Record Nr. UNINA9910877057603321 Reliability wearout mechanisms in advanced CMOS technologies / / **Titolo** Alvin W. Strong ... [et al.] Pubbl/distr/stampa Hoboken, N.J., : Wiley, c2009 **ISBN** 1-282-33149-3 9786612331497 0-470-45526-8 0-470-45525-X Descrizione fisica 1 online resource (642 p.) Collana IEEE Press series on microelectronic systems Classificazione **ELT 358f** ZN 4960 Altri autori (Persone) StrongAlvin Wayne <1946-> Disciplina 621.39732 Soggetti Metal oxide semiconductors, Complementary - Reliability Microelectronics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Introduction / Alvin W. Strong -- Dielectric characterization and reliability methodology / Ernest Y. Wu, Rolf-Peter Vollertsen, and Jordi Sune -- Dielectric breakdown of gate oxides: physics and experiments / Ernest Y. Wu, Rolf-Peter Vollertsen, and Jordi Sune -- Negative bias temperature instabilities in pMOSFET devices / Giuseppe LaRosa -- Hot carriers / Stewart E. Rauch, III -- Stress-induced voiding / Timothy D. Sullivan -- Electromigration / Timothy D. Sullivan. A comprehensive treatment of all aspects of CMOS reliability wearout Sommario/riassunto mechanisms This book covers everything students and professionals need to know about CMOS reliability wearout mechanisms, from basic concepts to the tools necessary to conduct reliability tests and analyze the results. It is the first book of its kind to bring together the pertinent physics, equations, and procedures for CMOS technology reliability in one place. Divided into six relatively independent topics, the book covers: Introduction to Reliability Gate Dielectric Reliability Negative

Bias