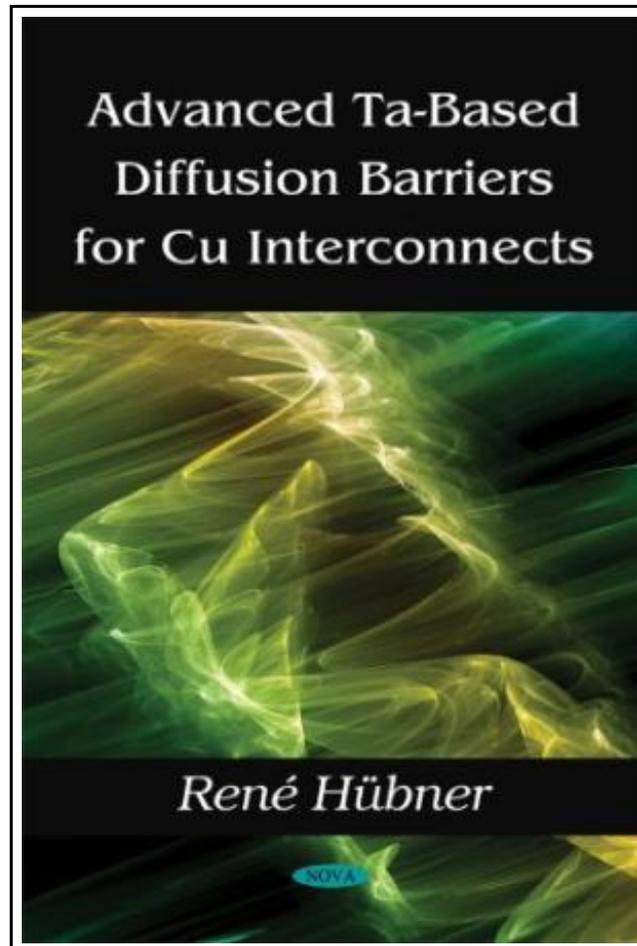


Advanced Ta-Based Diffusion Barriers for Cu Interconnects



Filesize: 2.37 MB

Reviews

This ebook is very gripping and fascinating. Sure, it is engage in, nevertheless an amazing and interesting literature. It is extremely difficult to leave it before concluding, once you begin to read the book.

(Ms. Ora Buckridge)

ADVANCED TA-BASED DIFFUSION BARRIERS FOR CU INTERCONNECTS



Nova Science Publishers Inc. Paperback. Book Condition: new. BRAND NEW, Advanced Ta-Based Diffusion Barriers for Cu Interconnects, Rene Hubner, During the last few years, copper has become the standard metallisation material for on-chip interconnects in high-performance microprocessors. Compared to the previously used aluminium, copper shows not only a lower resistivity, but also significantly improved electromigration resistance. Copper ions, however, are very mobile in silicon and many dielectric materials under electrical and thermal bias. Thus, barrier layers are needed to prevent Cu diffusion into the insulating layers surrounding the metallic interconnects. Since Ta-based compounds are characterized by a high thermal stability, pure Ta films or layer stacks consisting of Ta and TaN are used for such barriers. The continuous scaling down of the interconnect dimensions and, therefore, the essential decrease in the barrier layer thickness coupled with the replacement of silicon oxide by advanced low-k dielectrics demand further improvements of the diffusion barrier performance. It is the aim of this book to carry out microstructure and functional property investigations for advanced, high-performance Tabased diffusion barriers (Ta-TaN layer stacks and Ta-Si-N single layers) before and after annealing to compare their thermal stabilities and to probe the corresponding failure mechanisms. For the Ta-TaN barriers, these studies are undertaken for a range of layer sequences, while for the Ta-Si-N barriers a variety of films with different chemical compositions are analysed.



[Read Advanced Ta-Based Diffusion Barriers for Cu Interconnects Online](#)

[Download PDF Advanced Ta-Based Diffusion Barriers for Cu Interconnects](#)

You May Also Like



THE Key to My Children Series: Evan s Eyebrows Say Yes

AUTHORHOUSE, United States, 2006. Paperback. Book Condition: New. 274 x 216 mm. Language: English . Brand New Book ***** Print on Demand *****.THE KEY TO MY CHILDREN SERIES: EVAN S EYEBROWS SAY YES is about...

[Read ePub »](#)



EU Law Directions

Oxford University Press, United Kingdom, 2014. Paperback. Book Condition: New. 4th ed.. 242 x 188 mm. Language: English . Brand New Book. With a readable and modern writing style, EU Law Directions clearly explains the...

[Read ePub »](#)



The Preschool Inclusion Toolbox: How to Build and Lead a High-Quality Program

Brookes Publishing Co, United States, 2015. Paperback. Book Condition: New. 274 x 213 mm. Language: English . Brand New Book. Filled with tips, tools, and strategies, this book is the comprehensive, practical toolbox preschool administrators...

[Read ePub »](#)



Peter Rabbit: Treehouse Rescue - Read it Yourself with Ladybird: Level 2

Penguin Books Ltd. Paperback. Book Condition: new. BRAND NEW, Peter Rabbit: Treehouse Rescue - Read it Yourself with Ladybird: Level 2, This is based on the new Peter Rabbit animated TV series. Peter and Lily...

[Read ePub »](#)



Most cordial hand household cloth (comes with original large papier-mache and DVD high-definition disc) (Beginners Korea(Chinese Edition)

paperback. Book Condition: New. Ship out in 2 business day, And Fast shipping, Free Tracking number will be provided after the shipment.Paperback. Pub Date: Unknown in Publisher: Henan Science and Technology Press Information Original Price:...

[Read ePub »](#)

**Oxford Reading Tree Read with Biff, Chip, and Kipper: Phonics: Level 5: Dolphin Rescue (Hardback)**

Oxford University Press, United Kingdom, 2011. Hardback. Book Condition: New. 172 x 142 mm. Language: English . Brand New Book. Read With Biff, Chip and Kipper is the UK s best-selling home reading series. It

[Read eBook »](#)

**Oxford Reading Tree Read with Biff, Chip, and Kipper: Phonics: Level 3: Such a Fuss (Hardback)**

Oxford University Press, United Kingdom, 2011. Hardback. Book Condition: New. 172 x 142 mm. Language: English . Brand New Book. Read With Biff, Chip and Kipper is the UK s best-selling home reading series. It

[Read eBook »](#)

**Oxford Reading Tree Read with Biff, Chip, and Kipper: Phonics: Level 5: Craig Saves the Day (Hardback)**

Oxford University Press, United Kingdom, 2011. Hardback. Book Condition: New. 173 x 145 mm. Language: English . Brand New Book. Read With Biff, Chip and Kipper is the UK s best-selling home reading series. It

[Read eBook »](#)

**My Windows 8.1 Computer for Seniors (2nd Revised edition)**

Pearson Education (US). Paperback. Book Condition: new. BRAND NEW, My Windows 8.1 Computer for Seniors (2nd Revised edition), Michael Miller, Easy, clear, readable, and focused on what you want to do Step-by-step instructions for the

[Read eBook »](#)

**Oxford Reading Tree Read with Biff, Chip, and Kipper: Phonics: Level 3: The Sing Song (Hardback)**

Oxford University Press, United Kingdom, 2011. Hardback. Book Condition: New. 176 x 150 mm. Language: English . Brand New Book. Read With Biff, Chip and Kipper is the UK s best-selling home reading series. It

[Read eBook »](#)