

1. Record Nr.	UNINA9910826694903321
Titolo	Quasicrystals [[electronic resource]] : types, systems, and techniques / / Beth E. Puckermann, editor
Pubbl/distr/stampa	New York, : Nova Science Publishers, c2011
ISBN	1-61761-230-8
Edizione	[1st ed.]
Descrizione fisica	1 online resource (238 p.)
Collana	Physics research and technology Materials science and technologies
Altri autori (Persone)	PuckermannBeth E
Disciplina	530.4/1
Soggetti	Quasicrystals Crystals
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	""QUASICRYSTALS: TYPES, SYSTEMS, AND TECHNIQUES""; ""QUASICRYSTALS: TYPES, SYSTEMS, AND TECHNIQUES""; ""Contents""; ""Preface""; ""Dominance of Magnetic Scattering in Al70Pd20+Xmn10-X (X = 0, 1 and 2), Al70Pd20Mn8(TM)2 (TM=Fe, Cr, Co and Ni) and Al70- Xbx Pd20Mn10 (X = 0, 0.5, 1, 2 and 4) Stable Icosahedral Quasicrystals""; ""Abstract""; ""1. Introduction""; ""1.1. Phase Diagram""; ""1.2. Magnetic Properties""; ""1.3. Electrical Conductivity""; ""2. Synthesis and Characterization Details""; ""3. Part I""; ""3.1. Results and Discussions""; ""3.1.1. Structural Characterization"" ""3.1.2. Magnetic Characterization""""3.1.3. Conductivity Vs. Temperature ((-T))"; ""3.1.3.1. (-T Minimum""; ""3.1.3.2. (-T Maximum""; ""3.1.3.3. Possible Origin of Observed (-T Behavior""; ""3.1.4. Magneto-Resistance""; ""4. Part II""; ""4.1. Results and Discussion""; ""4.1.1. Structural Characterization""; ""4.1.2. Magnetic Characterization""; ""4.1.3. Conductivity Vs. Temperature""; ""4.1.3.1. ((-T) Minimum""; ""4.1.3.2. (-T Maximum""; ""4.1.3.3. Possible Origin of (-T Behavior""; ""4.1.4. Magneto-Resistance""; ""5. Part III""; ""5.1. Results and Discussion"" ""5.1.1. Structural Characterization""""5.1.2. Magnetic Characterization""; ""5.1.3. Conductivity Vs. Temperature""; ""5.1.4. Magneto-Resistance Measurement""; ""Conclusions""; ""Annexure I""; ""References""; ""Logarithmic Periodicity a€? Properties, Tests and

Uncertainties"; ""Abstract""; ""1. Introduction""; ""2. Model""; ""3. Properties""; ""3.1. Observations""; ""3.1.1""; ""3.1.2""; ""3.1.3""; ""3.1.4""; ""3.1.5""; ""3.1.6""; ""3.2. Consequences""; ""3.2.1. Indexation""; ""3.2.2. The Compromise Spacing Effect""; ""3.2.3 Dimensions""; ""3.2.4. Enthalpy, the Driving Force""
""3.2.5. Angular Filtering""""3.2.6. Double Diffraction""; ""3.2.7. Electronic States""; ""4. Evidence""; ""4.1. Simplicity, Symmetry, and Sharpness""; ""4.2. Ranking of Beam Intensities and Calculated a€? Structure Factorsa€?""; ""4.2.1. Logarithmic Periodicity""; ""4.2.2. Double Diffraction in CBED""; ""4.2.3. Bragg Anomaly in the 2-Fold Pattern""; ""4.2.4. 2-Fold Pattern Orientation Anomaly""; ""4.3. Diffraction Due to Clusters""; ""4.4. HREM Images of Clusters and Superclusters""; ""4.4.1. a€?Structure Factora€? For The HREM Model Structure""
""4.4.2. The 3-Fold Cluster Center in the 5-Fold Pattern""""5. Uncertainties""; ""5.1. Extension""; ""5.2. Defects""; ""5.2.1. The Aperiodic Cluster a€?Holea€?""; ""5.2.2. The a€?Holea€? in Supercluster Order 1""; ""5.2.3. The a€?Holea€? in Superclusters of Higher Order""; ""5.2.4. Glassy Structures""; ""5.3. Limitation to Binary Systems""; ""5.4. Quasicrystal Growth Mechanisms""; ""Conclusion""; ""Appendix 1. Quasi Bragg Diffraction""; ""Appendix 2. Lemmas, Proofs and Corollaries""; ""Reference""; ""Vacancies in Quasicrystals""; ""Abstract""; ""1. Introduction""
""2. Positron Annihilation Spectroscopy""
