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Polyquinone synthesis by dehydrogenation agent 3,3',5,5'-tetra-tert-butyl-4,4'-diphenoquinone

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Abstract

In this article a new approach for polyquinone synthesis is proposed: Polymerization of hydroquinone or 1,4-benzoquinone by dehydrogenating agent 3,3',5,5'-tetra-tert-butyl-- ,4'-diphenoquinone. Interest to this reaction is emerged from the knowledge of products may have a widespread application, polyquinone due to its π -conjugated structure with redox-active chains and 4,4'-bis(2,6-di-tert-butylphenol) due to good stabilizing efficiency in polymers. The obtained polyquinone was characterized by spectroscopic, elemental, NMR, EPR and GPC methods and its polymerized nature was proved.

Keywords

Antioxidants, Conjugated polymers, High temperature materials, Oligomers, Redox polymers