
Imec and Midiagnostics to Commercialize COVID-19 Breath Sampler

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Imec, a research and innovation hub in nanoelectronics and digital technology, has signed a nonexclusive licensing agreement with miDiagnostics, a spinoff of imec in collaboration with Johns Hopkins University, to commercialize technology that captures aerosols and droplets from exhaled breath. The patented technology from imec screens for viral RNA through miDiagnostics' ultrafast PCR capabilities.

Clinical trials demonstrated that the sampler can detect the SARS-CoV-2 virus in exhaled air quickly and reliably; in the past year, imec developed a breath sampler based on its silicon chip technology and performed clinical studies with the university hospital and university in Leuven. Additionally, imec developed a sampling instrument integrating the breath sampling technology and imec's ultrafast PCR test and optimized the robustness and ease of use to achieve a functioning proof of concept.

"With this proof of concept, we can demonstrate — much closer to the market — the added value of our technology, while significantly reducing the time-to-market for our partners," said imec CEO Luc Van den hove. "The license agreement with miDiagnostics is an important milestone for imec: Our breakthrough technology will help curb the COVID-19 pandemic in the foreseeable future."

Imec has now launched efforts to explore how the technology might be applied to diagnoses for other infectious airborne diseases, as well as diseases such as cancer.

"Despite the vaccination campaigns, there's still a great need for accessible and reliable rapid tests to curb new virus outbreaks or to avoid unnecessary quarantine," said Katleen Verleysen, CEO of miDiagnostics. "With our license to imec's groundbreaking technology, we aim to make our ultrafast PCR technology, which we now use for nasal swabs, also compatible with exhaled air — the perfect sample for silicon-based PCR. This first prototype

will be tested at the airport in November in collaboration with Brussels Airport, Ecolog, and Eurofins.”

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