Buchanan / Edwards / Bardeleben

Structure and Electronic Properties of Ultrathin Dielectric Films on Silicon and Related Structures: Volume 592

With the ever-decreasing dimension, laterally and vertically, in CMOS and DRAM technology, the understanding of thin insulators and their interfaces with silicon have become of critical importance. As a result of this scaling of semiconductor devices, an increased interest from industrial, government, and university laboratories has become evident in this field of study. The book, first published in 2000, includes detailed theoretical studies of the nature of SiO2 and its interface with silicon, electron paramagnetic resonance for the study of defects, electron tunneling, and band alignment among others. There are also studies developing new techniques and advancing our understanding of these dielectrics and interfaces, including addressing the issue of dielectric breakdown. Aside from the work addressing SiO2, there are a number of papers regarding the application of the so-called 'high-k' dielectrics. The high-k materials addressed in the volume include such films as Ta2O5, HfO2, Bi2Ti2O7, CeO2, and ZrO2.

41,50 €
38,79 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

Artikelnummer: 9781558995000
Medium: Buch
ISBN: 978-1-55899-500-0
Verlag: Cambridge University Press
Erscheinungstermin: 17.10.2000
Sprache(n): Englisch
Auflage: Erscheinungsjahr 2000
Serie: MRS Proceedings
Produktform: Gebunden
Gewicht: 635 g
Seiten: 406
Format (B x H): 160 x 234 mm