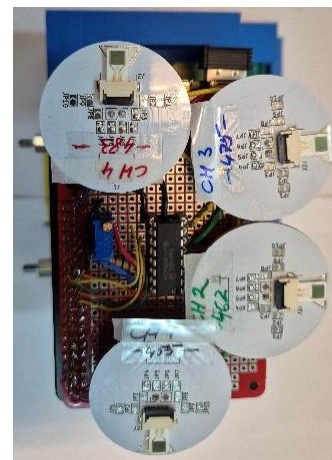
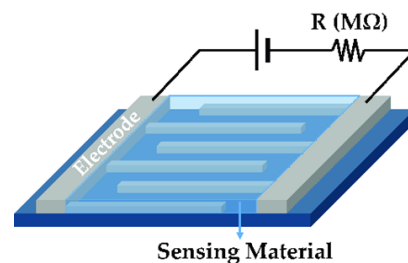


## NET4Air: Towards the development of a platform with interchangeable air pollution sensors

The Net4Air project is a Coordination and Support Action funded by the European Commission under the Twinning framework. Within it, a core action is an exploratory research project aiming to develop a low-cost wearable/portable nanoelectronic based platform for air monitoring. Low-cost air quality monitors allow individuals and organizations to contribute to hyper-local pollution data that empowers communities to take proactive steps to breathe cleaner air while also providing researchers and policy advocates with the information they need to make healthy changes for a cleaner planet.

This presentation will cover the progress to the scientific component of the project, from the development of sensitive layers to their use in sensors and their integration into a platform that allows for a wide range of interchangeable sensors.

*Alexandru Grigoroiu has completed his doctoral studies in the field of AI for early cancer detection and undergraduate studies in Biomedical Engineering at the University of Cambridge, UK. His research at IMT Bucharest is focused on implementing statistical analysis and machine learning techniques to environmental and biomedical sensors.*



## Sustainable alternatives for the cement industry

The building industry requires vast amounts of resources and accounts for about 50% of all extracted raw materials. Furthermore, the extensive use of concrete at global scale is no longer sustainable in terms of both CO<sub>2</sub> emission and costs. Most of the CO<sub>2</sub> arises from clinker production, the main constituent of Portland cement, because of the very high temperatures (1400-1500°C) involved in the process and of the CO<sub>2</sub> release from limestone. Therefore, reducing clinker content in cement mixtures by replacing it with clays or other inorganic secondary raw materials is considered a promising strategy to reduce carbon emissions.

In this framework, binders based on industrial by-products such as fly-ashes and furnace slag, as well as low-cost and widespread geological sources such as clays, are considered as promising alternatives to replace part of ordinary Portland cement (OCP), with an efficient use of local resources and raw materials.

*Hassan EZ-Zaki is an assistant professor at the Département de Chimie, Faculté des Sciences, Université Mohammed 5 de Rabat (Morocco). PhD in Chemistry of Solids, he has a specific knowledge on the chemistry of hydraulic binders, and expertise including the development and characterization of sustainable cementitious materials.*



## Webinar "MATERIALS MATTER!"

Dr. Alexandru Grigoroiu IMT Bucharest, Romania

Dr. Hassan EZ-Zaki, Mohammed V University, Rabat,  
Morocco