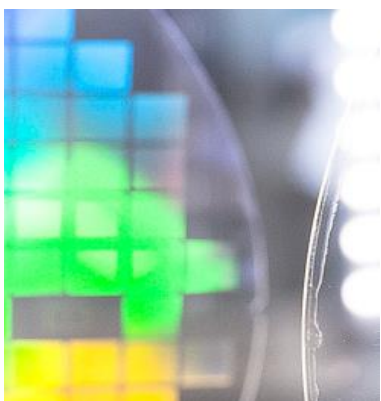
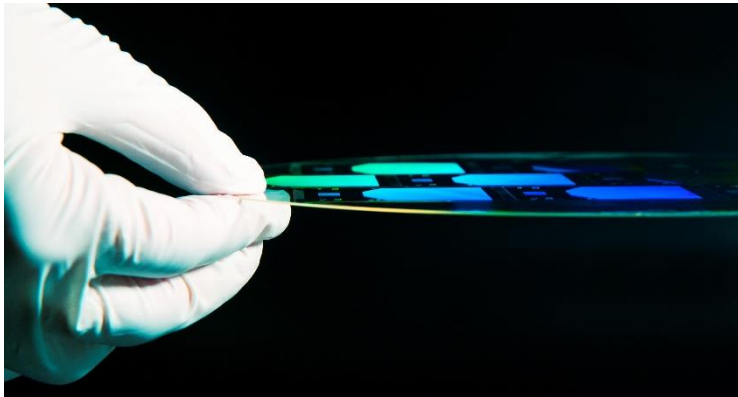
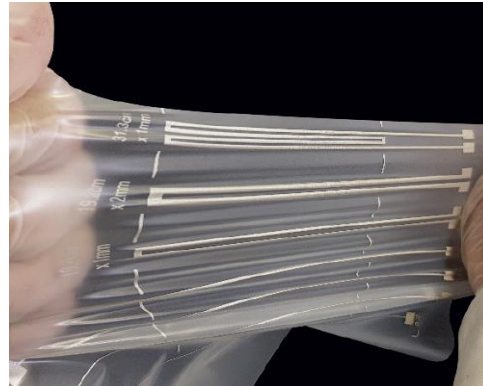
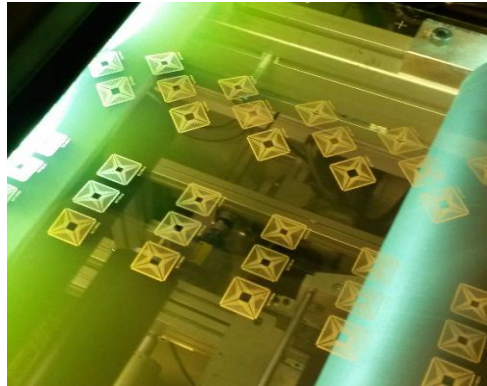


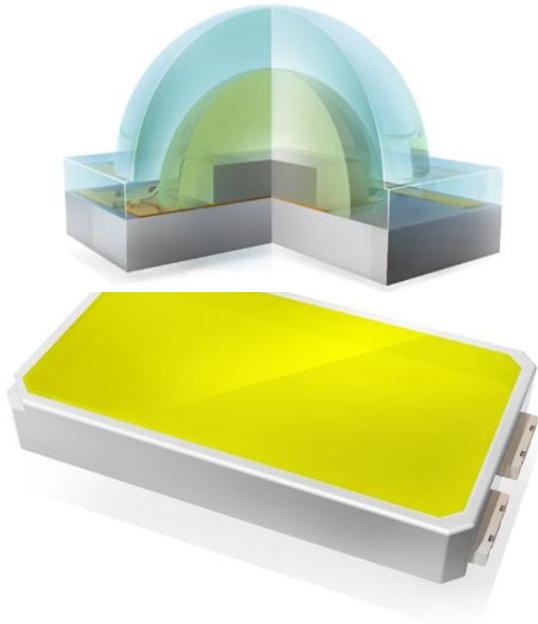
EPIC Online Technology Meeting on
Polymer Optics
July 6, 2020

