## **Special Issue**

# Olfactory Sensing System and Its Signal Processing

#### Message from the Guest Editors

Over the past few decades, olfactory sensing systems have played an increasingly important role as the olfaction economy has grown. There is an increasing need for rapid, highly sensitive and selective analytical methods to address emerging challenges in environmental monitoring, food safety and public health. Gas sensing systems based on a variety of sensing techniques have become promising tools compared with expensive and complex traditional chemical analytical instruments. This Special Issue of Signals focuses on the signal and data processing in different gas sensing technologies and systems, ranging from homemade systems to commercial products. We invite contributions exploring signal and data processing methods in gas sensing systems for different applications such as environmental monitoring, food safety and public health. Topics of interest include but are not limited to signal preprocessing techniques, feature extraction and selection, feature reconstruction, drift compensation, information fusion, multitask learning, transfer learning, ensemble learning, data augmentation, multimodal data and open-set circumstance...

#### **Guest Editors**

Prof. Dr. Jia Yan

Prof. Dr. Kenshi Hayashi

Prof. Dr. Guangfen Wei

Dr. Huirang Hou

Dr. Tao Wang

Dr. Yan Shi

#### Deadline for manuscript submissions

31 December 2025



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### **About the Journal**

#### Message from the Editor-in-Chief

Our primary goal is to encourage scientists and engineers to publish their theoretical results and developed methods in as much detail as possible. There is no limit to the maximum length of papers. Whenever possible, authors are encouraged to provide relevant data and developed code so that the results can be reproduced. Our goal is to provide a platform for scientists and engineers to share new approaches to signal processing in various application domains.

#### **Editor-in-Chief**

#### Prof. Dr. Santiago Marco

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