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Characterization and Properties of Novel Flame Retardants Based on s-Triazine

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Abstract : Recently, there has been a huge interest in using cyanuric chloride in a wide range of functional group transformations, as Cyanuric chloride has temperature-dependent differential reactivity for displacement of chlorides with various nucleophiles In the present work, some copolymers based on s-triazine Unit were prepared by microwave-assisted synthesis. For comparison study, the copolymers were synthesized by the conventional method. Synthesized Copolymers were characterized by MP, IR, TGA, DSC and GPC. The result indicated that copolymers are thermally stable and in good in composition and yield. Further studies that involve the test for selected removal of transition elements such as Cu (II), Zn (II) and Mn (II). Moreover, the effects of the polymeric triazine derivatives containing different functional groups which expected to have a good thermal stability and char formation ability on thermal degradation and flame retardancy.

Keywords : flame retardants, heavy metals, microwave-assisted synthesis, s-triazine
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