1. Record Nr. UNINA9910831075903321

Titolo	Silicon nanomembranes : fundamental science and applications / / edited by John A. Rogers and Jong-Hyun Ahn
Pubbl/distr/stampa	Weinheim, Germany : , : Wiley-VCH Verlag GmbH & Co. KGaA, , 2016 ©2016
ISBN	3-527-69100-6 3-527-69099-9
Descrizione fisica	1 online resource (369 p.)
Disciplina	660.2842
Soggetti	Membranes (Technology) Nanosilicon
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Cover; Title Page; Copyright; Contents; List of Contributors; Part 1 Materials and Processes; Chapter 1 Synthesis, Assembly, and Applications of Semiconductor Nanomembranes; 1.1 Introduction; 1.2 Strategies for Forming Silicon Nanomembranes; 1.2.1 Selective Etching to Release Nanomembranes from Layered Assemblies; 1.2.2 Anisotropic Etching to Release Silicon Nanomembranes from Bulk Silicon Wafers; 1.3 Transfer Printing for Deterministic Assembly; 1.3.1 Introduction; 1.3.2 Mechanics of Transfer Printing; 1.3.3 Transfer Printing for Single- and Multilayer Deterministic Assembly 1.4 Compressive Buckling for Deterministic Assembly1.4.1 Introduction; 1.4.2 Buckling on Compliant Substrates for Wavy Layouts; 1.4.3 Patterned Adhesion for Controlled, Large-Scale Buckling; 1.4.4 Deterministic Assembly of Complex, Three-Dimensional Architectures by Compressive Buckling; 1.5 Functional Devices Made from Silicon Nanomembranes; 1.5.1 Physically Transient Electronics; 1.5.2 Injectable, Cellular-Scale Optoelectronic Devices for the Brain; 1.5.3 Three-Dimensional Integumentary Membranes for Spatiotemporal Cardiac Measurements; 1.5.4 Arthropod Eyes Inspired Digital Camera 1.5.5 Cephalopod Skins Inspired Optoelectronic Camouflage Systems1. 6 Conclusions and Outlook; References; Chapter 2 Models of Reactive