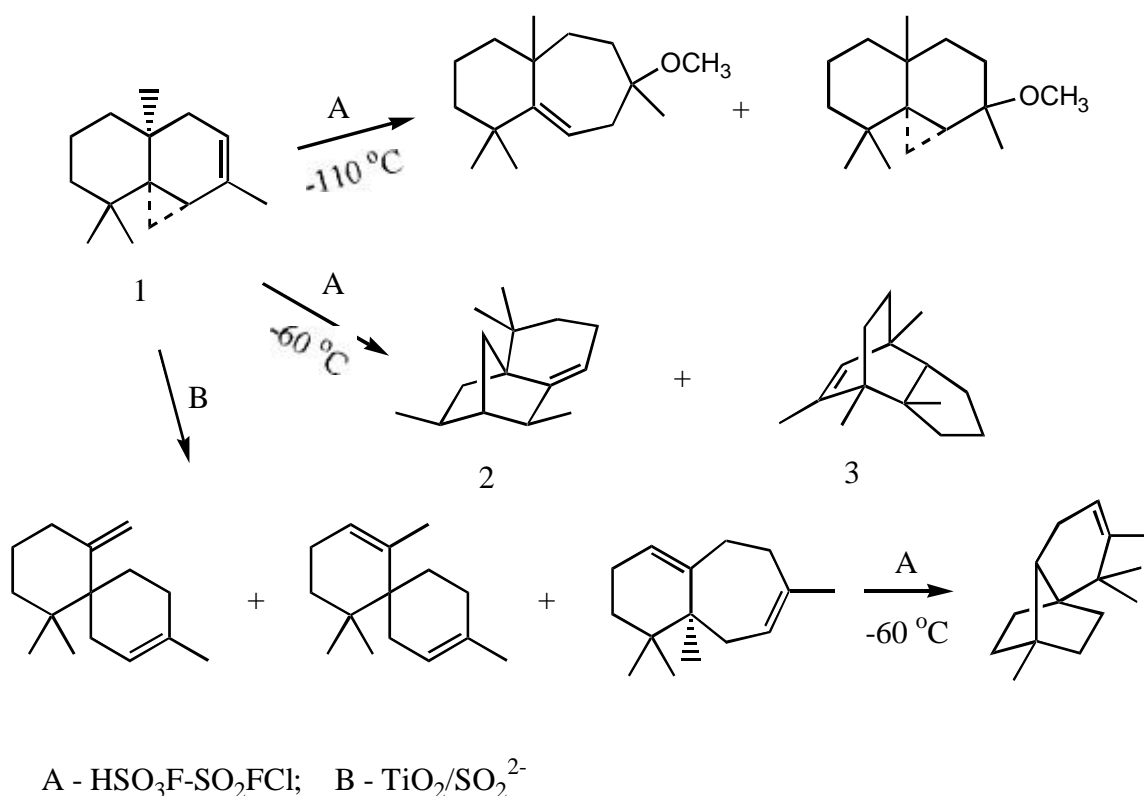


## Transformations of Thujopsene in Acid Media

Marina P. Polovinka, Olga I. Yarovaya, Andrei A. Shalko, Dina V. Korchagina, Yurii V. Gatilov, and Vladimir A. Barkhash

*N. N. Vorozhtsov Novosibirsk Institute of Organic Chemistry, Siberian Branch, Russian Academy of Sciences. 9, Lavrentiev ave., 630090 Novosibirsk 90; polovina@nioch.nsc.ru*

According to literature data, the acid-catalyzed transformations of thujopsene **1** were studied in standard acid media. The results of transformations of this sesquiterpene in a liquid superacid  $\text{HSO}_3\text{F}\text{-SO}_2\text{FCl}$  (-110 and -60 °C) and on a solid superacid  $\text{TiO}_2/\text{SO}_4^{2-}$  are reported.



Compounds **2** and **3** with a framework of new type have been isolated. A mechanism of these reactions is suggested using molecular mechanic and quantum chemical calculations. The structure of products was established by  $^1\text{H}$  and  $^{13}\text{C}$  NMR spectroscopy, two-dimensional  $^{13}\text{C}\text{-}^{13}\text{C}$  correlation spectroscopy, and X-ray crystallographic analysis.