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## Quartz crystallization in soda-lime-silica glass

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Abstract

The tribochemical treatment of glass and grains surface area as a crystallization activating factor and its influence on the crystal phase formation is a subject of the study. Sheet glass  $\text{SiO}_2\text{-CaO-Na}_2\text{O}$  as a material of extremely small crystallization ability has been used in the investigations. Tribochemical activating glass powder, pressed and heated at  $750^\circ\text{C}$  makes it possible to obtain glass-ceramic material containing quartz, devitrite and wollastonite crystals. During a prolonged heating time, up to 500 hours, devitrite and wollastonite content is diminishing and quartz becomes a main component of the material. Structural mechanism of tribochemical activated glass crystallization in its viscoelastic state as compared with liquid glass crystallization is considered.



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