1. Record Nr. UNINA9910674049903321

Titolo	First-Principles Approaches to Metals, Alloys, and Metallic Compounds / / edited by Richard Dronskowski
Pubbl/distr/stampa	Basel : , : MDPI - Multidisciplinary Digital Publishing Institute, , 2018
Descrizione fisica	1 online resource (180 pages) : illustrations
Disciplina	620.1
Soggetti	Intermetallic compounds
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Sommario/riassunto	Current fundamental electronic-structure theory allows for the accurate prediction and characterization of elemental metals adopting any allotropic structure, intermetallic compounds, and other metal-rich phases. From an engineering perspective, there is a need for structural materials that are suitable for mechanical and civil engineering as well as energy production and conversion. While different microstructural features influence the macroscopic behaviour, quantum-mechanical simulation may enormously accelerate and guide the entire development process since atomistic modelling allows for the generation of structural models and the calculation of enthalpies and other free energies as a function of pressure and temperature. Among other things, this volume covers high-manganese steels, some of which have come to light within Collaborative Research Centre 761 ("Steel ab initio"). In particular, it deals with short-range ordering from experiment and theory, also highlighting carbide-like precipitates, and it bridges the gap between atomistic and continuum levels, in particular for hydrogen embrittlement. Molecular dynamics simulates crack propagation, and first-principles theory helps in growing better intermetallic thin films and predicts structural and elastic properties. Eventually, multiscale modelling of hydrogen transport is provided, and the chemical reasons for H-trapping -carbides are highlighted. First-principles theory has acquired a powerful role in the fundamental and applied research of metals, alloys, and metallic compounds.

2. Record Nr. UNINA9910136606203321

Titolo	Perinatal Continuing Education Program . Book IV Specialized newborn care / / American Academy of Pediatrics
Pubbl/distr/stampa	Elk Grove Village, Illinois : , : American Academy of Pediatrics, , 2017 2017
ISBN	1-61002-059-6
Edizione	[Third edition.]
Descrizione fisica	1 online resource (170 pages) : illustrations, graphs
Disciplina	618.9201
Soggetti	Newborn infants - Medical care Neonatal intensive care
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	Time-saving, low-cost solutions for self-paced learning or instructor-led training!Developed for health care professionals who provide care to pregnant women and newborns, the Perinatal Continuing Education Program (PCEP) is a comprehensive, self-paced education program in four volumes.Completely updated and revised with leading-edge procedures and techniques, Book IV: Specialized Newborn Care, 3rd Edition features 6 units dealing with complex neonatal therapies, such as assisted ventilation, as well as a unit on continuing care for at-risk babies and those with specal problems following intensive care.PCEP is a proven educational tool for:Improving perinatal care know-how, policies, practices and proceduresEstablishing organization-wide care goals and routinesTeaching both practical skills and cognitive knowledgeSaving time and money -- streamline the learning processReducing care risks through staff-wide consistency of knowledge and skills competencyEncouraging cooperation and communication among diverse staffSimplifying education planning and budgeting