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17: ADVANCES IN NANOINTEGRATION METHODOLOGIES: PATTERNING, POSITIONING, AND SELF-ASSEMBLY18: INTEGRATION OF NANOWIRES IN NEW DEVICES AND CIRCUIT ARCHITECTURES: RECENT DEVELOPMENTS AND CHALLENGES; 19: INTEGRATING DIAMOND LIKE CARBON INTO NANOSTRUCTURE DESIGNS (FABRICATING MICROSCALE AND NANOSCALE ARCHITECTURES OF DIAMOND-LIKE CARBON FILMS); 20: SYNTHESIS, PROPERTIES, INTEGRATION, AND APPLICATIONS OF VERTICALLY ALIGNED CERAMIC NANOSTRUCTURES; 21: NANOINTEGRATION BASED ON THIN-FILM TECHNOLOGY; 22: MASS-MANUFACTURABLE NANOWIRE INTEGRATION: CHALLENGES AND RECENT DEVELOPMENTS
23: USABILITY OF INK-JET PRINTING TECHNOLOGY AND NANOMATERIALS IN ELECTRICAL INTERCONNECTIONS, ELECTRONIC PACKAGING, AND SYSTEM INTEGRATION FOR MICROELECTRONICS APPLICATIONS24: BIOINTEGRATION OF PROSTHETIC DEVICES; INDEX

Sommario/riassunto

This book joins and integrates ceramics and ceramic-based materials in various sectors of technology. A major imperative is to extract scientific information on joining and integration response of real, as well as model, material systems currently in a developmental stage. This book envisions integration in its broadest sense as a fundamental enabling technology at multiple length scales that span the macro, millimeter, micrometer and nanometer ranges. Consequently, the book addresses integration issues in such diverse areas as space power and propulsion, thermoelectric power generation, sol