EXPERIMENTAL MAPPING OF THE ABSOLUTE VALUE OF THE ELECTRONIC TRANSITION DIPOLE MOMENT FUNCTION $\mu_e(R)$ OF THE $^7\text{Li}_2 A^1\Sigma_u^+ \rightarrow X^1\Sigma_g^+$ SYSTEM

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Continuous wave (CW) triple resonance laser spectroscopy$^a$ was used to map the absolute value of the electronic transition dipole moment function $\mu_e(R)$ of the $^7\text{Li}_2$ A-X system. In this work, the transition dipole moment matrix elements of specific rovibronic molecular transitions were first determined by fitting the observed Autler-Townes splitting spectra. Then by employing the R-centroid approximation, or a multi-variable fit involving higher moments of R, $\mu_e(R)$ has been determined within a relatively large range of internuclear distance R. Finally, this electronic transition dipole moment function is compared with the ab initio calculations with very good agreement.