

Declaration of Rachel J. Watters on Authentication of Publication

I, Rachel J. Watters, am a librarian, and the Head of Resource Sharing for the General Library System, Memorial Library, located at 728 State Street, Madison, Wisconsin, 53706. Part of my job responsibilities include oversight of Wisconsin TechSearch (“WTS”), an interlibrary loan department at the University of Wisconsin-Madison. I have worked as a librarian at the University of Wisconsin library system since 1998, starting as a graduate student employee in the Kurt F. Wendt Engineering Library and WTS, then as a librarian in Interlibrary Loan at Memorial Library. I began professional employment at WTS in 2002 and became WTS Director in 2011. In 2019, I became of Head of Resource Sharing for UW-Madison’s General Library System. I have a master’s degree in Library and Information Studies from the University of Wisconsin-Madison. Through the course of my studies and employment, I have become well informed about the operations of the University of Wisconsin library system, which follows standard library practices.

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Exhibit A to this Declaration is a true and accurate copy of the front and back covers, front matter, and back inside cover of the *Silicon Processing for the VLSI Era, Volume 3: The submicron MOSFET* (1995) publication, which includes a stamp on the inside back cover showing that this book is the property of the Kurt F. Wendt Library at the University of Wisconsin-Madison.

Attached as Exhibit B is the cataloging system record of the University of Wisconsin-Madison Libraries for its copy of the *Silicon Processing for the VLSI Era, Volume 3: The submicron MOSFET* (1995) publication. As shown in the “Receiving date” field of this Exhibit, the University of Wisconsin-Madison Libraries owned this book and had it cataloged in the system as of February 2, 2002.

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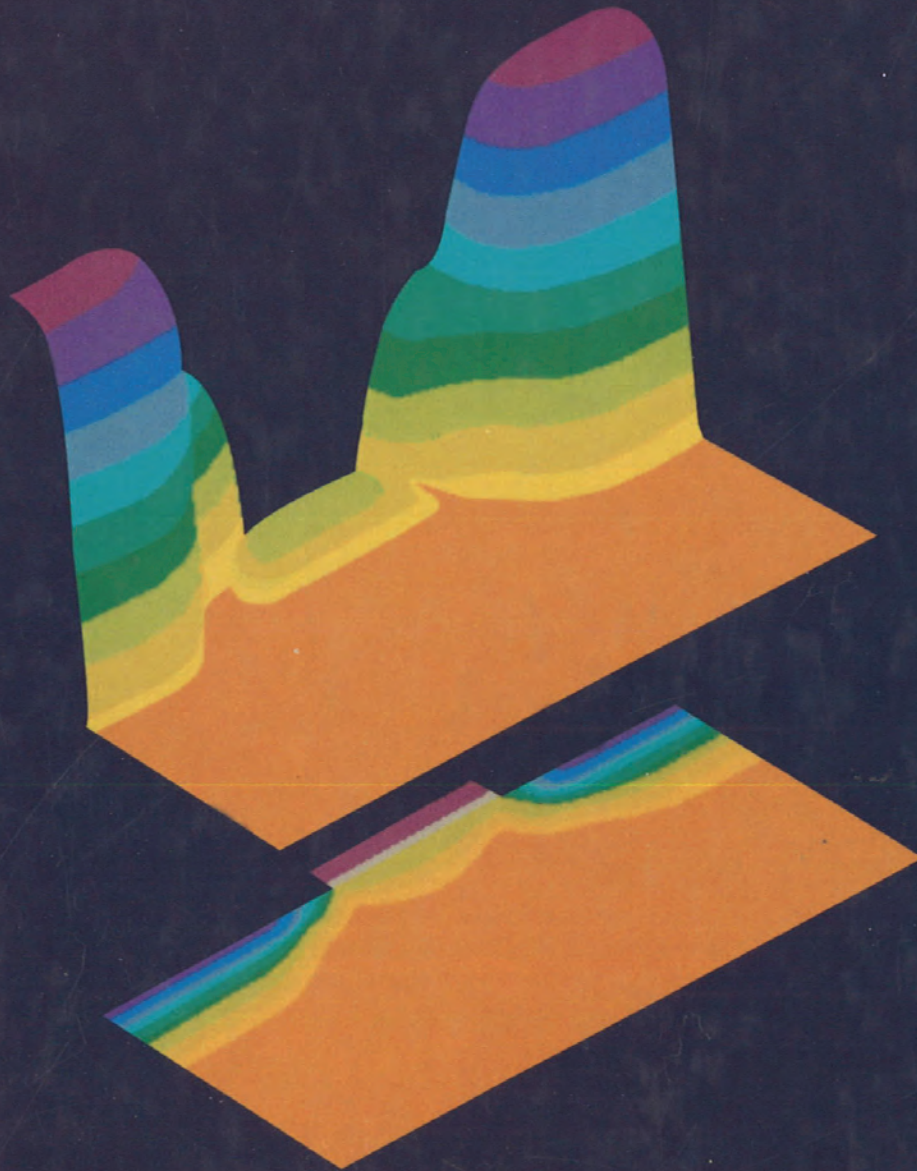
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EXHIBIT A

