CMP becomes the broker for European Mid-Infrared Technologies

"The goal of MIRPHAB is to bridge the gap between the development of new sensor concepts and the market uptake. Our Pilot Line offers open access to state-of-the-art technologies covering the full chain of optical sensing from the source to the detectors, developing standardized technologies to combine and interface these components at chip or packaging level. With CMP joining MIRPHAB we are targeting to expand the community of MIR optical sensing users to new adopters, providing them fast-track access to prototyping and fabrication of devices specifically tailored for their applications."

Sergio Nicoletti (CEA-LETI), Coordinator of MIRPHAB

MIRPHAB (MID INFRARED PHOTONICS DEVICES FABRICATION FOR CHEMICAL SENSING AND SPECTROSCOPIC APPLICATIONS) is pleased to announce that a new partner – CMP – has joined the MIRPHAB consortium. MIRPHAB is an open platform for design and prototyping of (MIR) Mid-Infrared sensors with access to the top facilities and expertise in Europe, with special focus on SMEs.

CMP will be contributing to the consortium's goals promoting the access to MIRPHAB technologies panel and supporting leads and customers toward a successful prototyping. Among other tasks, CMP as MIRPHAB broker, will handle the administrative, legal and financial relationship with the Pilot Line customers and will organize follow up to help them in defining & precising their requests up to the delivery of prototypes. **CMP Technical Director, Kholdoun TORKI said**: "CMP is committed to making every effort to bring the innovative MIRPHAB Pilot Line products to customers, thus contributing to the future manufacturing of the Mid-IR European industry sensors."

CMP offers access to ICs, Photonics, MEMS & Smart Power prototyping services from industrial advanced and mature process lines from, among others, main European companies such as STMicroelectronics and ams as well as from research & technologies organizations such as CEA LETI. CMP supports the access to the Process Design Kits and Design Rule Manuals. CMP supports customers in getting ready to design and then to submit designs before to handle for them, the MPW data preparation required by the foundries for the manufacturing of the prototypes. Since 1981, 614 customers from 70 countries have been served, more than 7900 projects have been prototyped through 1043 MPW runs and 72 different technologies have been interfaced.

Miniaturized and autonomous sensing devices for medical, environmental and industrial applications

Molecules can interact with mid-infrared light (MIR, 4000 cm-1 to 400 cm-1, 2-25 µm) by absorbing or emitting light. Each molecule presents a unique ro-vibrational absorption spectrum in the MIR region, which allows for qualitative and quantitative detection of the chemical. Recent developments in integrated photonics components have allowed the miniaturization of MIR spectroscopy otherwise confined to laboratory usage only and nowadays used for real-time monitoring.

In addition to their small dimensions, these sensors allow in-situ and real-time detection, without pre-treatment or the requirement of additional equipment for the final detection. Therefore, MIR sensors are ideal candidates for integration in complex tools for on-line and direct monitoring of chemicals and can be used for a wide range of fields such as the development of point-of-care devices for medical applications, the detection of pollutant gasses, and the control of the processes in pharmaceutical industry, to name a few.

MIRPHAB Pilot Line in the leadership of MIR Sensor prototyping

In the next few years, the use of spectroscopic devices in consumer applications is expected to grow considerably, especially in air quality and emission monitoring, due to the reduction in the cost of the components and the progressive miniaturization of MIR sensors. However, the introduction of new MIR chemical sensors into the market can carry a risk, especially for SMEs.

MIRPHAB offers services from market analysis, design, fabrication to final packaging of prototypes, including testing. The goal of MIRPHAB to facilitate the introduction of sensors based on MIR technologies into markets. MIRPHAB reduces this risk of adopting innovative technologies by offering to European Companies financial support partially covering the development of chemical sensors using Pilot Line services.

"Having CMP as broker represents a breakthrough for the activities in manufacturing Mid-IR products of the MIRPHAB Pilot Line. We plan to leverage CMP´s position in the CMOS community to reach even further the volume markets and translate their specifications to the leading component manufacturers forming the MIRPHAB consortium." ***Said Jose Pozo, CTO at EPIC.***