Title (en)

METHOD FOR THE PRODUCTION OF SYNTHETIC SILICA GLASS

Title (de)

VERFAHREN ZUR HERSTELLUNG VON SYNTHETISCHEM QUARZGLAS

Title (fr)

PROCEDE DE PRODUCTION DE VERRE DE QUARTZ SYNTHETIQUE

Publication

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Application

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Abstract (en)

[origin: WO2004065314A1] The invention relates to a previously known method for producing synthetic silica glass, comprising the following steps: a gas stream containing a vaporizable initial substance, which can be converted into SiO2 by means of oxidation or flame hydrolysis, is formed; the gas stream is delivered to a reaction zone in which the initial substance is converted so as to form amorphous SiO2 particles; the amorphous SiO2 particles are deposited on a support so as to form an SiO2 layer; and the SiO2 layer is vitrified during or following deposition of the SiO2 particles in order to obtain the silica glass. The aim of the invention is to create an economical method for producing synthetic silica glass, which is characterized by a favorable damaging behavior towards short-wave UV radiation while being particularly suitable for producing an optical component used for transmitting high-energy ultraviolet radiation having a wavelength of 250 nm or less. Said aim is achieved by using a mixture of a monomeric silicon compound containing a singular Si atom and an oligomeric silicon compound containing several Si atoms as an initial substance, provided that the oligomeric silicon compound in the mixture contributes less than 70 percent to the total silicon content.

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