

Abstract Submitted
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Determination of Verdet Constants of Organic Laser Dyes in Ethanol ZHENYU CHEN, Whittier College, SERKAN ZORBA — Organic laser dyes are indispensable for dye lasers which are used to obtain unpolarized and polarized light. Verdet constant is a measure of the amount of rotation of polarization direction of light under the application of an external magnetic field. We have measured Verdet constants of various laser dyes diluted in ethanol as a function of concentration. The Verdet constants approached that of ethanol with dilution but with a small upward systematic shift of 0.15 rad/Tm above the value measured for ethanol which is 2.85 rad/Tm. The reason for the upward systematic error is due to our reuse of the glass cells for different dyes, which in turn left a residue on the walls of the cell which we could not totally remove. This upward systematic shift is used to correct the measured values.

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