

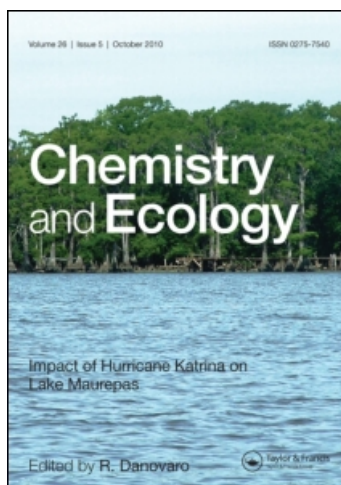
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Publisher *Taylor & Francis*

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Chemistry and Ecology

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title~content=t713455114>

A review of: "Environmental Analysis Using Chromatography Interfaced with Atomic Spectroscopy"

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To cite this Article Marshall, G. B.(1990) 'A review of: "Environmental Analysis Using Chromatography Interfaced with Atomic Spectroscopy"', *Chemistry and Ecology*, 4: 3, 175

To link to this Article: DOI: 10.1080/02757549008035973

URL: <http://dx.doi.org/10.1080/02757549008035973>

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BOOK REVIEW

“Environmental Analysis Using Chromatography Interfaced with Atomic Spectroscopy,” edited by Roy M. Harrison and Spyridon Rapsomanikis. Published by Ellis Horwood Ltd, Chichester: Price £59.50. 12 chapters, 370 pages.

Chemical speciation, rather than the determination of total elemental concentrations, is a topic of increasing interest to environmental scientists. Analytical chemists have responded to this challenge by developing a multitude of hybrid techniques and the separation capability of chromatography coupled with the powers of detection of atomic spectroscopy provide an ideal combination. The publication of “Environmental Analysis Using Chromatography Interfaced with Atomic Spectroscopy” edited by Harrison and Rapsomanikis is, therefore, timely.

The book is a compilation of chapters by well established workers in the field. It opens with a run down on the basic principles of chromatography and atomic spectroscopy by S. J. de Mora—necessarily brief but sufficiently to the point for the non-specialist. C. N. Hewitt then describes atomic-absorption detectors following both GC and LC separation. There then follows a chapter on the well known flame photometric detectors—principally for sulphur and phosphorus, but also including recent information on their combination with liquid chromatography. Detection by atomic emission plasma spectroscopy and atomic fluorescence is described. This is fine—but I would have preferred more emphasis on atomic emission detection rather than atomic fluorescence particularly because these instruments are in far wider commercial use. Moreover I couldn't find any mention of the use of ICP-MS as a detector for chromatography. The technique is new but, nevertheless, there are many instruments now installed worldwide and it offers exciting prospects to the specialist in chemical speciation.

Les Ebdon and Steve Hill then describe interfaces between liquid chromatography and atomic absorption and the rest of the book is devoted to specific detail of individual elements, i.e. tin, germanium, lead, arsenic, antimony, mercury and sulphur gases.

For those with particular problems to solve the element by element description will lead them in the right direction, while newcomers to the field will find the theory of techniques more useful.

A lot of the arrows in analytical chemistry (particularly in academic circles) are now pointing towards speciation and this book provides a good basis for those who wish to follow them.

G. B. Marshall