



# *methods and protocols*

an Open Access Journal by MDPI

## Methods in Dating and Other Applications using Luminescence

Guest Editor:

**Prof. Dr. James K. Feathers**  
University of Washington, Seattle,  
WA, USA  
jimf@uw.edu

*Deadline for manuscript  
submissions:*

**1 August 2019**

### Message from the Guest Editor

Dear Colleagues,

The phenomenon of using luminescence to date materials began in the 1960s and 1970s in the context of dating pottery from archaeological sites. Its applications spread to sediments, both geological and archaeological, in the 1980s. Substantial developments in methods, including the introduction of optically stimulated luminescence (OSL) and infrared stimulated luminescence (IRSL) and the development of single-aliquot and single-grain techniques, over the past 30 years have made luminescence dating one of the major chronological tools in Quaternary science. Not only have the kinds of dating applications expanded, but luminescence is increasingly being used to address other kinds of questions. The latter include rates of landscape exhumation, fluvial transport dynamics, the sourcing and transport rates of sedimentary grains, soil development including mixing from bioturbation, and the incidence of wildfires. This Issue hopes to compile papers on cutting-edge methodology in dating and other applications. Potential topics include thermochronometry, sediment provenience, dating sediments older than 100,000 years or younger than 100 years, dating rock surfaces, dating archaeological structures, statistical models for single-grain equivalent dose distributions, anomalous fading in feldspars, variations in luminescence sensitivity of both quartz and feldspars, radio-fluorescence, improving dating precision, time-resolved luminescence, dose rate heterogeneity, exposure dating, modeling bioturbation, spectral applications of luminescence, novel stimulation modes, and bleaching during fluvial transport. A younger generation of practitioners, who have earned their degrees in the last 10 years, is driving much of the methodological innovation in luminescence, and these younger scientists are particularly encouraged to submit papers.



[mdpi.com/si/24181](https://mdpi.com/si/24181)

# Special Issue



# *methods and protocols*

an Open Access Journal by MDPI

## Editor-in-Chief

### **Prof. Dr. Fernando Albericio**

1. School of Chemistry, University of KwaZulu-Natal, Durban 4001, South Africa

2. Department of Organic Chemistry, University of Barcelona, 08028-Barcelona, Spain

## Message from the Editor-in-Chief

*Methods and Protocols* (ISSN 2409-9279) is an open access journal devoted to the publication of new procedural approaches and cutting-edge methodological developments. The ultimate objective of this new forum of scientific communication is to provide researchers with an indispensable tool, enabling better use of the latest scientific technologies. With a broad and totally interdisciplinary focus, *Methods and Protocols* was established with the objective of facilitating cross-fertilization and cross-talk in the scientific arena. *Methods and protocols* in Life Sciences, Chemistry, Biomedical Sciences, Engineering, and in their intersections such as Biotechnology and Nanotechnology will constitute the core of the journal. However, we anticipate that other fundamental disciplines such as Physics or Geology will be rapidly incorporated.

## Author Benefits

**Open Access:** free for readers, free publication for well-prepared manuscripts submitted before 1 July 2019.

**Rapid publication:** manuscripts are peer-reviewed and a first decision provided to authors approximately 23 days after submission; acceptance to publication is undertaken in 5.9 days (median values for papers published in this journal in the second half of 2018).

**Recognition of reviewers:** reviewers who provide timely, thorough peer-review reports receive vouchers entitling them to a discount on the APC of their next publication in any MDPI journal, in appreciation of the work done.

## Contact Us

---

*Methods and Protocols*  
MDPI, St. Alban-Anlage 66  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
Fax: +41 61 302 89 18  
www.mdpi.com

mdpi.com/journal/mps  
mps@mdpi.com  
@MPs\_MDPI