



## OTHER FACTS

### 01 IMEC CAMPUS

To carry out its advanced research, imec has ultramodern research facilities that we continuously expand:

- a 200mm and 300mm cleanroom
- a new 450mm-ready cleanroom (ready in March 2016)
- a silicon and organic PV pilot line
- state-of-the-art labs for R&D on imagers, wireless communication and life sciences
- advanced metrology labs

### 02 CORPORATE SOCIAL RESPONSIBILITY

Imec's focus on social responsibility is driven by our values that define our way of doing business. We strive for integrity, passion, connectedness and excellence. We care for the well-being and education of our people. We value diversity in the workplace and we endeavor solidarity around the globe. We respect our planet through an environmentally friendly way of working. We are committed to develop nano-enabled solutions in ICT, healthcare and energy that allow people to have a better life in a sustainable society.

### 03 IMEC AS EMPLOYER

Imec stands for groundbreaking research that leads to innovative technological developments. We also continue to be a world leader in nanotechnology. Something we can't achieve alone. That's why imec is constantly recruiting new talent. We offer multiple challenging career opportunities in an international and innovative high-tech environment. Our current vacancies are listed at [www.imec.be/jobs](http://www.imec.be/jobs).

#### IMEC - YOUR INNOVATION PARTNER

- Joint R&D – global open innovation platform
- Transfer and licensing
- EC consortium programs
- Training via imec academy – learning for excellence
- Services such as imec IC-link, a reliable single point of contact to turn ideas into silicon products
- Collaboration with local industry via imec interact
- Spin-offs

## READ THE MONTHLY IMEC MAGAZINE



Want to know more about the many surprising possibilities of nanoelectronics?

- Foldable solar cells
- Complete medical laboratories on a chip
- Ever faster smartphones and computers ...

Or do you want to know what happens behind the scenes of our research center? Then have a look at the imec magazine. You can read this monthly magazine as app for tablet and smartphone for iOS or Android. Or on the website [magazine.imec.be](http://magazine.imec.be). The magazine is available in both English and Dutch.



