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Alexey S. Kurlov
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Tungsten Carbides

Structure, Properties and Application in Hardmetals

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Tungsten Carbides

Structure, Properties and Application in Hardmetals

This book embraces the entire range of problems associated with phase equilibria in "tungsten–carbon" binary system and related ternary systems, nonstoichiometry, disorder and order in different tungsten carbides, electronic and crystal structure of these carbides.

The main application of tungsten carbides is constituent in hardmetals for cutting tools. In the last 20 years, the most active efforts were made in synthesis and application of nanocrystalline tungsten carbide for the production of nanostructured hardmetals. The present book describes in detail different methods for production of nanocrystalline tungsten carbide. The peculiarities of sintering of Co hardmetals from nanocrystalline powders having different particle sizes are discussed. Materials scientists using tungsten carbide to create novel superhard and tough materials will find this book particularly useful.

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