

E-TEXTILES RESEARCH



Today's world is full of intelligent electronic devices based on conventional, rigid silicon chips. By making smart systems flexible and stretchable, we now have the possibility to embed intelligence directly into wearables, clothing, technical textiles, changing the way we interact with electronics. Soft, even stretchable micro-electronics, integrated on textiles feel comfortable on the skin, merge seamlessly in a soft, yielding environment.

CMST (imec-UGent) develops flexible and stretchable electronics technology and generic components to enable electronic intelligence embedded in wearables, textiles, plastics, etc.

Research is performed in the following application domains:

- Wearable light therapy platforms
- Washable smart garments with integrated sensors (temperature sensing, body posture monitoring, etc.)
- Smart socks for movement analysis
- Soft sensors measuring ECG for animals
- Soft pressure sensors
- Smart diapers for moisture detection
- Orthoses with integrated sensors
- Smart wound dressings
- Smart surfaces with integrated lighting, touch and energy harvesting
- Integration of electronics in garments without reduction in comfort

Check our website www.cmst.be to know more about our research and scientific publications.

OUR OFFERING

- Flexible and stretchable electronics technologies
- Packaged sensors on smart narrow fabrics
- A technology platform ready for prototyping and low-volume manufacturing of your innovative products
- A worldwide network of manufacturing partners
- Experience R&D teams to realize your application-specific custom developments
- Continuing research to create the best user experience and performance

The technologies are available, waiting for your ideas!



CMST



imec

embracing a better life

WHO WE ARE

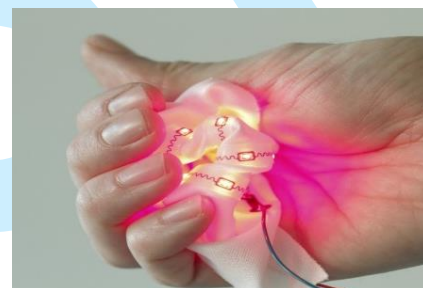
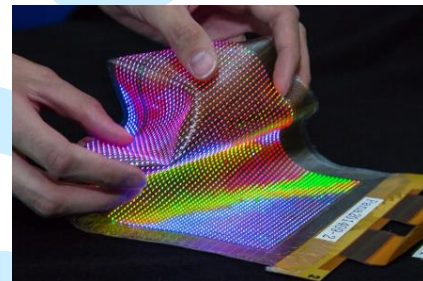
The work presented in this flyer is performed at imec's **Centre for Microsystems Technology (CMST)**, located at Ghent University. CMST is specialized in electronic interconnection and assembly on various substrates (laminates, thick and thin films, flex and stretch substrates), optical interconnection and opto-electronics packaging, and electronic and optical design activities, bringing together expertise from electronics, mechanics, physics and chemistry.

imec (www.imec.be) is the world-leading R&D and innovation hub in nanoelectronics and digital technologies.

Ghent University is an open, pluralistic and socially engaged university. It is more than 200 years old, offers more than 200 programmes (including 64 English-taught master's programmes) and conducts in-depth research within a wide range of scientific domains. Our credo is 'Dare to Think: we are a haven for courageous thinkers'.

COLLABORATION

CMST is geared to working with industry on a daily basis via different collaboration modes. We participate and take the lead in defining both Horizon Europe and regionally funded projects with companies. We engage regularly in bilateral developments-on-demand, both with large enterprises, established SMEs and start-ups. We provide samples or process steps as a service for evaluation and we provide direct access to third parties to our processing and characterization infrastructure for their proprietary research (see <https://www.ugent.be/namifab/en>). In this way we offer a partnership to companies covering everything from joint research on early stage, low-TRL ideas to higher-TRL bespoke developments, including technology transfer and support to the supply chain of the company.



Offices



Cleanroom



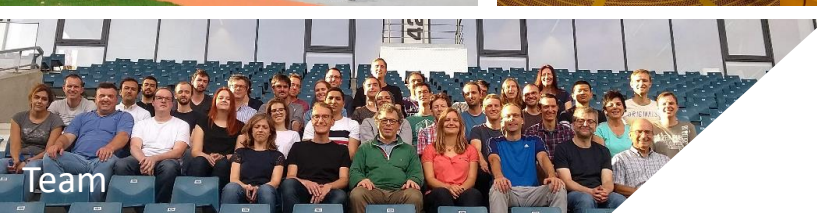
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Team



CMST

