

SYNTHESIS AND CHARACTERIZATION OF NEW HIGHLY-FLUORINATED DIAMINES SUITED FOR POLYMERIZATION

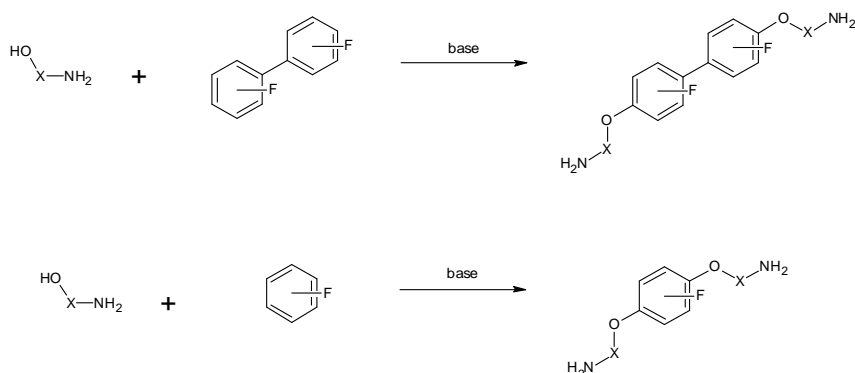
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This work deals with synthesis of new types of highly-fluorinated diamines and study of their properties. The reasons for fluorination are to increase solubility of diamine monomers and to improve thermal stability of polymers prepared of them.

There were synthesized two types of diamines that were fully characterized and subsequently used for preparation of model polymers.



Scheme 1. Synthesis of monomers [1-2]

It was found that the synthesized diamines are stable in the air atmosphere and well soluble in conventional organic solvents. Further, it was proved that the new types of fluorinated diamines have positive effect on thermal properties of the prepared model polymers.

The observed results confirmed high efficiency of the novel types of fluorinated diamines in preparation of thermally stable polymeric systems. The synthesized fluorinated diamines have good potential to find broad utilization in many industrial applications.

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[1] Hyeonuk Y., Munju G., Bon-Cheol K., Nam-Ho Y.: Polymer, 76, 280-286, **2015**.

[2] Gerasimova T. N., Kolchina E. F., Kargapolova I. Yu.: Org. Chemistry, 36, 2611-2615, **1988**.