

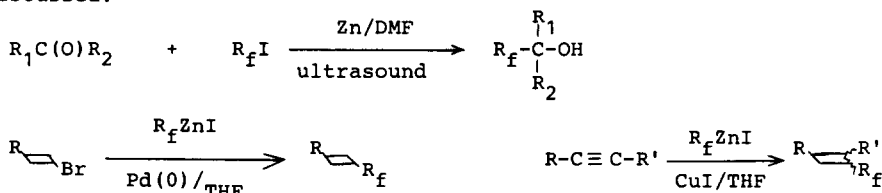
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ULTRASOUND IN FLUORINE CHEMISTRY: SELECTIVE PERFLUORO-ALKYLATION ON A DESIRED POSITION OF ORGANIC MOLECULES

Tomoya Kitazume* and Nobuo Ishikawa

Department of Chemical Technology, Tokyo Institute of Technology, Ookayama, Meguro-ku, Tokyo 152 (Japan)

The use of a new technical method to introduce perfluoroalkyl groups on a desired position of molecules is a challenge for fluorine chemistry. Ultrasound provides a potential solution to this problem. We have found that it is now possible to introduce a perfluoroalkyl group to carbon-oxygen and carbon-carbon double bonds, and to carbon-carbon and carbon-nitrogen triple bonds with perfluoroalkyl iodides by the use of ultrasonically dispersed zinc. Regio- and stereochemical information is discussed.



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(F-TERT-BUTYL)HYPOCHLORITE – A VERSATILE REAGENT

Gary L. Gard* and Jean'ne M. Shreeve

Department of Chemistry, University of Idaho, Moscow, Idaho 83843 (U.S.A.)

(F-tert-Butyl)hypochlorite continues to be a very useful reagent for introducing the F-tert-butoxy group (R_f) into molecules via oxidative addition and/or oxidative displacement. Because of the mild conditions under which it will react, we have now been able to add four R_f groups to S_4N_4 essentially quantitatively without ring opening. It is stable to attack by such highly oxidizing materials as CrO_2Cl_2 , giving $\text{CrO}_2(\text{R}_f)_2$ again in nearly 100% yield. Its reaction with other early transition metal compounds as well as Vaska's compound yields interesting products.