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ABSTRACT

A TOOL FOR DETECTION AND CLASSIFICATION OF ODOURS

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The detection of odours via electronic noses presents a wide range of applications including the detection of toxic gases, food quality control or early screening of diseases. However, there is currently no standard tool for the recognition of odours outside the laboratory.
Thus, our goal is to design a method to identify odours in uncontrolled conditions. Not only will it highlight olfactory phenomena, but it will also classify them among an odour database. As part of our experiments, we used the devices manufactured by RUBIX S&I. These portable and connected electronic noses are equipped with various sensors (MOS, Electrochemical sensors, PM, PID). Their measurements permitted to create a database of signals associated with 5 different olfactory sources. We then developed a pattern recognition machine learning model, whose robustness was assessed by making predictions on new measurements.

Indicate preference of kind of presentation
- ¤ Oral Communication

Indicate session in which authors propose to present their work:
- ¤ Session IV. Electronic devices for gases and odourant detection. Odourants and VOCs monitoring techniques.