Android

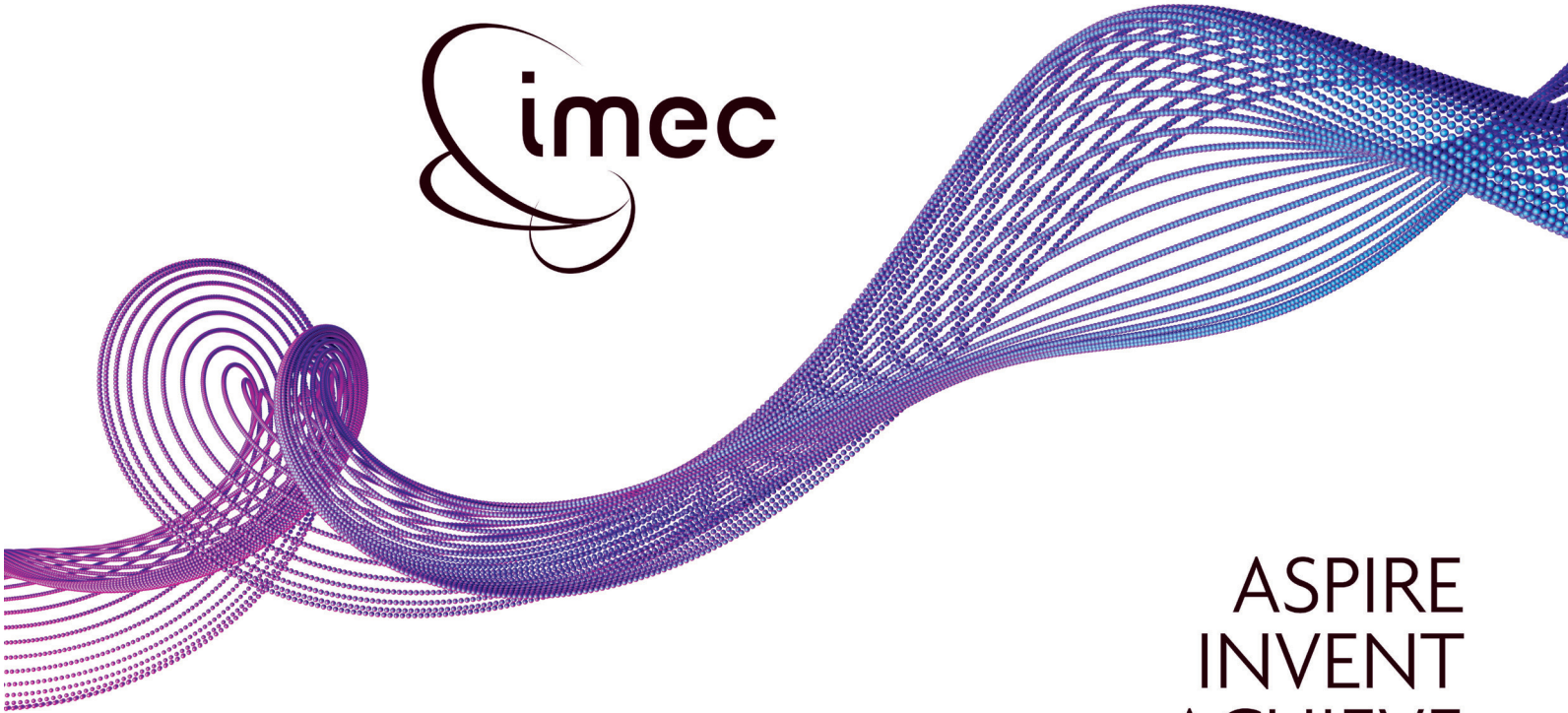


iOS

[www.imec.be](http://www.imec.be) - [info@imec.be](mailto:info@imec.be) - app name: imec int

