FORMATION OF COMPLEXES c-C_3H_6···MCl (M = Ag or Cu) AND THEIR CHARACTERIZATION BY BROADBAND ROTATIONAL SPECTROSCOPY

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New molecules formed by the non-covalent interaction of cyclopropane (c-C_3H_6) with MCl, where M is either Ag or Cu, have been detected and characterized by means of broadband rotational spectroscopy. They were synthesized by laser ablation of a silver or copper rod in the presence of a gaseous sample containing 1% each of c-C_3H_6 and CCl_4, with the remainder argon. Spectra of several isotopologues of each complex have been analysed. The title molecules are found to have C_{2v} symmetry, and the geometry can be described by the MCl subspecies coordinating "edge on" to the cyclopropane ring. Experimental structures will be compared with those from ab initio calculations and those of related species.