Silicon Processing

for the VLSI Era

Volume 3 - The Submicron MOSFET



S. Wolf

for the VLSI Era

Volume 1 - Process Technology

By **STANLEY WOLF** and **RICHARD N. TAUBER**

TABLE of CONTENTS - Ch.1 Silicon: Single-Crystal Growth and Watering; Ch. 2 Crystalline Defects, Thermal Processing, and Gettering; Ch. 3 Vacuum Technology for VLSI Applications; Ch. 4 Basics of Thin Films; Ch. 5 Silicon Epitaxial Film Growth; Ch. 6 Chemical Vapor Deposition of Amorphous and Polycrystalline Films; Ch. 7 Thermal Oxidation of Silicon Ch. 8 Diffusion in Silicon; Ch. 9 Ion Implantation for VLSI; Ch. 10 Aluminum Thin Films and Physical Vapor Deposition in VLSI; Ch. 11 Refractory Metals and Their Silicides in VLSI; Ch. 12 Lithography I: Optical Photoresists - Material Properties and Process Technology; Ch. 13 Lithography II: Optical Aligners and Photomasks; Ch. 14 Advanced Lithography: E-Beam and X-Ray; Ch. 15 Wet Processing: Cleaning, Etching, and Lift-Off; Ch. 16 Dry Etching for VLSI; Ch. 17 Material Characterization Techniques for VLSI Fabrication; Ch. 18 Structured Approach to Design of Experiments for Process Optimization.

1986 LATTICE PRESS 660 pp. ISBN 0-9616721-3-7

Volume 2 - Process Integration

By **STANLEY WOLF**

TABLE of CONTENTS - Ch. 1 Process Integration for VLSI and ULSI; Ch.2 Isolation Technologies for Integrated Circuits; Ch. 3 Contact Technology and Local Interconnects for VLSI; Ch. 4, Multilevel Interconnect Technology for VLSI and ULSI; Ch. 5 NMOS Devices and Process Integration; Ch. 6 CMOS Process Integration; Ch. 7 Bipolar and BiCMOS Process Integration; Ch. 8 Semiconductor Memory Process Integration; Ch. 9 Process Simulation.

1990 LATTICE PRESS 752 pp. ISBN 0-9616721-4-5

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Silicon Processing
for the VLSI Era

Volume 3

The
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MOSFET

S. Wolf

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1986
v.3



**SILICON PROCESSING
FOR
THE VLSI ERA**

**VOLUME 3:
THE SUBMICRON MOSFET**

STANLEY WOLF Ph.D.
Professor, Department of Electrical Engineering
California State University, Long Beach
Long Beach, California

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Sunset Beach, California

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Enumeration A

3

Enumeration B

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Chronology I

-

Chronology J

-

Description

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Pages

-

Pieces

1

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Temporary Location Information

