

S43-2 Mysterious Relationship between Halogen and Metals: Novel Synthesis of Halogenated Compounds

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“Halogen” means “an element that produces a salt when it forms a compound with a metal” in Greek. In chemical sense, this also means that halogen-metal bond is strong. Utilizing this chemical nature, organic halogenated compounds are used as starting materials and reagents for construction of carbon-carbon and carbon-heteroatom bonds by reacting with compounds having carbon-metal and heteroatom-metal bonds. We investigated and reported herein the reverse process, synthesis of organic halogenated compounds from ones with metal-halogen bonds. A key to realize the reaction is utilization of propargylmolybdenum halides in both stoichiometric and catalytic manner.

