Special Issue

Advanced Techniques for Fluctuation-Enhanced Sensing and Gas Sensor Applications

Message from the Guest Editor

Fluctuation-enhanced sensing (FES) acts in a way completely analogous to biological sensing, taking advantage of the fact that the sensed agent changes the statistics of the generated output given that it is the noise (the signal fluctuations) that carries the useful sensory information. The application of FES enables the attainment of sensitivity orders of magnitude higher than those of classical sensing methods, even when compared to standard commercial electronic noses. In order to reach the highest sensitivity, particular attention must be paid to the dedicated instrumentation necessary for the application of the FES technique, and suitable methods for the identification of the agents starting from the measurements must be developed. For this Special Issue, we want to collect contributions that are relevant in the field of FES, focused on sensors, on measurement techniques and instruments, and on algorithms and techniques for the identification of gases and odors.

- gas sensor
- fluctuation-enhanced sensing
- low noise instrumentation
- noise measurements
- spectral analysis and spectrum analyzers

For more information, please visit: mdpi.com/si/182202

Guest Editor

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Sensors is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. Sensors organizes Special Issues devoted to specific sensing areas and applications each year.

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