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Technique Using Molten Tin as the Solvent -- ; 12. Artificial Kieftite CoSb3 by an Antimony Self-Flux Method -- ; 13. Artificial Violarite FeNi2S4 by a Hydrothermal Method Using DL-Penicillamine as the Sulfiding Reagent -- ; 14. Artificial Willemite Zn1.96Mn0.04SiO4 by a Hybrid Coprecipitation and Sol-Gel Method -- ; 15. Artificial Scheelite CaWO4 by a Microwave-Assisted Solid-State Metathetic Reaction -- ; 16. Artificial Hackmanite Na8[Al6Si6O24]Cl1.8S0.1 by a Structure-Conversion Method with Annealing Under a Reducing Atmosphere -- ; 17. Gold-Ruby Glass from a Potassium-Antimony-Borosilicate Melt with a Controlled Annealing.

Sommario/riassunto

Intended as a textbook for courses involving preparative solid-state chemistry, this book offers clear and detailed descriptions on how to prepare a selection of inorganic materials that exhibit important optical, magnetic and electrical properties, on a laboratory scale. The text covers a wide range of preparative methods and can be read as separate, independent chapters or as a unified coherent body of work. Discussions of various chemical systems reveal how the properties of a material can often be influenced by modifications to the preparative procedure, and vice versa. References to miner