



Chemistry in Microelectronics

Download now

[Click here](#) if your download doesn't start automatically

Chemistry in Microelectronics

Chemistry in Microelectronics

Microelectronics is a complex world where many sciences need to collaborate to create nano-objects: we need expertise in electronics, microelectronics, physics, optics and mechanics also crossing into chemistry, electrochemistry, as well as biology, biochemistry and medicine. Chemistry is involved in many fields from materials, chemicals, gases, liquids or salts, the basics of reactions and equilibrium, to the optimized cleaning of surfaces and selective etching of specific layers. In addition, over recent decades, the size of the transistors has been drastically reduced while the functionality of circuits has increased. This book consists of five chapters covering the chemicals and sequences used in processing, from cleaning to etching, the role and impact of their purity, along with the materials used in “Front End Of the Line” which corresponds to the heart and performance of individual transistors, then moving on to the “Back End Of the Line” which is related to the interconnection of all the transistors. Finally, the need for specific functionalization also requires key knowledge on surface treatments and chemical management to allow new applications.

Contents

1. Chemistry in the “Front End of the Line” (FEOL): Deposits, Gate Stacks, Epitaxy and Contacts, François Martin, Jean-Michel Hartmann, Véronique Carron and Yannick Le Tiec.
2. Chemistry in Interconnects, Vincent Jousseau, Paul-Henri Haumesser, Carole Pernel, Jeffery Butterbaugh, Sylvain Maîtrejean and Didier Louis.
3. The Chemistry of Wet Surface Preparation: Cleaning, Etching and Drying, Yannick Le Tiec and Martin Knotter.
4. The Use and Management of Chemical Fluids in Microelectronics, Christiane Gottschalk, Kevin McLaughlin, Julie Cren, Catherine Payne and Patrick Valenti.
5. Surface Functionalization for Micro- and Nanosystems: Application to Biosensors, Antoine Hoang, Gilles Marchand, Guillaume Nonglaton, Isabelle Texier-Nogues and Françoise Vinet.

About the Authors

Yannick Le Tiec is a technical expert at CEA-Leti, Minatec since 2002. He is a CEA-Leti assignee at IBM, Albany (NY) to develop the advanced 14 nm CMOS node and the FDSOI technology. He held different technical positions from the advanced 300 mm SOI CMOS pilot line to different assignments within SOITEC for advanced wafer development and later within INES to optimize solar cell ramp-up and yield. He has been part of the ITRS Front End technical working group at ITRS since 2008.

 [Download Chemistry in Microelectronics ...pdf](#)

 [Read Online Chemistry in Microelectronics ...pdf](#)

Download and Read Free Online Chemistry in Microelectronics

From reader reviews:

Helen Wright:

What do you think of book? It is just for students as they are still students or that for all people in the world, what best subject for that? Just simply you can be answered for that query above. Every person has diverse personality and hobby for every other. Don't to be pressured someone or something that they don't would like do that. You must know how great along with important the book Chemistry in Microelectronics. All type of book are you able to see on many methods. You can look for the internet sources or other social media.

Roberta Bourland:

Reading a e-book can be one of a lot of action that everyone in the world adores. Do you like reading book consequently. There are a lot of reasons why people like it. First reading a e-book will give you a lot of new data. When you read a book you will get new information mainly because book is one of a number of ways to share the information or maybe their idea. Second, reading a book will make anyone more imaginative. When you looking at a book especially fictional works book the author will bring that you imagine the story how the characters do it anything. Third, it is possible to share your knowledge to other individuals. When you read this Chemistry in Microelectronics, you could tells your family, friends as well as soon about yours book. Your knowledge can inspire average, make them reading a reserve.

Theresa Frost:

The guide with title Chemistry in Microelectronics has lot of information that you can find out it. You can get a lot of benefit after read this book. This specific book exist new information the information that exist in this book represented the condition of the world currently. That is important to yo7u to learn how the improvement of the world. This specific book will bring you inside new era of the the positive effect. You can read the e-book on your own smart phone, so you can read this anywhere you want.

Pamela Bost:

Chemistry in Microelectronics can be one of your starter books that are good idea. We recommend that straight away because this publication has good vocabulary that can increase your knowledge in vocab, easy to understand, bit entertaining but nonetheless delivering the information. The author giving his/her effort to get every word into satisfaction arrangement in writing Chemistry in Microelectronics although doesn't forget the main stage, giving the reader the hottest and also based confirm resource details that maybe you can be considered one of it. This great information could drawn you into completely new stage of crucial pondering.

Download and Read Online Chemistry in Microelectronics
#F8M0B4NDCP7

Read Chemistry in Microelectronics for online ebook

Chemistry in Microelectronics Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Chemistry in Microelectronics books to read online.

Online Chemistry in Microelectronics ebook PDF download

Chemistry in Microelectronics Doc

Chemistry in Microelectronics Mobipocket

Chemistry in Microelectronics EPub