

Article

Diffusion mass exchange during synthesis of sapphirine and cordierite

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Abstract

Modern information on inter-relations in MgO - Al₂O₃ - SiO₂ system has been considered. This has made it possible to study mechanism of diffusion mass exchange during synthesis of sapphirine and cordierite taking into account opportunity for forming the solid solutions. Schemes of diffusion cation flows in reaction zones of solid-phase interaction have been presented. Evolution ways of development of exchange type reactions have been determined. Mechanisms of diffusion mass exchange processes of solid-phase reactions have been shown. Their inter-matching and conjugation in correspondence with thermodynamic regularities in subsolidus structure of the system have been described.

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