

## ROTATIONAL SPECTROSCOPY OF THE CCCC1 RADICAL

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Pure rotational spectra of the CCCC1 radical in a supersonic jet have been observed for the first time by FTMW spectroscopy. The radical was produced in a pulsed electric discharge of C<sub>2</sub>H<sub>2</sub> and CCl<sub>4</sub> diluted to 0.6 and 0.3 % with Ar, respectively. Transitions with spin splittings and hyperfine splittings were observed for the two isotopomers, CCC<sup>35</sup>Cl and CCC<sup>37</sup>Cl, in the region from 11.3 GHz for  $N = 2-1$  to 33.8 GHz for  $N = 6-5$ . The molecular constants including the hyperfine constants due to the Cl nucleus have been precisely determined.