1. Record Nr. UNISA996280615103316

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|---|---|
| Titolo | IEEE Std 269-2010 (Revision of IEEE Std 269-2002) - Redline: IEEE Standard Methods for Measuring Transmission Performance of Analog and Digital Telephone Sets, Handsets, and Headsets - Redline |
| Pubbl/distr/stampa | IEEE |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |

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|---|---|
| Titolo | Quasicrystals : 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<br>Materials science and technologies |
| Altri autori (Persone) | PuckermannBeth E |
| Disciplina | 530.4/1 |
| Soggetti | Quasicrystals<br>Crystals |
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| 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""

Sommario/riassunto

Quasicrystals are metallic alloys that exhibit atomic scale order, but not periodic order. Atomic scale properties of these materials are different from single crystalline material, for example, extraordinary mechanical properties, electrical and thermal transport properties, and electronic structure. This book presents topical research in the study of quasicrystals, including vacancies in quasicrystals; the formation of quasicrystals in bulk metallic glasses and their effects on mechanical behaviour; the electrical transport observed in Al-Pd-Mn quasicrystals; logarithmic periodicity in quasicrystals; and, positron annihilation studies of quasicrystals.