Jukka Perento
Inkron Oy

The siloxane monomer and polymer expert

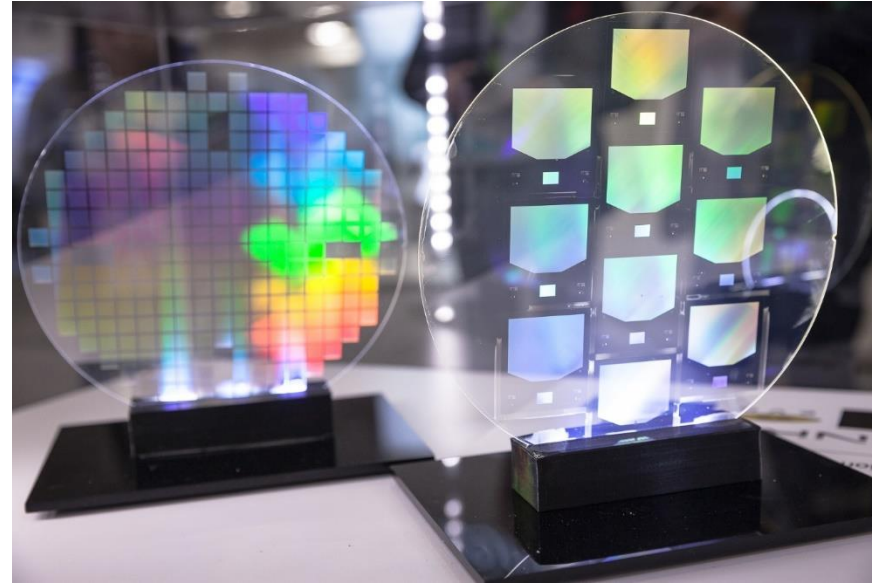
- ISO-9001 certified Nagase Group Company
- **Core competence:**
 - In-house synthesis of the resins
 - In-house formulation
 - Siloxane based application specific formulated products
- **Key attributes of Inkron products:**
 - Transparent and clear
 - Thermally and optically stable
 - Low and High Refractive Index coatings





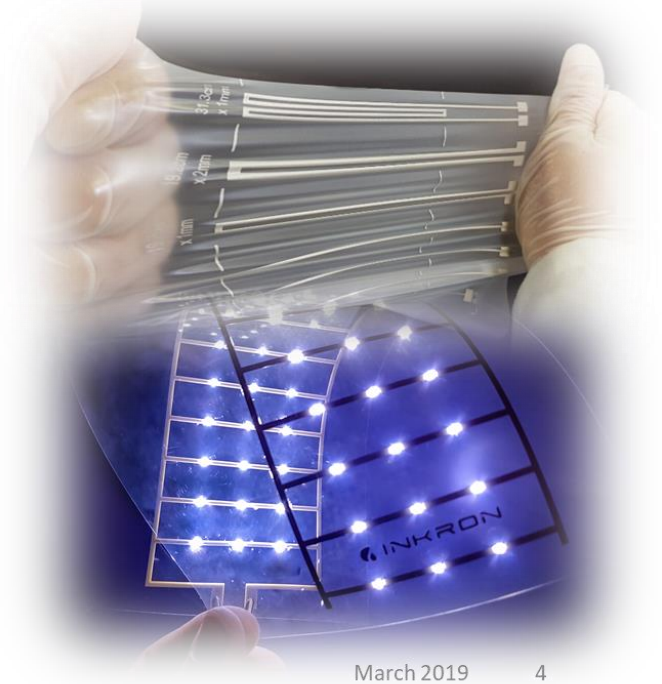
Optics Packaging

- Adhesives for optical devices
- High RI Encapsulant
- Applications:
 - Lighting solutions
 - Sensors
 - General optics



Optical Devices (NIL/DOE)

- High and Low Refractive index light management coatings
- Nanoimprint Lithography (NIL) materials
- Applications
 - AR waveguides
 - 3D sensors
 - Diffractive optics and more



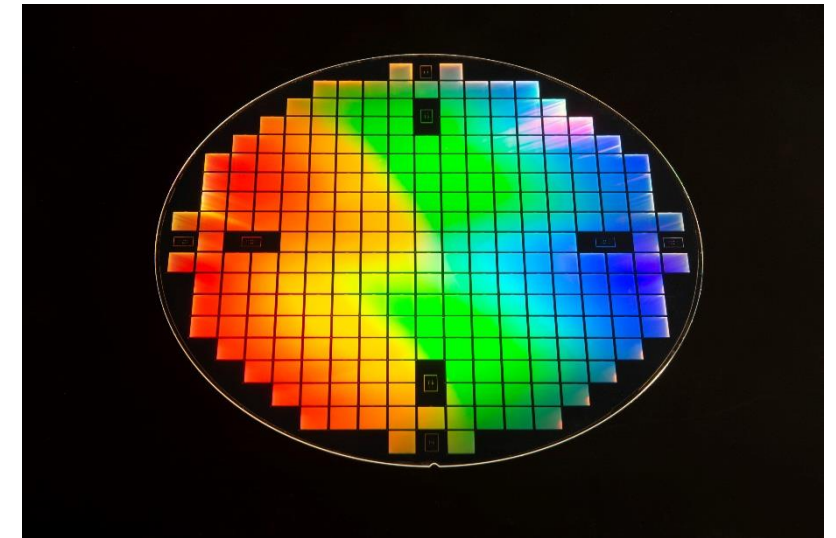
Printed Electronics

- Screen printable and inkjettable Conductive and dielectric inks
- Applications
 - Wearables
 - In-Mold-Electronics
 - And more

