Intramolecular CO···H Interaction in Arene(tricarbonyl)-chromium Complexes

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Abstract—Unlike benzene(tricarbonyl)chromium which displays two carbonyl stretching vibrations bands in the IR spectrum, analogous tricarbonylchromium complexes of the general formula $(C_6H_5ZMe)Cr(CO)_3$ [Z = O, CH(OH), N(Pr), CH=CH] are characterized by three carbonyl bands, one of which is displaced to the low-frequency region. The appearance of that band was rationalized in terms of intramolecular interaction between hydrogen atoms in the substituent on the benzene ring and carbonyl groups.

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