Special Issue

Application of Intelligent Flavor Sensing System for the Quality Detection of Foods

Message from the Guest Editors

Intelligent Flavor Sensing Systems (IFSS) enable real-time, non-destructive detection of food flavor profiles under atmospheric pressure. Key technologies include the electronic nose (e-nose) and electronic tongue (e-tongue), which mimic human senses. Advanced methods like gas chromatography-ion mobility spectrometry (GC-IMS) and nuclear magnetic resonance (NMR) enhance flavor evaluation. IFSS applications include process monitoring, freshness assessment, authenticity verification, and quality control. This Special Issue will report recent advances in Intelligent Flavor Sensing Systems for addressing these challenges, including progress in sensor material development, achievements in intelligent signal processing algorithms and methods, novel measuring techniques, practical applications, etc.

- Fabrication of new-style flavor sensors;
- Development of new-style Intelligent Flavor Sensing Systems;
- Signal normalization, standardization, optimization, and baseline correction;
- Chemometric approaches for feature extraction and data fusion;
- Pattern recognition methods for classification and prediction.

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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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