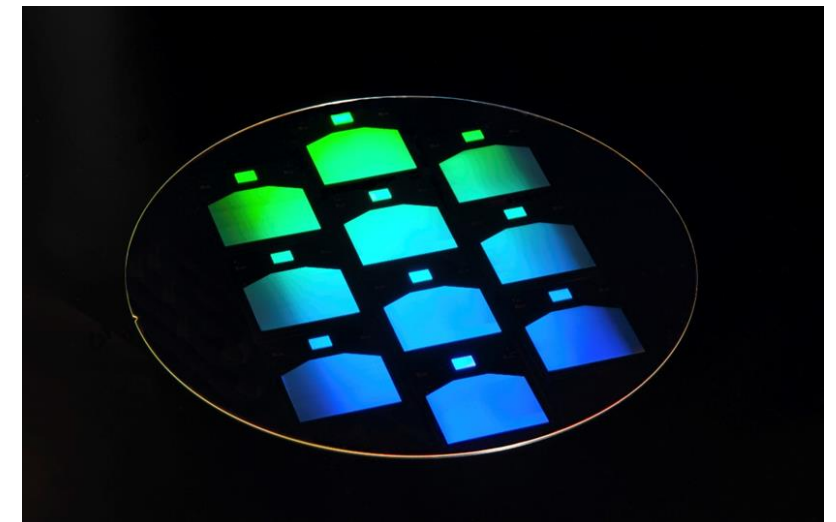


Inkron's standard portfolio of Optical Coatings

| | LOW-RI | | MED-RI | |
|----------------|-------------------|------------------|------------------|--------------------|
| | IOC-560 | IOC-501 | IBA-210 | IOC-110 |
| RI | 1.10-1.25 | 1.25 | 1.40 | 1.55 |
| Solvent system | Solvent | Solvent | Solvent | Solvent free |
| Cure | Curing: 180-230°C | Curing: 90-230°C | Curing: UV+150°C | UV curing |
| | | Gap Filling | Gap Filling | Nanoimprinting NIL |



| | HIGH-RI | | |
|----------------|--------------------|--------------------|--------------------|
| | IOC-172 | IOC-132 | IOC-133 |
| RI | 1.58 - 1.74 | 1.75 - 1.82 | 1.8 - 1.9x |
| Solvent system | Solvent | Solvent | Solvent |
| Cure | UV-curing | UV-curing | UV-curing |
| | Nanoimprinting NIL | Nanoimprinting NIL | Nanoimprinting NIL |

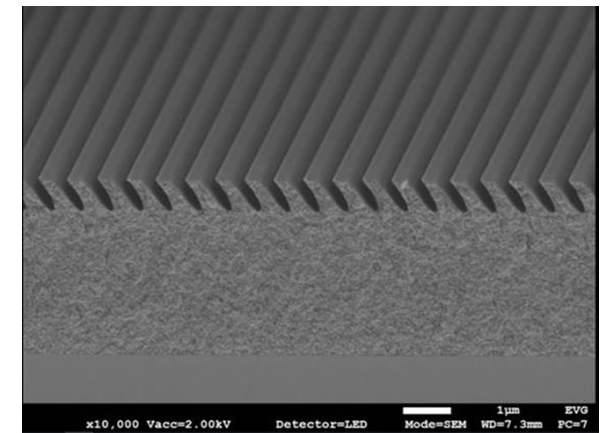


Images. EVG, Waveoptics & SCHOTT



Customized material solutions and NIL capability

- **What can Inkron do for you ?**
- Specialist in high and low RI coatings
 - In-house NIL capability to support your component development
 - Complete material solutions for DOE and NIL
 - Gap filling ultra low refractive index (RI) coatings starting from 1.1 RI
 - Thermally stable NIL processable high RI coatings (Up to and over 1.9x)
 - Customized formulations
- **What are we looking for?**
 - Partners interested in developing new NIL based DOE designs and applications





THANK YOU!

PS. New product releases
in the pipe-line, stay
tuned!



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