1. Record Nr. UNINA9910483477703321 Autore Lau John H. Titolo Semiconductor advanced packaging / / John H. Lau Pubbl/distr/stampa Gateway East, Singapore: ,: Springer, , [2021] ©2021 **ISBN** 981-16-1376-1 Edizione [1st ed. 2021.] 1 online resource (XXII, 498 p. 557 illus., 530 illus. in color.) Descrizione fisica Disciplina 621.38152 Soggetti Semiconductors - Design and construction Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Recent Advance on Semiconductor Packaging -- System-in-Package --Fan-In Wafer/Panel-Level Chip-Scale Packages -- Fan-Out Wafer/Panel-Level Packaging -- 2D, 2.1D, and 2.3D IC Integration --2.5D IC Integration -- 3D IC Integration -- Hybrid Bonding -- Chiplets Packaging -- Dielectric Materials -- Trends and Roadmap for Advanced Semiconductor Packaging. Sommario/riassunto The book focuses on the design, materials, process, fabrication, and reliability of advanced semiconductor packaging components and systems. Both principles and engineering practice have been addressed, with more weight placed on engineering practice. This is achieved by providing in-depth study on a number of major topics such as systemin-package, fan-in wafer/panel-level chip-scale packages, fan-out wafer/panel-level packaging, 2D, 2.1D, 2.3D, 2.5D, and 3D IC integration, chiplets packaging, chip-to-wafer bonding, wafer-to-wafer bonding, hybrid bonding, and dielectric materials for high speed and frequency. The book can benefit researchers, engineers, and graduate

students in fields of electrical engineering, mechanical engineering,

materials sciences, and industry engineering, etc.