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Structures of Bi-Based High-Tc Cuprate Superconductors"; "4. High-Tc Superconductors in the 2 D Limit: [(Py-Cnh_{2n+1})₂hgi₄]-Bi₂Sr₂Cam-1cumoy (M=1 And 2)"; "4.1. Research Motivation"; "4.2. Synthesis and Measurements"; "4.3. Conclusion"; "5. A Novel Hybrid of High-Tc Superconducting and Curie-Paramagnetic Subsystems"; "5.1. Introduction"; "5.2. Synthesis"; "5.3. Physico-Chemical Properties"; "5.4. Conclusion"

"6. Hybrid System of High- Tc Superconducting and Pauli-Type Paramagnetic Subsystems""6.1. Introduction"; "6.2. Synthesis"; "6.3. Physico-Chemical Properties"; "6.4. Conclusion"; "Acknowledgements"; "References"; "SURVEYING THE VORTEX MATTER PHASE DIAGRAM FOR PRISTINE MgB₂, AND ATOMIC SUBSTITUTED Mg_{1-a}xAlxB₂ AND MgB_{2-a}xCx SINGLE CRYSTALS"; "Abstract"; "1. Introduction"; "2. Experimental Techniques"; "3. Pristine Single Crystals"; "3.1. Growth of Pristine MgB₂ Single Crystals"; "3.2. Experimental Data for Pristine MgB₂ Single Crystals"

"4. Aluminium Substituted Single Crystals""4.1. Growth of Mg_{1-a}xxAlxB₂ Single Crystals"; "4.2. Experimental Data for Mg_{1-a}xxAlxB₂ Single Crystals"; "5. Carbon Substituted Single Crystals"; "5.1. Growth of MgB_{2-a}xCx Single Crystals"; "5.2. Experimental Data for MgB_{2-a}xCx Single Crystals"; "6. Conclusion"; "Acknowledgments"; "References"; "NANOCRYSTALLINE MICROSTRUCTURE OF MECHANICALLY ALLOYED MgB₂ SUPERCONDUCTOR PRECURSOR POWDER FOR BULK AND TAPE FABRICATION AND IMPLICATIONS ON THE SUPERCONDUCTIVITY"; "Abstract"; "Introduction"; "Experimental"; "Results"

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