

Special Issue on  
**Portable Spectroscopic Equipment**

# CALL FOR PAPERS

Recent developments in the field of electronics have resulted in manufacturing of low-cost, portable spectrophotometers that are available for a diverse group of users. The solution-oriented products that are designed for nonspecialists provide easy, rapid measurements to a broader range of samples and their physical/chemical properties. Such equipment has considerable potential for a broad range of applications due to the absence of moving parts and their light-weight and compact design. In combination with a short scanning time, they become an interesting alternative for in-field and online spectroscopic measurements. It is in line with an increased interest in bringing sensors out to "where the samples are," as opposed to the bringing samples to the lab approach.

The present special issue focuses on implementation of handheld instruments for several sectors: environmental, food, agriculture, forestry, pharmaceutical, petrochemical, biomedical, pulp and paper, process analytical technology (PAT), cultural heritage and conservation, defense and security, forensic, and industry 4.0/smart factory, among others. Reports on developments in the spectroscopic setup, new instrumentation, and alternative approaches for process and product quality control are particularly encouraged. Original research articles, or review articles that describe the current state of the art related to the scope of this special issue are welcome.

Potential topics include but are not limited to the following:

- ▶ Near infrared spectroscopy (NIR)
- ▶ Infrared spectroscopy (IR)
- ▶ Ultraviolet-visible spectroscopy (UV-VIS)
- ▶ Nuclear magnetic resonance spectroscopy (NMR)
- ▶ Laser-induced breakdown spectroscopy (LIBS)
- ▶ Surface-enhanced Raman spectroscopy (SERS)
- ▶ Mass spectrometry (MS)
- ▶ Hyperspectral imaging (HI)
- ▶ Comparison of laboratory and portable equipment performance
- ▶ New chemometric methods applied to data mining in portable spectrometers
- ▶ Calibration transfer between portable and laboratory instruments
- ▶ Quantification measurement
- ▶ Calibration-free measurement
- ▶ Success stories, problems, and challenges regarding online implementation and in situ measurements
- ▶ Use of portable instruments in teaching
- ▶ New hardware developments to be implemented as portable equipment in a close future

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/jspec/pe/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

**Lead Guest Editor**

Anna Sandak, National Research Council of Italy (CNR-IVALSA), San Michele all'Adige, Italy  
[anna.sandak@ivalsa.cnr.it](mailto:anna.sandak@ivalsa.cnr.it)

**Guest Editors**

Jakub Sandak, InnoRenew CoE, Izola, Slovenia  
[jakub.sandak@innorenew.eu](mailto:jakub.sandak@innorenew.eu)

Ingunn Burud, Norwegian University of Life Science, Ås, Norway  
[ingunn.burud@nmbu.no](mailto:ingunn.burud@nmbu.no)

Jez W. B. Braga, University of Brasilia, Brasilia, Brazil  
[jez@unb.br](mailto:jez@unb.br)

**Submission Deadline**

Friday, 25 May 2018

**Publication Date**

October 2018