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Book review

Inductively Coupled Plasmas in Analytical Atomic Spectrometry, 2nd Edition, edited by A. Montaser and D.W. Golightly. VCH Publishers, New York (NY), Weinheim (Germany), Cambridge (UK), 1992, 1017 pages; list price \$195; ISBN 1 56081 514 0.

Everybody having an experience with any of the following commitments will whole-heartedly agree that writing a chapter for a book is a chore, writing a monograph is a stiff job, editing a book of 10 to 20 chapters is a tremendous, stress-arousing enterprise, while succeeding in editing the second edition of such a book is a merit for which the courageous editor(s) deserve a place in the gallery of heroes! Unfortunately, a place in this gallery is a lonely and 'stony' one, since all those who originally agreed to participate in the project have for many years looked for a back-stage door to disappear unseen as soon as (any of) the editor(s) came into sight. They, the contracted authors, have, since they enthusiastically signed the contract, changed jobs, positions, interests, and priorities, and silently hope that the editor(s) underwent the same fate! Some do indeed, others are as persistent as the devil and reappear in the authors' sphere at the most inconvenient instants complete with horns and tridents. Persistence, convincing power, diplomacy balanced with a proper dose of thick skin, and expertise are the prime features that book editors should possess to get the job completed after the terrible experience of being mangled for several years between the publisher, the authors, their own work and daily duties, and the requirements made by their private lives. No doubt, this picture must apply to the editors of the present work, Akbar Montaser and Dan Golightly. They do deserve indeed a place in that gallery of mangled heroes. However honourable such a place may be, crucial is whether the final result of their endeavours also deserves a permanent place on the shelves of the libraries and – more importantly – on the desks of all those who could enhance the value of their own work by absorbing part of the knowledge compiled and digested. I shall attempt to give a brief, objective, though personal assessment of this point. I do so on the special request of Akbar Montaser, who was so kind to send me rather recently a complementary copy of the second edition of the book. Although—as evidenced by the Editorial in the present issue of this journal—I am lured by other challenges, and spectroscopy is thus becoming a passed station for me, the latter is not yet so far behind me that I would be unable to pronounce a general judgment about this book. Obviously I have not read the book from cover to cover, but nevertheless made a series of representative comparisons between the first and second edition and in a general way performed checks on a number of subjects that had my keen interest when I was still actively involved in contributing to the development of analytical atomic spectroscopy. Since that number was rather large, one may be confident that my checks covered a sufficiently wide scope.

I feel that I may safely assume that many, if not most, analytical spectroscopists involved in plasma spectroscopy have appreciated the first edition of this work and have it readily available for frequent consultation. Doubtless, that edition, published in 1987, was a highly useful addition to the literature, an indispensable source of information for anyone concerned with this subject. Therefore I see it as my prime task to assess to what extent the second edition (1992) provides for an adequate update and extension. Clearly, in this rapidly expanding and developing field, regular updates and extensions are indispensable. Although basic knowl-

edge does not really change, later developments may put it into a different light or induce a change in emphasis. It is convenient then for 'newcomers' in the field to get the latest view, as much as possible stripped of historical fringes and contexts.

In this comparison, I was struck, at a first glance, by two features: total volume and the literature volume. Considering that the overall format of the two editions is the same, one finds an increase in the total thickness of the printed text from 3.5 to 5.0 cm, corresponding to an increase in the number of pages from 660 to 1017. This is, on average an increase by about 50% over a period of 5 years, compared to 22 years of inductively coupled plasma (ICP) development to reach the first 3.50 cm or 660 pages! Which changes and additions have mainly led to this increase in volume?

As could be surmised, the part on ICP mass spectrometry, as a very rapidly developing branch, vastly increased in volume by both the addition of two new chapters and an update/extension of the chapter in the first edition. However, many other chapters were also essentially and substantially extended, which has been evidently achieved by attracting new authors as co-authors for the original chapters of the first edition. This is an excellent idea to deal with the 'fatigue' problems of the original authors. It is noteworthy that the name of one of the editors, Akbar Montaser, occurs as the 'added' co-author of five chapters, while in two important chapters with which his (co-)authorship was connected in the first edition, a distinct shift is perceptible to Montaser's imprint on the content (and volume) of these chapters.

Chapters on the mathematical modelling of ICPs and on spectroscopic reference data have been added, while an earlier, mainly theoretical chapter on ICP atomic fluorescence (AFS) disappeared in favour of a practical chapter on analytical applications of ICP-AFS. Those interested in that theory will thus still have to refer to the first edition and attempt to see there the wood for the trees.

Virtually all chapters present in the first edition were brought up well to date, now covering the literature to at least the end of 1991. Representative checks indicate that this literature was not only formally added to the list, but mostly also well embedded in the treatment of the subjects. With some chapters it could appear at first glance that the list of references did not undergo an extension, but here the authors achieved the extension by differentiating references under the existing reference numbers using (a), (b), (c), etc. This is practicable if the number of additions is fairly limited. It then avoids the muddle that too often results from literature additions. However, with other chapters entirely new lists of references have been composed.

It is beyond the scope of this brief assessment to get into details of the extensions, updates or revisions, but I found it highly satisfying to see how the authors have succeeded in making this book up to date, thus promoting that also the results of rather recent work will rapidly enter the domain of common knowledge. Without treating the individual contributions of all authors as of little importance, it is certainly not exaggerated to say that much of the value of this book is due to the hard work and perseverance of Akbar Montaser. Although whatever work, let alone a work of this scope and extent, has some flaws, it would be silly to put salt on the few snails one encounters. Moreover, also in science, opinions need not and should not necessarily concur.

To conclude, this book is a remarkable document, but not a document to be stored on a shelf: everyone working in this field should study at least those chapters that are of direct relevance to his or her work. Thereafter these readers are recommended to consult the work frequently to refresh the mind or discover an overlooked hint or reference. If this could be realized, then, not only may the editors and authors look back with profound satisfaction at the result of the sweat droplets the work left behind, but also would analytical atomic spectroscopy vastly benefit from the enhanced use of rational approaches for solving practical problems, devising new instruments or methods, or investigating fundamentals. Overall, the authors and editors are to be congratulated with this work. Perhaps the next edition could be accompanied (not replaced!) by a CD-ROM with the texts of the book and all the references covered! I shall eagerly look forward to it.

Paul Boumans
Honorary Editor