Phasenbeziehungen und Chemischer Transport der Verbindungen im ternären System Re/Mo/O

Phase Relations and Chemical Transport of the Compounds in the Ternary System Re/Mo/O

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Z. Naturforsch. **53 b,** 397–404 (1998); eingegangen am 21. Januar 1998

Rhenium Molybdenum Mixed Oxides, Chemical Transport Reaction, Phase Diagram

In the ternary system Re/Mo/O four series of mixed oxides have been prepared by heating of powder samples and by transport reactions. The series are derived from the oxides ReO_2, MoO_2, γ-Mo_4O_{11} und η-Mo_4O_{11} and have compositions $Re_{1-x}Mo_xO_2$ ($0 < x < 0.37$), $Mo_{1-y}Re_yO_2$ ($0 < y < 0.42$), γ-$Mo_{4-z_1}Re_{z_1}O_{11}$ ($0 < z_1 < 1$), and η-$Mo_{4-z_2}Re_{z_2}O_{11}$ ($0 < z_2 < 1$). Contributions to the understanding of the transport mechanism were obtained from thermodynamic calculations. The composition of the mixed crystals obtained have been determined by EPMA and ICP-AES.

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