The Scope of Analytical Chemistry

ARTICLE *in* ANALYTICAL CHEMISTRY · JUNE 2015

Impact Factor: 5.64 · DOI: 10.1021/acs.analchem.5b02231 · Source: PubMed

analytical chemistry

Editorial

pubs.acs.org/ac

The Scope of *Analytical Chemistry*

Today's field of analytical chemistry is wide-ranging, and accordingly, as its flagship journal, ***Analytical Chemistry*** publishes articles encompassing a broad spectrum of scientific and engineering disciplines related to measurement science. Each month, we receive multiple inquiries about whether or not a specific article fits the scope of our journal. Historically speaking, in 1949, Walter Murphy (Editor from 1943−1956) defined our scope as the publication of *"Fundamental studies on the properties of matter which can be adapted to measuring qualitatively and quantitatively chemical compounds and elements."* Not surprisingly, the focus of our field has greatly expanded over the past 65 years and so we no longer limit articles to those involving qualitative and quantitative measurements. Perhaps the most concise definition of today's journal scope was advanced in Royce Murray's 2007 editorial: ***Analytical Chemistry*** publishes *"... fundamental and practical applications of how to measure important chemical things, which include concentrations, rate constants, lifetimes, and whatever—as long as what is measured is a chemically important parameter."*

If you are interested in a more detailed description, we provide you the following from our author guidelines: *"**Analytical Chemistry** is devoted to the dissemination of original knowledge in all branches of analytical chemistry. Fundamental articles may address the general principles of chemical measurement science and need not directly address existing or potential analytical methodology. Articles may be entirely theoretical with regard to analysis, or they may report experimental results. They may contribute to any phase of analytical operations, including sampling, chemical reactions, separations, instrumentation, measurements, and data processing. Papers dealing with known analytical methods should offer a significant, original application of the method, a noteworthy improvement, or results on an important analyte."*

Keep in mind that these "rules" balance details with brevity, as too long a set of guidelines hinders their use. Thus, we acknowledge that there remains room for interpretation, not only by the author, who may suggest a new topic of interest, but also the handling editor, who makes the definitive decision about an article's suitability for the journal.

So, what are some key factors to consider when deciding to submit your article to ***Analytical Chemistry***? The fit is obvious when a major focus of your manuscript is to advance measurement science, and it directly deals with the process of making or improving an analytical measurement. Another way of determining if your article fits the journal's scope is to see if we have published similar articles in the recent past, with the caveat that topics that were once novel and publishable can become routine and thus no longer fit our scope.

The most challenging questions we receive about suitability for the journal involve "applications" articles. We welcome manuscripts on difficult applications, so difficult that nothing comparable has yet been published, even though attempts have been made. We also encourage applications that evaluate unique or rare samples such as moon rocks, meteorite samples, novel deep-sea samples, artwork, and rare biological samples, as well as applications in which the measurement data is part of an important larger narrative, and the analytical data provides a noteworthy addition to the story. The problem to be solved should be important, or the proposed technique must greatly improve the measurement conditions, perhaps by major decreases in analysis times or costs, or by large improvements in the measurement figures of merit.

Let's consider another scenario. When the major goal of an article is to advance another field of science, which is acceptable, but the analytical methods used are not novel or significantly improved over existing ones, the manuscript may not fit our journal. What else may factor into a decision that an article is not appropriate for ***Analytical Chemistry***? Some typical examples are reports of minor modifications to well-established methods, or standard applications of existing analytical approaches.

Together we hope that this editorial has provided you with some insight on what we look for when evaluating manuscript submissions. Finally, we leave you with the following, overarching message: we look forward to receiving articles describing advances in all fields of measurement science, using a broad range of measurement techniques. Surprise us with something new!

The Editors of *Analytical Chemistry*

Jonathan V. Sweedler
Daniel W. Armstrong
Yoshinobu Baba
Gert Desmet
Norman Dovichi
Andrew Ewing
Catherine C. Fenselau
Robert T. Kennedy
Cynthia K. Larive
Frances S. Ligler
Richard L. McCreery
Reinhard Niessner
Jeanne E. Pemberton
Weihong Tan
David R. Walt
John R. Yates, III
Renato Zenobi
Xinrong Zhang

AUTHOR INFORMATION

Notes

Views expressed in this editorial are those of the authors and not necessarily the views of the ACS.

DOI: 10.1021/acs.analchem.5b02231
Anal. Chem. XXXX, XXX, XXX−XXX