BALZ-SCHIEMANN DECOMPOSITION UNDER MILD CONDITIONS

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Aryldiazonium fluoroborates decompose thermally to aryl fluorides at temperatures which are characteristic for each compound and which lie for the majority of fluoroborates, between 100 and 200 °C. A very useful process for decomposing aryldiazonium fluoroborates is their heating in organic solvents. Another way is the photolytic decomposition too [1]. We investigated the BALZ-SCHIEMANN reaction forced by ultrasound from 17 kHz in presence of triethylamine trishydrofluoride and hydrofluoric acid fould resins as catalysts. The reaction starts for the moment with ordinary temperature under evolution of gas. In absence of catalysts sonification don't force the decomposition. n-Pentane was used for continuous extracting of the fluoroarenes throughout the conversion. All components must be dried very carefully to get good yields.

1 M. Hudlicky, Chemistry of Fluorine Compounds, Ellis Horwood Ltd. Publ. Chichester, John Wiley, New York - London - Sydney - Toronto, 1976.