

Structural Investigation of Strontium Lead Silicate Glass Prepared from Silica Gel Waste Using Ultrasonic and FTIR Spectroscopy

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Preparation of the glass 6 samples in the system $10\text{SrO} - x\text{PbO} - (90 - x)\text{Silica gel}$ where $x = 20, 25, 30, 35, 40$ and 45 mol%. The principle of Archimedes was used to measure the density of the glass samples. The ultrasonic velocities of the glasses were determined at room temperature by using pulse echo technique. The velocity data of the glass system have been used to find the elastic moduli. FTIR spectroscopy which measure in range $400\text{-}2000\text{ cm}^{-1}$ were used to study the structural properties of the glass samples. The results supported our discussion of the formation of NBO and BO in the structural of glass systems.

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