

Appendix I: Hydrogen-Atom Donors

Hydrogen-atom donors are widely used in radical reactions because hydrogen-atom abstraction is the final step in most radical chain processes. Donors can have a hydrogen atom bonded to a tin, silicon, sulfur, selenium, boron, phosphorous, or carbon atom. Most reactions involve organotin compounds, usually tri-*n*-butyltin hydride (Bu_3SnH). Some organosilanes, in particular tris(trimethylsilyl) silane [$(\text{Me}_3\text{Si})_3\text{SiH}$], are effective enough as hydrogen-atom transfers to serve as replacements for organotin hydrides. Most other hydrogen-atom transfers are either so reactive or so unreactive that they typically are used only in special situations.

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