

## **Elastic constant of $(\text{TeO}_2)_{90}(\text{AlF}_3)_{10-x}(\text{ZnO})_x$ Zinc Oxyfluorotellurite glasses.**

### **ABSTRACT**

New series of ternary tellurite glasses in the form  $(\text{TeO}_2)_{90}(\text{AlF}_3)_{90-x}(\text{ZnO})_x$  have been successfully synthesized. Both longitudinal and shear ultrasonic velocities were measured in different compositions of the glass system by using the MBS8000 Ultrasonic Data Acquisition System at 10 MHz frequency and at room temperature. The elastic properties of ternary tellurite glasses  $(\text{TeO}_2)_{90}(\text{AlF}_3)_{90-x}(\text{ZnO})_x$  were measured as a function of composition. The ultrasonic velocity data, the density, the calculated elastic moduli and micro-hardness are composition dependent and discussed in terms of ZnO modifiers that were expected to change the physical properties of oxyfluorotellurite glasses.

**Keyword:** Elastic constants glasses.