GENERAL METHOD FOR AROMATIC IMINO GROUP CONTAINING POLYMERS SYNTHESES

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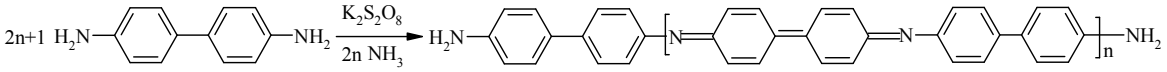
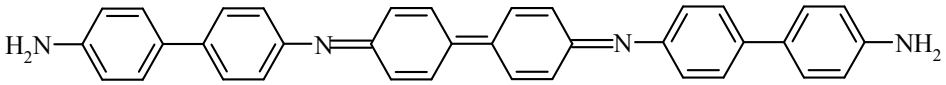
Electroactive polymers synthesized by oxidative polymerization technique from aromatic amines are of huge interest due to the easy method of preparation, stability and possibilities of application in different areas of industry [1,2]. It had been shown, that the method proposed on basis of oxidative condensation of PFDA is a convenient one step and unique method for the synthesis of the polymer having structure similar to that of fully oxidized state of polyaniline–pernigraniline[3]. Investigation of oxidative polycondensation of benzidine using the same reaction conditions as for polycondensation of PFDA revealed, that the reaction processed by the similar same mechanism and as a result polymer 1 was obtained.



1

As structural elucidation of obtained polymer was complicated due to bad solubility, the oligomer with following structure have been obtained and characterized by UV, IR and PMR spectral methods.



The fact of synthesis of both polymer and oligomer is exciting, first of all, due to the ordered structure, that would be complicated to obtain by other methods, and then, due to the fact of evidence of generality of proposed method for the syntheses of quinonediiminic structures on the base of aromatic diamines.

References

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3. A. A. Durgaryan, R. A. Arakelyan, N. A. Durgaryan., Rus. J Gen. Chem.,**84**, 1095–1100,2014.