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NEW BIFUNCTIONAL COMPOUNDS DERIVED FROM PERFLUOROOLEFINS

W. Schwertfeger*, G. Siegemund and H. Millauer

Hauptlaboratorium G 830, Hoechst Aktiengesellschaft, Postfach 80 03 20, D-6230 Frankfurt/M. 80 (F.R.G.)

Fluorinated olefins like tetrafluoroethylene or hexafluoropropene react with electrochemically produced peroxydisulfuryldifluoride in fluorosulfonic acid to form oligomeric bisfluorosulfates of formulas I and II.

 $FSO_2 - O - (CF_2 - CF_2)_n - O - SO_2F$ $FSO_2 - O - (C_3F_6)_m - O - SO_2F$ I n = 1 - 5 II m = 1, 2

The composition of I and II has been determined. In addition, the structures of the isomeric substances in II m = 2 have been elucidated. The bisfluorosulfates are used for the preparation of bifunctional compounds, especially with two functional groups of different reactivity. The used synthetic pathways will be presented.