





Formation of Intermolecular Covalent Bonds Observed with IR Photodissociation Spectroscopy Yoshiya INOKUCHI (Hiroshima University)

(M–H)⁺

Covalent

 $H_{3}O^{+}, NH_{4}^{+}$

Nucleophilic Additional Reactions of C=O Molecule + Proton $\dot{C} = \dot{O} - E$ $C = \ddot{O} + \vec{E}^+ \rightarrow$ $\dot{C} - \ddot{O} - E$ Bond order = 1 Formation of covalent bond Primary process of nucleophilic reactions **Resonance interactions** between MOs are important









