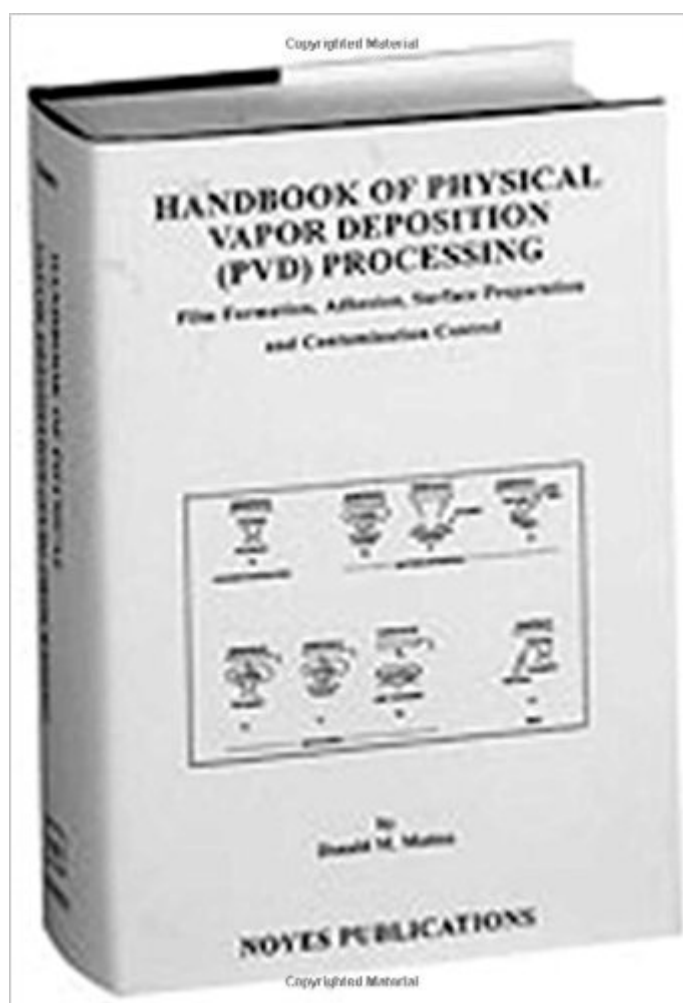


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# Handbook Of Physical Vapor Deposition (PVD) Processing (Materials Science And Process Technology)



## Synopsis

This book covers all aspects of physical vapor deposition (PVD) process technology from the characterizing and preparing the substrate material, through deposition processing and film characterization, to post-deposition processing. The emphasis of the book is on the aspects of the process flow that are critical to economical deposition of films that can meet the required performance specifications. The book covers subjects seldom treated in the literature: substrate characterization, adhesion, cleaning and the processing. The book also covers the widely discussed subjects of vacuum technology and the fundamentals of individual deposition processes. However, the author uniquely relates these topics to the practical issues that arise in PVD processing, such as contamination control and film growth effects, which are also rarely discussed in the literature. In bringing these subjects together in one book, the reader can understand the interrelationship between various aspects of the film deposition processing and the resulting film properties. The author draws upon his long experience with developing PVD processes and troubleshooting the processes in the manufacturing environment, to provide useful hints for not only avoiding problems, but also for solving problems when they arise. He uses actual experiences, called "war stories", to emphasize certain points. Special formatting of the text allows a reader who is already knowledgeable in the subject to scan through a section and find discussions that are of particular interest. The author has tried to make the subject index as useful as possible so that the reader can rapidly go to sections of particular interest. Extensive references allow the reader to pursue subjects in greater detail if desired. The book is intended to be both an introduction for those who are new to the field and a valuable resource to those already in the field. The discussion of transferring technology between R&D and manufacturing provided in Appendix 1, will be of special interest to the manager or engineer responsible for moving a PVD product and process from R&D into production. Appendix 2 has an extensive listing of periodical publications and professional societies that relate to PVD processing. The extensive Glossary of Terms and Acronyms provided in Appendix 3 will be of particular use to students and to those not fully conversant with the terminology of PVD processing or with the English language.

## Book Information

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## Customer Reviews

If you are new to PVD as I am, you will find this book to be well worth the money. - .com Review

Donald M. Mattox, together with his wife, Vivienne, are the founders of Management Plus, Inc. He is also the Technical Director of the Society of Vacuum Coaters (SVC). Mattox writes a monthly column on PVD processing and vacuum/plasma technology for the American Electroplating and Surface Finishing (AESF) Society journal, *Plating and Surface Finishing*. Since 1992, he has also been Technical Director of the Association of Vacuum Equipment Manufacturers (AVEM). Mattox was a staff member at Sandia National Laboratories for twenty-eight years. He is the inventor of the "ion plating" process. In addition, he was past president of the American Vacuum Society, Chairman of the Thin Film Division, Member of the Board of Directors, and associate editor of the *Journal of Vacuum Science and Technology*. Mattox is author of over 100 journal publications and several book chapters.

I received the book very quickly. It is in great shape as it was reported to be. I am very happy to have the book and the seller was very easy to work with. I would buy another book from them.

If you are new to PVD as I am, you will find this book to be well worth the money. If the book doesn't give you enough details on what you are interested in, it will give you a ton of references to get you in the right direction. As a graduate student working on different PVD techniques including RF Sputtering, Thermal Evaporation, Electron Beam Evaporation, and Arc Deposition I use this book all the time. The only drawback is that it is huge but I liked it so much, I simply bought a copy for the

lab and a copy for home.

This is a valuable Handbook for people working in related industries, universities and research institutes. Mr. Donald M. Mattox is a highly respectable expert in this field. He is still actively giving knowledge about PVD in many places around the Internet. Thanks Mr. Mattox for his valuable book and his free advice to all of us.

I am a PVD engineer. The content of this book includes everything I want to know. If engineers can have this book, they do not need to spend much time searching tech. information in front of a PC. It is a handbook for sure. I can not wait to own one!!

Although this book has accurate technical content, the organization is ill-thought and amounts to little more than numerous papers stapled together under a pretty cover.

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