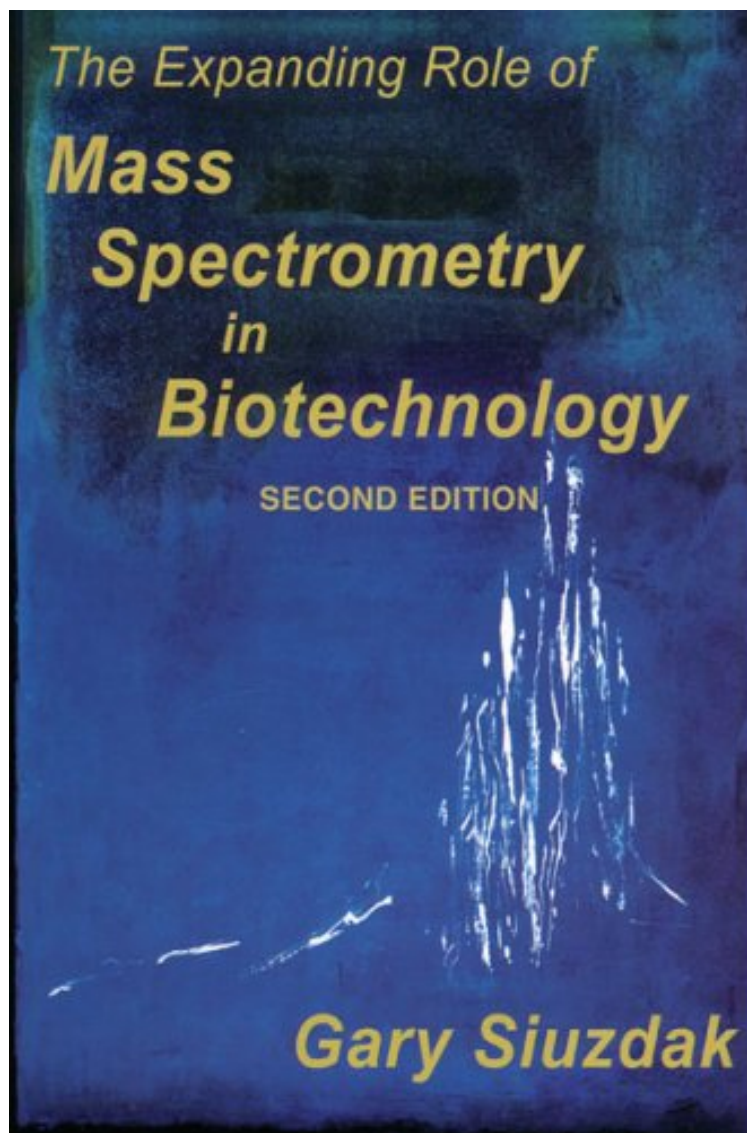


## The Expanding Role of Mass Spectrometry in Biotechnology, Second Edition

Gary Siuzdak

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**Gary Siuzdak : The Expanding Role of Mass Spectrometry in Biotechnology, Second Edition** before purchasing it in order to gage whether or not it would be worth my time, and all praised The Expanding Role of Mass Spectrometry in Biotechnology, Second Edition:

0 of 0 people found the following review helpful. Nice intro to mass spectrometry. By Robert Winkler Well suited for an introduction to mass septrometry. 9 of 9 people found the following review helpful. Well-written excellent reference

or short text on bio MS By Joanna D. Whether you are a biochemist working in the field of biotechnology, or an analytical instrument engineer, Siuzdak's compact text makes for easy reading and a quick way to bone up on most of the MS techniques being used today in biotechnology. The second edition is a big improvement--better illustrations and graphics (especially the ones for ESI-MUX, high throughput analysis and MALDI and Q-TOF.) Just about every technique and instrument type were covered except for a couple of rare ones I could think of. The range of chapters covers the mass analyzer types then covers the use of various analyzers in pharmacokinetics, molecular analysis, proteins, peptides, nucleic acids and carbohydrates, and high throughput screening. If you are a professor of analytical chemistry, I would recommend Siuzdak's book for your class. It is well-written, easy to read and covers the subject well. This book would be a welcome desk reference for most scientists who use the services of a mass spectroscopist for their work. There are a few articles on mass spec analysis of steroids, its use in disease diagnosis and a good glossary in the back. Highly recommended as a good basic text.

