

“The Mechanism of the Reaction of Molecular Bromine with Organosilicon Hydrides”

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The kinetics of the bromination of 7 triarylsilanes and 14 other organosilicon hydrides by molecular bromine in CCl₄ have been determined by stopped flow method. For triethylsilane, Arrhenius parameters have been measured in octane and CCl₄, and solvent effects determined in other solvents of different polarity. The results accord with a molecular mechanism involving one molecule of bromine and one of the organosilicon hydride, with partial positive charge build-up on silicon in the transition state.