1. Record Nr. UNISA990001613680203316

Autore	GOLDING, William Gerald
Titolo	Free Fall / by William Golding
Pubbl/distr/stampa	London : Faber and Faber, 1970
Descrizione fisica	253 p. ; 18 cm
Collocazione	VII.3.A. 1345(II i A 570)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia

2. Record Nr. UNINA9910143413903321

Autore	Theodore Louis
Titolo	Nanotechnology [[electronic resource]] : basic calculations for engineers and scientists / / Louis Theodore
Pubbl/distr/stampa	Hoboken, N.J., : Wiley-Interscience, c2006
ISBN	1-280-46269-8 9786610462698 0-470-24468-2 0-471-75201-0 0-471-75199-5
Descrizione fisica	1 online resource (481 p.)
Disciplina	620.5 620/.5
Soggetti	Nanotechnology - Mathematics
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 and index.
Nota di contenuto	NANOTECHNOLOGY; Contents; Preface; Introduction; PART 1: CHEMISTRY FUNDAMENTALS AND PRINCIPLES; 1 Units, Conversion Constants, and Dimensional Analysis; 1.1 Background on the Metric

System; 1.2 Describe the SI System of Units; 1.2.1 Seven Base Units; 1.2.2 Two Supplementary Units; 1.2.3 SI Multiples and Prefixes; 1.3 The Conversion Constant g(c); 1.4 Unit Conversion Factors: General Approach; 1.5 Temperature Conversions; 1.6 Pressure Calculations; 1.7 Density and Thermal Conductivity; 1.8 Viscosity Conversions; 1.9 Air Quality Standard; 1.10 Conversion Factors for Particulate Measurements
1.11 Significant Figures and Scientific Notation1.12 Uncertainty in Measurement; 2 Atoms, Elements, and the Periodic Table; 2.1 Atomic Theory; 2.2 The Avogadro Number; 2.3 Mass and Size of Atoms; 2.4 Atomic Conversions; 2.5 Atomic Number, Atomic Weight, and Mass Number; 2.6 Bismuth Application; 2.7 Elements; 2.8 Symbols for Elements; 2.9 Periodic Table Application; 2.10 Isotopes; 3 Molecular Rearrangements; 3.1 License Plate Sets; 3.2 Chemical Permutations and Combinations; 3.3 Formula Weight and Molecular Weight; 3.4 Mole/Molecule Relationship; 3.5 Pollutant Chemical Formulas
3.6 Stoichiometry3.7 Limiting and Excess Reactants; 3.8 Combustion of Chlorobenzene; 3.9 Metal Alloy Calculation; 3.10 Chemical Production; 4 Concentration Terms; 4.1 Density, Specific Gravity, and Bulk Density; 4.2 Classes of Solution; 4.3 Molality versus Molarity; 4.4 Molar Relationships; 4.5 Concentration Conversion; 4.6 Chlorine Concentration; 4.7 Trace Concentration; 4.8 Ash Emission; 4.9 Dilution Factor; 4.10 Nano Exhaust to Atmosphere; 4.11 Flue Gas Analysis; 4.12 pH; 5 Particle Size, Surface Area, and Volume; 5.1 Sphere, Cube, Rectangular Parallelepiped, and Cylinder
5.2 Parallelogram, Triangle, and Trapezoid5.3 Polygons; 5.4 Elipse and Ellipsoid; 5.5 Cones; 5.6 Torus; 5.7 Area to Volume Ratios; 5.8 Area to Volume Calculation; 5.9 Increase in Sphere Surface Area; 5.10 Increase in Cube Surface Area; 6 Materials Science Principles; 6.1 Metals, Polymers, and Ceramics; 6.2 Composites, Semiconductors, and Biomaterials; 6.3 Crystal Coordination Numbers; 6.4 Geometry of Metallic Unit Cells; 6.5 Geometry of Ionic Unit Cells; 6.6 Packing Factor; 6.7 Density Calculation; 6.8 Directions and Planes; 6.9 Linear Density; 6.10 Planar Density
7 Physical and Chemical Property Estimation7.1 Property Differences; 7.2 Material Selection; 7.3 Vapor Pressure; 7.4 Vapor Pressure Calculation; 7.5 Heat of Vaporization From Vapor Pressure Data; 7.6 Critical and Reduced Properties; 7.7 Estimating Enthalpy of Vaporization; 7.8 Viscosity; 7.9 Thermal Conductivity; 7.10 Thermal Conductivity Application; 7.11 Nokay Equation and Lydersen's Method; 7.12 The Rihani and Doraiswamy Procedure, and the Lee-Kesler Equation; References: Part 1; PART 2: PARTICLE TECHNOLOGY; 8 Nature of Particulates; 8.1 Definition of Particulates
8.2 Dust, Smoke, and Fumes

Sommario/riassunto

A practical workbook that bridges the gap between theory and practice in the nanotechnology fieldBecause nanosized particles possess unique properties, nanotechnology is rapidly becoming a major interest in engineering and science. Nanotechnology: Basic Calculations for Engineers and Scientists-a logical follow-up to the author's previous text, Nanotechnology: Environmental Implications and Solutions-presents a practical overview of nanotechnology in a unique workbook format.The author has developed nearly 300 problems that provide a clear understanding of this growing field in