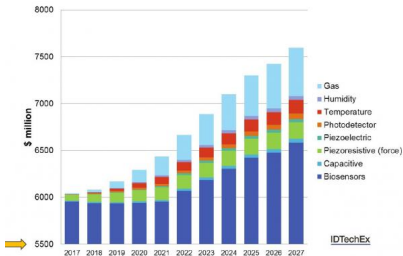


## Personalized cosmetics: a low-hanging fruit for printed biosensors: Page 4 of 4

April 10, 2018 // By Julien Happich



Although AFELIM members gathered in Paris under the general theme "printed sensors", the focus was clearly on biosensors during the "Rencontres électronique imprimée".

For health applications, the trends are point-of-care diagnostics and personalized therapy enabled through portable and disposable sensors to be used by the patient directly, doing away with large and costly lab equipment. Now, a bigger trend that Noel sees is the convergence of point-of-care diagnostics sensors with the identification of biomarkers for personalized care. Ideally, the pharmaceutical industry would like to associate companion auto-diagnostics biosensors with every pharmaceutical, enabling the patient to ensure that the treatment is relevant to his/her condition, out-of-the-box. This may be happening within the next 10 years, anticipates the researcher.

"Printed bioelectronics is right at the convergence point of that hypertrend" Noël said, notably thanks to EGOFETs. One drawback though, is that the health market is very competitive and heavily regulated, making it difficult and costly to get any product certification.

On the other hand, many active molecules and administration modes could easily be transferred to cosmetics for so-called skin point-of-care, under much less scrutiny. Cosmetics is largely marketing driven and Luxury brands in particular are very good at adding value out of virtually nothing, he noted jokingly.

Some luxury brands already offer basic tools, sometimes as smartphone add-ons or standalone devices that measure basic skin parameters such as hydration, UV exposure, fat content or roughness. Here printed biosensors could be delivered with standalone promotional samples or integrated in the packaging of cosmetics for skin auto-diagnostics.

"Next could come personalized skin-care based on the analysis of your microbiome, the blend of living bacteria on your skin that is truly unique to you" envisioned Noel.

"The good thing with cosmetics is that this is a rather novel market for biosensors, highly value-added and still to be defined" concluded the researcher, noting that France with its Cosmetic Valley is well placed to become a leader in this field.

IMT-Université de Lille – [www.imt-lille-douai.fr](http://www.imt-lille-douai.fr)  
ITODYS - Université Paris Diderot - [www.itodys.univ-paris-diderot.fr](http://www.itodys.univ-paris-diderot.fr)  
Cosmetic Valley - [www.cosmetic-valley.com](http://www.cosmetic-valley.com)

**Related articles:**

- Printed NFC not ripe for mass production, or is it?
- How about plastic MEMS?
- European plastic electronics industry flexes its muscles
- Sensors in clothes to monitor vital signs, warn on exposure to dangerous chemicals