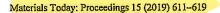


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## ICMAM-2018

## Kinetic Study of Non-Isothermal Decomposition of Copolymer Resin Derived from 2, 4-Dihydroxypropiophenone, 1, 5-Diaminonaphthalene and Formaldehyde

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## Abstract

The copolymer 2,4-DHP-1,5-DANF have been integrated by the build up of 2,4-dihydroxypropiophenone, 1,5-diaminonaphthalene with formaldehyde within the sight of 2M hydrochloric acid as an impetus with 2:1:3 molar extent of responding monomers. The structure of copolymer has been clarified by different physico-concoction and otherworldly systems, for example, natural examination, UV-visible, FT-IR, 1H-NMR and non-watery conductometric titration. The warm deterioration example and its energy were examined by thermo gravimetric examination (TGA) in a static nitrogen environment at a warming rate of 10<sup>o</sup>C/min. The SW and FC strategies have been embraced to assess the energy and thermodynamics parameters, for example, the warm enactment vitality (Ea), request of response (n), entropy change (ΔS), energy change (ΔF), obvious entropy change (S\*) and recurrence factor (Z). The order of disintegration response was found to 0.96. The energy of thermal activation dictated by these strategies are in close concurrence with one another.

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Selection and Peer-review under responsibility of INTERNATIONAL CONFERENCE ON MULTIFUNCTIONAL ADVANCED MATERIALS (ICMAM-2018).

Keywords: Copolymer, Thermo gravimetric analysis, Kinetics, Sharp-Wentworth and Freeman-Carroll methods

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