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On-board and intelligent electronic nose for particle detection of explosive materials

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Abstract

The proliferation of terrorist risks and industrial accidents has become very dangerous. Volatile gases emanating from explosive materials could be a source of detection and prevention of these risks. However, the design of a gas or odor detection system is no longer limited today to the design of a selective sensor on a variable product, but to the intelligence it embeds and the computing power to make continuous learning and software improvements as it is used. This project deals with its different aspects and presents the different experimental modules we are working on both to design multi-gas sensor arrays and to associate it with artificial intelligence to give it a strong possibility of adaptation to the deployment context.

Keywords: Electronic Noze, IA, Gaz sensors, MOF

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