

CAVITY AND CHIRPED PULSE ROTATIONAL SPECTRUM OF THE LASER ABLATION SYNTHESIZED, OPEN-SHELL MOLECULE TIN MONOCHLORIDE, SnCl.^a

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The use of laser ablation source-equipped chirped pulse and Balle-Flygare type cavity spectrometers have been utilized to accurately measure multiple isotopologues of the tin monochloride molecule in the $X^2\Pi_{1/2}$ state. The molecule has been synthesized by ablating tin foil in the presence of 0.3% Cl₂ in Ar. Rotational constants, nuclear electric quadrupole coupling constants, and magnetic hyperfine constants for the many isotopologues will be discussed. Although rotational analyses of this molecule have been previously performed^b, this is the first high-resolution, microwave study of SnCl.

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^bN. Badowski, W. Zyrnicki and J. Borkowska, *J. Phys. B: At. Mol. Phys.* **20** (1987), 5931-5937