

## Book review

# Patricia Forbes' book *Monitoring of Air Pollutants: Sampling, Sample Preparation and Analytical Techniques*

Rebecca Garland

Council for Scientific and Industrial Research, South Africa

<http://dx.doi.org/10.17159/2410-972X/2017/v27n1a4>

The Elsevier series, "Comprehensive Analytical Chemistry" has released a volume on monitoring ambient air pollution. This volume, edited by Patricia Forbes, provides information on sampling and measurement techniques for ambient air pollution, including examples of the use of the techniques and instruments in real-world settings.

This is an excellent reference book providing detailed information on a variety of sampling techniques and analytical methods to measure air pollution. While the series is aimed at analytical chemists, the book is also a useful reference for anyone in the field who measures air pollution or who uses monitored air pollution data. As someone who does limited measurements currently, but uses monitoring data very often, this book is a helpful reference to understand the theory behind the measurement technique used, as well as the limitations. This can help to ensure that the data are not used incorrectly!

The book itself is divided into three sections, providing; i) an introduction, ii) techniques on sampling and sample preparation, and iii) analytical methods used to measure ambient air pollution. The chapters cover both established methods, as well as emerging methods.

The sampling techniques discussed in the book include;

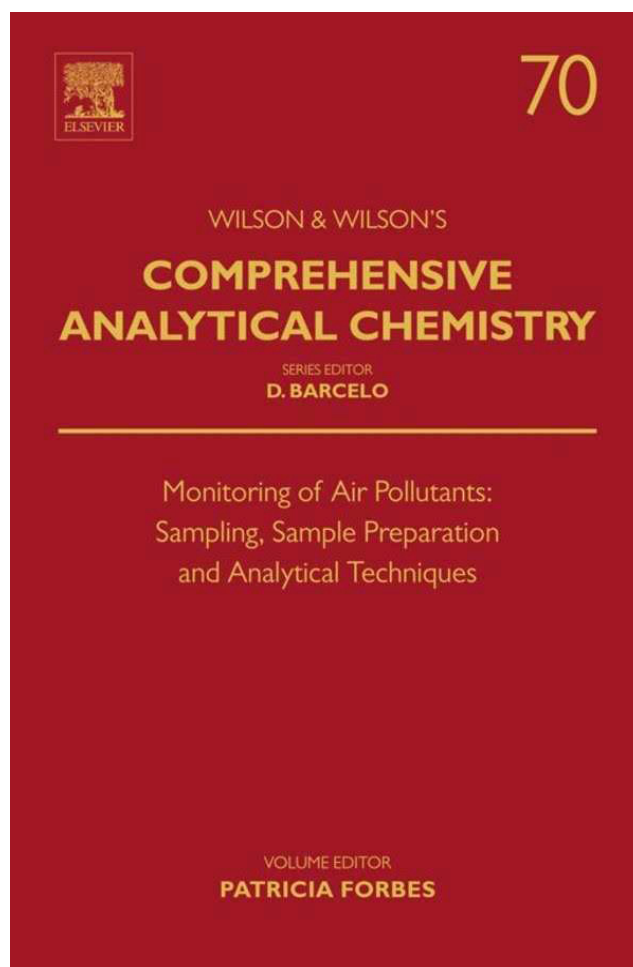
- passive sampling,
- biomonitors,
- whole-air sampling,
- denuders, and
- automated continuous air monitoring.

The analytic methods described are;

- spectroscopic and chromatographic techniques for metals, metalloids and ions,
- chromatographic techniques for organic analytes,
- mass spectrometry and ion mobility spectrometry, and
- microscopic single-particle methods.

A feature that I found to be very useful are the number of case studies (many drawn from African examples) that highlight how these techniques have been used in practical applications. I find it a great advantage that the African case studies are included as they provide lessons on the application of these techniques to the conditions that scientists working in Africa and the developing world face.

This book is a very helpful reference to researchers who are measuring pollutants in ambient air and want to craft an



appropriate monitoring plan. In addition, it is a very valuable resource for all the researchers who use and analyse monitored data, in order to understand the limitations of the data that they use.

P.B.C. Forbes (editor), 2015, 'Monitoring of Air Pollutants: Sampling, Sample Preparation and Analytical Techniques' in Barcelo, D (eds.) 'Wilson and Wilson's Comprehensive Analytical Chemistry' volume 70.

Available for purchase online at [www.elsevier.com](http://www.elsevier.com).