

1. Record Nr.	UNINA9910410000103321
Titolo	Handbook of Materials Modeling : Applications: Current and Emerging Materials // edited by Wanda Andreoni, Sidney Yip
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2020
ISBN	3-319-44680-0
Edizione	[2nd ed. 2020.]
Descrizione fisica	1 online resource (930 illus., 849 illus. in color. eReference.)
Disciplina	620.11015118
Soggetti	Mathematical physics Nanotechnology Mechanics, Applied Solids Chemistry, Physical and theoretical Condensed matter Theoretical, Mathematical and Computational Physics Solid Mechanics Theoretical Chemistry Condensed Matter Physics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	The Handbook of Materials Modeling, 2nd edition is a six-volume major reference serving a steadily growing community at the intersection of two mainstreams of global research: computational science and materials science and technology. This extensively expanded new edition reflects the significant developments in all aspects of computational materials research over the past decade, featuring progress in simulations at multiple scales and increasingly more realistic materials models. Thematically separated into two mutually dependent sets – “Methods: Theory and Modeling (MTM)” and “Applications: Current and Emerging Materials (ACE)” – the handbook runs the entire gamut from theory and methods to simulations and

applications. Readers benefit from its in-depth coverage of a broad methodological spectrum extending from advanced atomistic simulations of rare events to data-driven artificial intelligence strategies for materials informatics in the set MTM, as well as forefront emphasis on materials of far-ranging societal importance such as photovoltaics and energy-relevant oxides, and cutting-edge applications to materials for spintronic devices, graphene, cement, and glasses in the set ACE. The thorough, interconnected coverage of methods and applications, together with a line-up of internationally acclaimed editors and authors, will ensure the Handbook of Material Modeling's standing as an enduring source of learning and inspiration for a global community of computational materials scientists. .