Item is in temporary location	No
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Exhibit A to this Declaration is a true and accurate copy of the front matter of the *Silicon Processing for the VLSI Era. Volume 4: Deep-submicron process technology* (2002) publication, which includes a stamp on the title page showing that this book is the property of the General Library System at the University of Wisconsin-Madison. Exhibit A also includes a true and accurate copy of a front matter verso page with library date stamp of *Silicon Processing for the VLSI Era. Volume 4: Deep-submicron process technology* (2002), from the University of Wisconsin-Madison Library collection. Based on this information, the date stamp on the front matter verso page indicates *Silicon Processing for the VLSI Era. Volume 4: Deep-submicron process technology* (2002) was received by the General Library System, University of Wisconsin-Madison Libraries on November 26, 2002.

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Members of the interested public could locate the *Silicon Processing for the VLSI Era. Volume 4: Deep-submicron process technology* (2002) publication after it was cataloged by searching the public library catalog or requesting a search through WTS. The search could be done by title, author, and/or subject key words. Members of the

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**VOLUME 4:
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STANLEY WOLF Ph.D.

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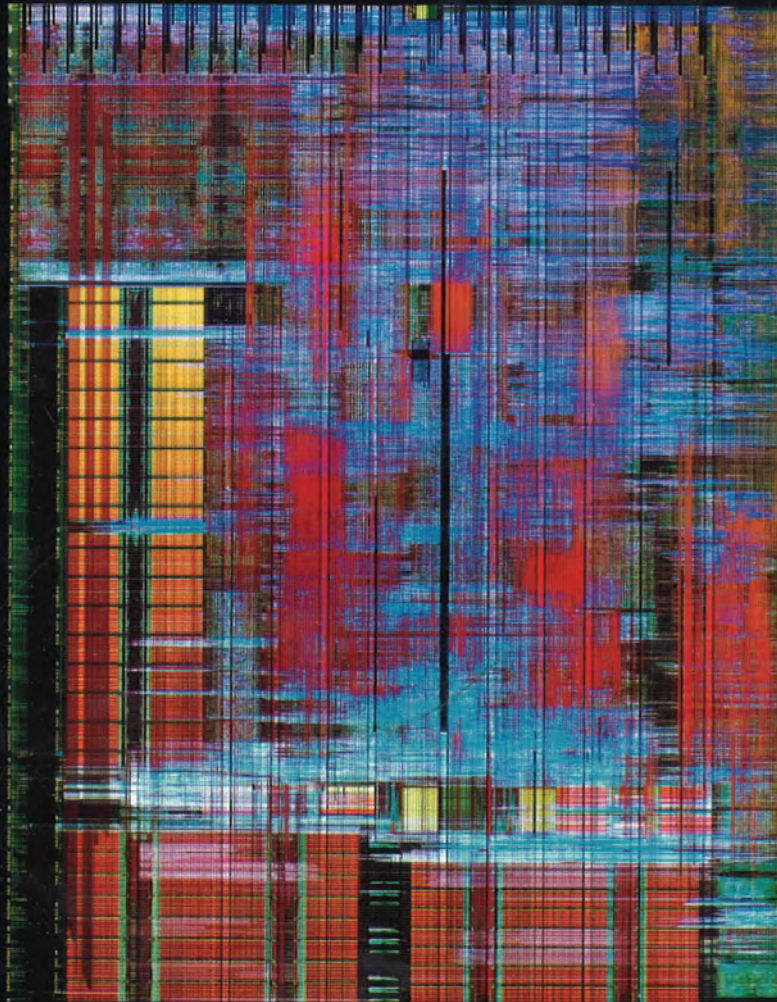


