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Initiation of homolytic addition to alkenes by means of organophosphorus radical-cations

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Abstract

An experiment is conducted which shows that the electrochemically generated radical-cations (RC) of organophosphorus compounds can react with substances possessing a weak element-hydrogen bond via a mechanism of homolytic abstraction of the hydrogen atom. A new method of electrochemical initiation of chain radical addition of thiols, dialkylthiophosphites and dialkylphosphites to alkenes is proposed which is based on these phenomena.
