

BOOK REVIEW

Inductively Coupled Plasma Mass Spectrometry. Edited by Akbar Montaser. Wiley-VCH, NY, 1998. Pp. 964. \$149. ISBN: 0-471-18620-1.

This is an incredibly informative and comprehensive book on both the fundamental understanding and practical application of ICP-MS. Topics covered include an introduction and summary of commercially available ICP-MS instruments, microwave sample preparation, sample introduction, plasma generation, instrumentation for low- and high-resolution ICP-MS, analytical characteristics, fundamental considerations, novel applications, mixed gas and helium ICPs and microwave induced plasma-MS. Twenty seven expert authors were involved in writing the eleven chapters. For the most part, the editor has effectively melded the contributions from the different authors together in a coherent and consistent form. In some cases topics (sample introduction, for example) are discussed from a different perspective in more than one location in the book.

The book provides an excellent, single source that clearly discusses virtually every topic relating to ICP-MS. Chapters including those on plasma generation, instrumentation for low and high resolution ICP-MS and fundamental considerations in ICP-MS, bring together information that is not covered elsewhere in an easily understandable form. The book also provides an outstanding guide to the original literature with extensive references (including titles) in each chapter. The strength of the book, in addition to being comprehensive and clearly written, is that the reader can learn not only the details of what analytical performance ICP-MS can provide, what its limitations are and how ICP-MS works but also why. As a result, the reader can gain valuable insight into fundamental and practical details of ICP-MS operation that can be used to better use the strength of ICP-MS for analysis and problem solving.

This book is very complementary in style and substance to the Handbook of Inductively Coupled Plasma Mass Spectrometry, by K.E. Jarvis, A.L. Gray and R.S. Houk (published in 1992). The Jarvis book focuses more on practical details for developing specific analysis methods including sample preparation method recipes and approaches for particular sample types. The Montaser book is more comprehensive, is more up to date because of its more recent publication date and provides far more information on fundamental understanding of the processes involved in ICP-MS.

Experts and researchers involved with ICP-MS, students learning about ICP-MS, professionals who use ICP-MS, those who are considering buying ICP-MS instruments and laboratory managers who oversee ICP-MS analyses should all have this book.

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