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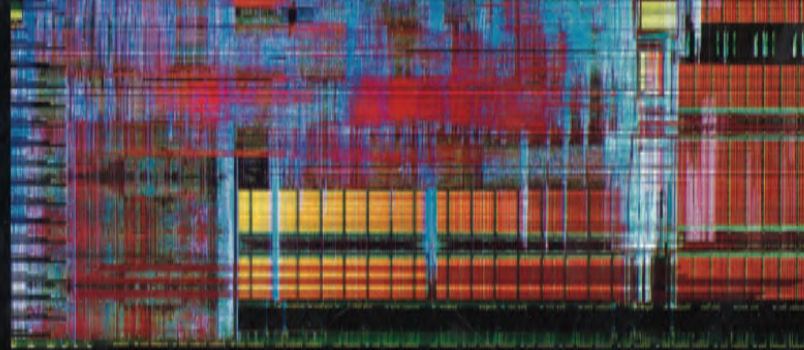


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- incorporates the basics of semiconductor materials and conduction processes in solids needed to understand p-n junctions, bipolar and metal oxide semiconductor (MOS) transistors, optoelectronic and other devices.
- greatly expanded and updated discussion of device fabrication processes and CMOS integrated circuit technology, along with new data in the Appendices, provides a useful understanding of how semiconductor devices are made.
- extensive discussion of circuit and other application examples to provide students with feedback about the practical relevance of the theory.
- completely updated discussion of MOS devices, both in the underlying theory as well as discussion of short channel, high field and hot carrier effects in scaled MOSFETs, recognizing the current preponderance of CMOS.
- updated, consolidated treatment of optoelectronic devices, including sources such as blue GaN-based LEDs and semiconductor vertical-cavity surface-emitting lasers, as well as detectors such as avalanche and resonant-cavity photodiodes.
- includes a listing of the key equations for semiconductor devices on the inside covers of the book, arranged thematically to help students digest the concepts.
- about 200 problems and current references which extend concepts in the text.

BEN G. STREETMAN is Dean of the College of Engineering at The University of Texas at Austin and holds the Dula D. Cockrell Centennial Chair in Engineering. He is a Professor of Electrical and Computer Engineering and was the founding Director of the Microelectronics Research Center. He has taught at the University of Illinois at Urbana-Champaign as well as the University of Texas at Austin. He has received numerous awards including the Education Medal of IEEE, The Frederick Emmons Terman Medal of the ASEE, and membership in the National Academy of Engineering. He has published more than 270 articles in the technical literature. Thirty-three students of Electrical Engineering, Materials Science, and Physics have received their Ph.D.s under his direction.



SANJAY BANERJEE is the Cullen Trust Endowed Professor of Electrical and Computer Engineering, and Director of the Microelectronics Research Center at The University of Texas at Austin. He has more than 225 archival refereed publications and 12 U.S. patents, and has supervised 18 Ph.D. students. His honors include the NSF Presidential Young Investigator Award (1988), the Texas Atomic Energy Centennial Fellowship (1990-1997), Distinguished National Lecturer for the IEEE Electron Devices Society (1997-), and Fellow of the IEEE (1996).



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This is the fifth edition of the most widely used introductory book on semiconductor materials, physics, devices and technology. Previous editions have been translated into Russian, French, German, Japanese, and Polish. The book was written with two basic goals in mind: 1) develop the physics concepts to understand current and future devices; 2) provide a source of current semiconductor devices and technology so that their applications in optoelectronic circuits and systems can be appreciated.

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KEY FEATURES:

- incorporates the basics of semiconductor materials and conduction processes in solids needed to understand p-n junctions, bipolar and metal oxide semiconductor (MOS) transistors, optoelectronic and other devices.
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Solid State Electronic Devices

BEN G. STREETMAN AND SANJAY BANERJEE

*Microelectronics Research Center
Department of Electrical and Computer Engineering
The University of Texas at Austin*



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Enumeration A

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Physical condition

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Inventory date

Inventory price

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Permanent location *

Steenbock Library: Steenbock Stacks (stk)

Item call number type

Item call number

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Storage location ID

Temporary Location Information

Item is in temporary location

No ☐ Yes ☐

Temporary location

Temporary call number type

Temporary call number

Temporary source (Subfield 2)

Temporary item policy

Due back date

Retention Information

Committed to Retain

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Retention Reason

Retention Note