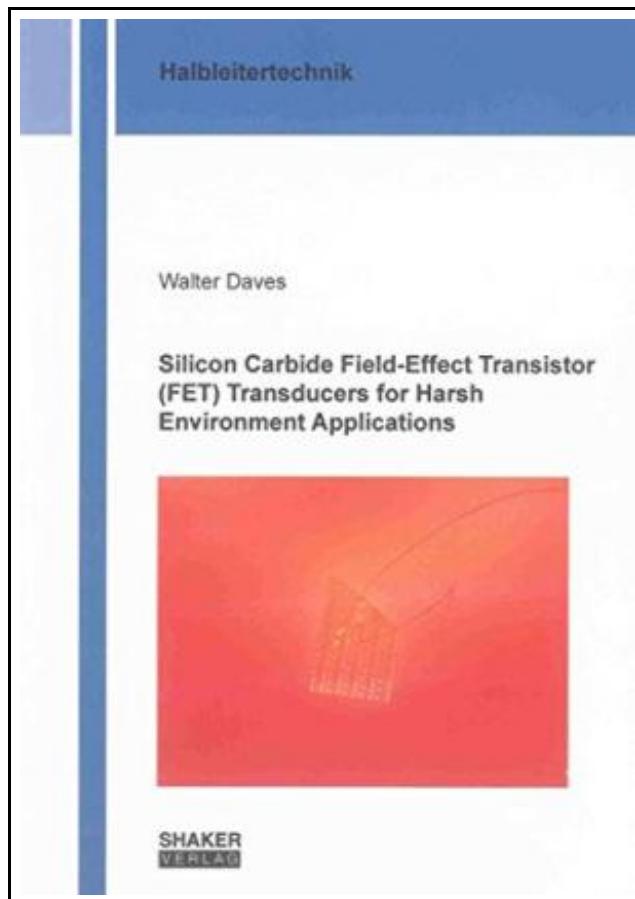


Silicon Carbide Field-Effect Transistor (FET) Transducers for Harsh Environment Applications



Filesize: 1.18 MB

Reviews

These kinds of pdf is the ideal ebook accessible. Of course, it is actually play, nevertheless an interesting and amazing literature. I realized this publication from my i and dad suggested this book to find out.

(Ms. Ruth Wisozk)

SILICON CARBIDE FIELD-EFFECT TRANSISTOR (FET) TRANSDUCERS FOR HARSH ENVIRONMENT APPLICATIONS

[DOWNLOAD PDF](#)

Shaker Verlag Mrz 2013, 2013. Buch. Book Condition: Neu. Neuware - The emerging field of harsh environment semiconductor devices has a high potential to improve efficiency and safety of combustion processes significantly. Above all, robust sensor and electronic devices enable system and exhaust gas monitoring, as well as combustion control in real-time. For these applications the exposure of the devices to the harsh environment is often unavoidable. Especially for pressure and exhaust gas sensing applications, the direct contact with the harsh environment is required for sensor operation. This imposes completely different requirements on the material and the device reliability compared to silicon microsystem technology standards. In particular, resistance against temperatures as high as 600 °C and highly corrosive air/moisture environments is required. Furthermore, thermal cycling is also a major concern. Silicon carbide (SiC) is a promising semiconductor material for harsh environment sensors and electronics due to its outstanding properties and the high level of maturity of the related process technology. Despite the excellent properties of the SiC substrate material, the lifetime of SiC devices in harsh environments is above all limited by the stability of the ohmic contacts and the gate dielectrics. This work aimed at the development of novel materials and processes for the realization of SiC field-effect transistor (FET) transducers capable of operating in exhaust gas environments at temperatures up to 500 °C. Highly-stable Pt-based metallizations, robust amorphous silicon carbide protective coatings, and highly reliable Ti ohmic contacts as well as oxide-nitride-oxide gate dielectrics were established. Extended environmental testing methods were established to assess the reliability of the device components, specifically addressing the requirement profile of harsh environment applications. These methods included thermal aging in different gas environments, thermal cycling, autoclave testing, storage in exhaust gas concentrate, and biasstress experiments. The single device components were initially optimized and...

[Read Silicon Carbide Field-Effect Transistor \(FET\) Transducers for Harsh Environment Applications Online](#)[Download PDF Silicon Carbide Field-Effect Transistor \(FET\) Transducers for Harsh Environment Applications](#)

Relevant Kindle Books



Programming in D

Ali Cehreli Dez 2015, 2015. Buch. Book Condition: Neu. 264x182x53 mm. This item is printed on demand - Print on Demand Neuware - The main aim of this book is to teach D to readers...

[Download Book »](#)



Unplug Your Kids: A Parent's Guide to Raising Happy, Active and Well-Adjusted Children in the Digital Age

Adams Media Corporation. Paperback. Book Condition: new. BRAND NEW, Unplug Your Kids: A Parent's Guide to Raising Happy, Active and Well-Adjusted Children in the Digital Age, David Dutwin, TV. Web Surfing. IMing. Text Messaging. Video...

[Download Book »](#)



Adobe InDesign CS/Cs2 Breakthroughs

Peachpit Press, 2005. Softcover. Book Condition: Neu. Gebraucht - Sehr gut Unbenutzt. Schnelle Lieferung, Kartonverpackung. Abzugsfähige Rechnung. Bei Mehrfachbestellung werden die Versandkosten anteilig erstattet. - Adobe InDesign is taking the publishing world by storm and...

[Download Book »](#)



The Java Tutorial (3rd Edition)

Pearson Education, 2001. Softcover. Book Condition: Neu. Gebraucht - Sehr gut Unbenutzt. Schnelle Lieferung, Kartonverpackung. Abzugsfähige Rechnung. Bei Mehrfachbestellung werden die Versandkosten anteilig erstattet. - Praise for "The Java' Tutorial, Second Edition" includes: "This book...

[Download Book »](#)



JA] early childhood parenting :1-4 Genuine Special(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 :2006-01-01 Pages: 179 Publisher: the China Pictorial Our book is all...

[Download Book »](#)