0 of 0 people found the following review helpful.

2nd Edition Follow Up Is As Brilliant As The First By Danielle I've been slow to review this book, not because of a lackluster enthusiasm but because the 2nd edition of *The Expanding Role of Mass Spectrometry in Biotechnology* is a heftier book than the 1st edition (257 pages versus 161 pages in the first edition). Some of the added bulk is due to more pictures/graphics than in the first. Also it appears that the 2nd edition has a few more individuals contributing to some of the sections of the book (Liz Want, Michael Greig, Jennifer Bardi, and Darlene Custodio, etc.).

**IMPROVEMENTS:** 2nd edition has improvements such as more pictures/graphics and conceptual explanations than the 1st edition. I love the first edition as it was well written, but the 2nd edition has really touched on the various forms of bringing the material to the learner which really ensures that the knowledge of the material is ingrained by the reader. Because of this, it's a great educational textbook for classes/seminars/and also casual reading. 2nd edition also has one of the better textbook introductions for spectrometry of which I've seen in a long time. It really allowed for one to put the history of spectrometry into focus as Siuzdak succinctly talks about historical developments in mass spec from the year 1899 to 2001- this was a marvel in itself. 2nd edition summarizes nicely the types of ionization sources, not only in table format but also in the bulk of the text. For this reason, I find this book to be essential for the practicing analytical chemist and also those who are PI or heading projects because when presented with a radical new research idea you will know what type of mass analyzers can do the job and provide you the data you want and need for your project with just a simple glance at a table. I find that too many people in non-academia mass spec fields, like myself, are limited to only the knowledge of the sales rep from a leading manufacturing firm, with Siuzdak's book it's possible to think outside of the box.

Other things the 2nd edition covers: + Issue of sensitivity + Isotope patterns of selected mass analyzers (including the algorithm) + Siuzdak's perspective on the route MS is heading and what problems it currently encounters + End of chapter quizzes (just like in his 1st edition) + Showing the blending of biotechnology techniques/enhancements/multidisciplines in order to get more out of mass spec data and capabilities

**OVERALL (5++ STARS):** I really do find this book to be a gem among some of the many MS books out there on the market. This is a very high tech Cliff's Note guide to MS. It's not overly simplified or terribly difficult to understand which makes it unlike most MS literature out there. There are things in the *Mass Spectrometry for Biotechnology* (1st edition) title that you may not find in the 2nd edition. Because of this, I think it's best to actually own both copies. However, if you had to choose only one, I would definitely pick the latest edition and then add the 1st edition at a later date. I must reiterate Gary Siuzdak's ability to write hard-core/scientific/academia material is a testament to someone who really understands their discipline as the reading is very easy to grasp (especially conceptually), unconvoluted, creative and very progressive. If I could start life over again I would have probably continued graduate studies simply so I could work in his Scripps lab with so many other talented and creative people. Because I didn't, this book is my next best thing to such knowledge.

Mass Spectrometry has become one of the most important tools in the biochemical sciences with capabilities ranging from small molecule analysis to protein characterization. Because of this versatility, mass spectrometry is the technology many scientists are turning to. *The Expanding Role of Mass Spectrometry in Biotechnology* covers the basic concepts in mass spectrometry as well as advanced topics including protein identification/protein structural analysis, carbohydrate and oligonucleotide analysis. Topics also include pharmacokinetics, high throughput screening, and the recent development of mass spectrometry in clinical diagnosis. Features: Abundant Illustrations Mass Spectrometry Basics Protein Identification/Characterization Carbohydrate/Oligonucleotide/Steroid Analysis Pharmacokinetics/High Throughput Applications

**About the Author** Gary Siuzdak obtained his Ph.D. at Dartmouth College and is currently at The Scripps Research Institute where he is Senior Director of the Center for Mass Spectrometry and Assistant Professor of Molecular Biology.