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Optical Sensing Technologies for Food Quality and Safety

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Deadline for manuscript submissions:
closed (20 December 2025)

Message from the Guest Editors

Dear Colleagues,

Spectroscopic methods ranging from optical to atomic and mass spectrometry offer exciting opportunities, and these methods can be applied to diverse food testing by disseminating elemental, chemical bonds, and optical transducer information via spectral outputs. In addition, the recent development of machine learning algorithms may expedite the extraction of valuable information from large amounts of spectral data, which is crucial for connecting the dots between spectral peaks and food elements. This Special Issue will be soliciting submissions on the following topics related to food analysis via spectroscopic methods:

- Food composition analysis by spectroscopic methods;
- Spectroscopy-based pathogen detection and/or foreign material detection;
- Food authenticity via spectrometry;
- Application of machine learning algorithms to the spectroscopic data acquired from food analysis;
- Field-deployable spectroscopic instrument for food analysis;
- Evaluation and identification of food spoilage.

Prof. Dr. J. Paul Robinson
Dr. Euiwon Bae
Guest Editors

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Message from the Editor-in-Chief

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