

1. Record Nr.	UNINA9910299673003321
Titolo	Buildings for Advanced Technology // edited by Ahmad Soueid, E. Clayton Teague, James Murday
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2015
ISBN	3-319-24892-8
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (188 p.)
Collana	Science Policy Reports, , 2213-1965
Disciplina	620
Soggetti	Building construction Nanotechnology Nanoscale science Nanoscience Nanostructures Nanotechnology Building Physics, HVAC Nanoscale Science and Technology Nanotechnology and Microengineering
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	Introduction -- Design Criteria -- Temperature and Humidity Control -- Vibration Isolation -- Acoustic Noise -- Building Mechanical Systems Disturbances -- Electric Power Grounding and Conditioning -- EMI/RFI: Electromagnetic and Radio-Frequency Interference -- Airborne Contamination -- Bio-containment -- Case Studies and Building Statistics.
Sommario/riassunto	This book deals with the design and construction of buildings for nanoscale science and engineering research. The information provided in this book is useful for designing and constructing buildings for such advanced technologies as nanotechnology, nanoelectronics and biotechnology. The book outlines the technology challenges unique to each of the building environmental challenges outlined below and provides best practices and examples of engineering approaches to

address them: • Establishing and maintaining critical environments: temperature, humidity, and pressure • Structural vibration isolation • Airborne vibration isolation (acoustic noise) • Isolation of mechanical equipment-generated vibration/acoustic noise • Cost-effective power conditioning • Grounding facilities for low electrical interference • Electromagnetic interference (EMI)/Radio frequency interference (RFI) isolation • Airborne particulate contamination • Airborne organic and chemical contamination • Environment, safety and health (ESH) considerations • Flexibility strategies for nanotechnology facilities The authors are specialists and experts with knowledge and experience in the control of environmental disturbances to buildings and experimental apparatus.
