Role of the glass phase in bioactive glass-ceramics

Z. Strnad¹

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Glass-ceramics, or composites with a glass-ceramic matrix prepared by controlled crystallization, almost invariably contain a residual glass phase. A suitable composition for the residual glass phase of bioactive glass-ceramics can be found approximately and controlled on the basis of calculation of a structural parameter Y, which in the simplified concept of the glass structure corresponds to the mean number of bridging oxygens per polyhedron in the glass lattice. The structural parameter Y can be use d as a tool for tailoring bioactive glass-ceramics, and composites with a glass-ceramic matrix, which a exhibit combination of the additional required properties.

¹ Lasak Ltd., Papírenská 25, Prague, Czech Republic