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Elasticity of Lead Crystals

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constants. The frequencies of vibration of higher harmonics of finite plates, divided by the order of the harmonic, should approach very close to the frequency of the theoretical infinite plate.

Plates of quartz were accurately oriented and cut from well-developed, flaw-free quartz crystals and the frequencies of higher-harmonic piezo-electric vibrations were accurately determined. With this information, the six adiabatic elastic constants of quartz were evaluated.

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ELASTICITY OF LEAD CRYSTALS

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Additional measurements have been made on the Young's Modulus of lead single crystals. The value of the modulus depends on the orientation of the length of the specimen relative to the crystallographic axis. This relationship will be shown.

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RELATIVE INTENSITIES OF FLUORESCENCE AT LOW TEMPERATURES

J. E. DINGER

The change in intensity of fluorescence of $ZnSiO_3$, $CaWO_4$, CdB_2O_5, was measured at various temperatures between room temperature and the temperature of liquid oxygen. The fluorescence was excited by means of the 2537 Å line of a mercury arc. Microphotometric measurements were made on photographs of the fluorescent spectra. The results indicate a decrease in intensity with decrease in temperature of the CdB_2O_5 and the fluorescence of $ZnSiO_3$ passes through a maximum of intensity between room temperature and liquid oxygen temperature.

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