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# IMEC AT A GLANCE



ASPIRE  
INVENT  
ACHIEVE

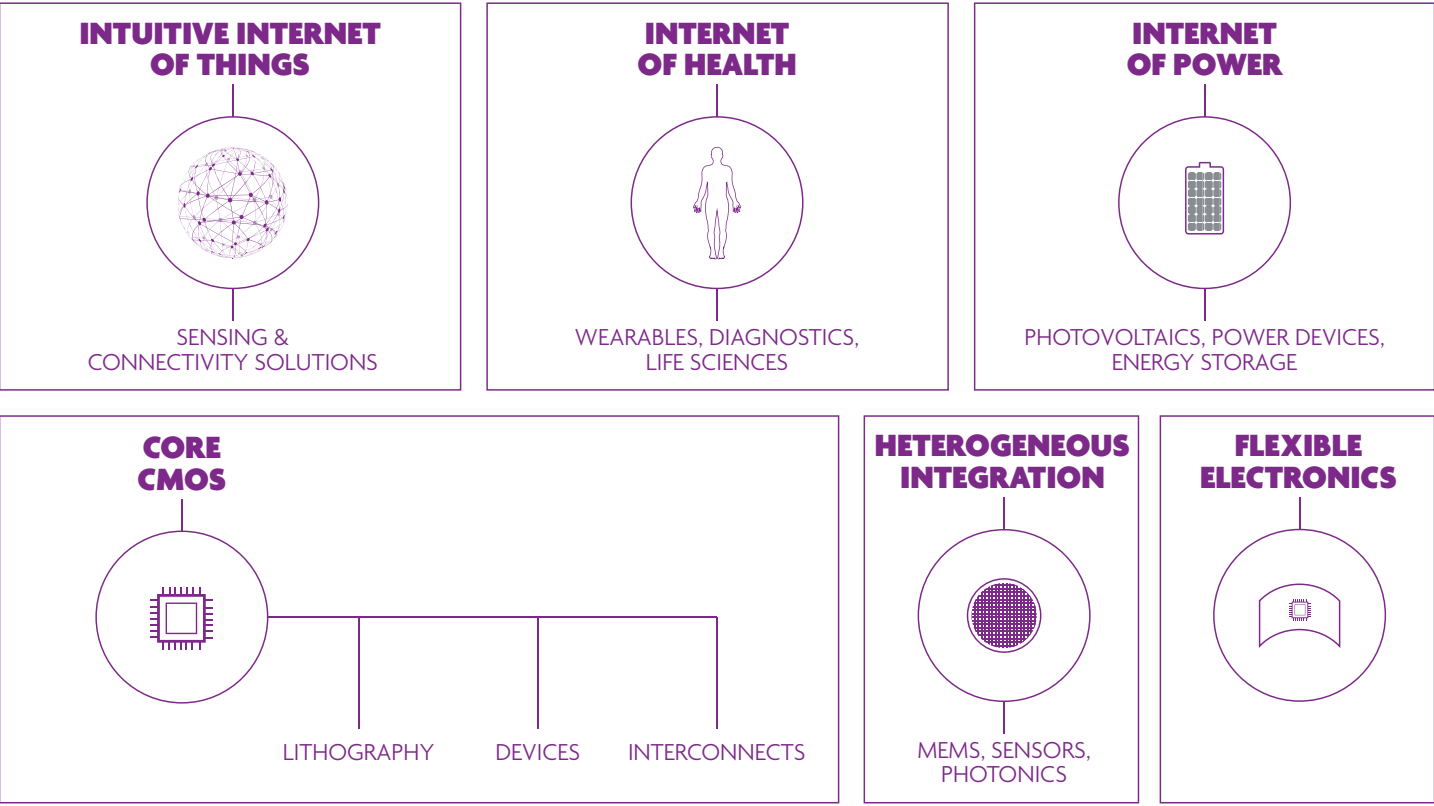




# ABOUT IMEC

Imec is the **premier R&D** lab for nanoelectronics. Our goal: creating the solutions and **building blocks** for a **better, healthier life** in a **sustainable environment** – through **innovations** in **nanoelectronics**. In our research labs, scientists and engineers collaborate with experts from our partners – top companies, research institutes and universities in semiconductor technologies, healthcare, energy, communication and Internet of Things. Imec is headquartered in **Leuven**, Belgium and has offices in the Netherlands, Taiwan, USA, China, India and Japan. We have a **staff** of over **2,300** including almost 700 industrial residents and guest researchers. In 2014, imec’s **revenue** (P&L) totaled **363 million euro**.

# IMEC INNOVATION PLATFORM



Imec has a **two-layered innovation platform**. The basis is formed by our **technology R&D platforms** in Core CMOS, heterogeneous integration, and flexible electronics. These allow us to create innovative solutions for our **three application domains**: the Intuitive Internet of Things, Internet of Health and Internet of Power.

# TECHNOLOGY R&D PLATFORMS

## 01 CORE CMOS

Imec has driven the semiconductor roadmap for more than 30 years. With its global nanoelectronics open innovation platform, imec brings together the entire semiconductor ecosystem including the leading foundries, IDMs, fabless and fablite companies, material and equipment suppliers. Together we develop new technologies and processes for sub-10nm CMOS scaling, both for logic and memory technology. Looking even 10 years ahead, we explore options to create chips with transistor dimensions smaller than 5nm. We pioneer the use of new materials and transistor architectures, processing technologies, integration and design methods, 3D system integration and high-bandwidth optical input/output between system components.

## 02 HETEROGENEOUS INTEGRATION

Imec tunes and extends CMOS processes with new processing steps, adding functions other than logic and memory (such as mechanical, chemical and optical functions). Possible applications are specialty imagers (e.g. EUV sensors, high-speed sensors) or photonic ICs (e.g. biosensors, Ge detectors). We offer development-on-demand, prototyping and low-volume production.

## 03 FLEXIBLE ELECTRONICS

Imec and Holst Centre develop the technology and generic components to make flexible electronic systems and displays. These will be the basis of a wide range of future applications: e.g. a flexible and pliable tablet computer, wall covering that displays games and information, or food labels that show how fresh a product is.

# APPLICATION-DRIVEN RESEARCH PROGRAMS

## 04 INTUITIVE INTERNET OF THINGS

Imec develops the building blocks for an easy-to-use, intuitive internet of things that surrounds us unnoticed. That interacts with us as individuals and learns from our habits, our preferences, our health... An internet of things that will connect a wide range of systems. That will turn the massive amount of monitored data into information to make the right decisions and take the right actions, taking our privacy into account. Our R&D includes compact and power-efficient sensor modules, innovative wireless connectivity, and flexible integration technologies.

## 05 INTERNET OF HEALTH

Worldwide, there is a need for a sustainable healthcare system based on preventive, predictive and personalized medicine.

- Imec and Holst Centre develop technologies for wearable health and lifestyle multi-sensor platforms with medical accuracy. These will play a key role in empowering people to live a healthier life and to prevent diseases. Examples are wearable sensors that measure our physical activity, stress, cardiac activity, brain activity, ...
- Within our life science research, we develop very powerful instrumentation that will facilitate both discovery in the lab and routine diagnostics anywhere and anytime. These are disruptive nanotechnology solutions e.g. for ultrafast sorting of human cells looking for stray cancer cells, for the analysis of DNA markers, or for stem cell culturing to help select and

- develop better (personalized) drugs.
- Also at imec, NERF (NeuroElectronics Research Flanders), set up by imec, KU Leuven and VIB, aims to unravel the neuronal circuitry of the human brain.

## 06 INTERNET OF POWER

To make the world’s energy consumption more sustainable, our electricity grid will be redesigned, adding extra components and functions to allow a bidirectional electricity flow.

- We are working to find new materials, process steps, and cell structures to improve the efficiency of silicon solar cells and to make their production cheaper. In addition, we also improve thin-film solar cells in the framework of Solliance, a world-class solar energy consortium situated in Eindhoven, The Netherlands.
- The future smart grid will run on mass-produced, micro-sized power-electronics, such as power inverters. To fabricate these components, imec is developing a cost- and power-efficient technology: galliumnitride-on-silicon.
- In the field of energy storage, we focus on composite electrolyte batteries, which will have a higher power and energy density than today’s thin-film or Lithium-Ion batteries.