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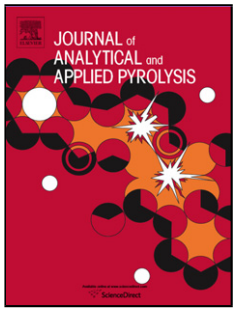

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Epoxy Resin Flame-Retarded via a Novel Melamine-Organophosphinic Acid Salt: Thermal Stability, Flame Retardance and Pyrolysis Behavior

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Highlights

- Additive-type flame retardant for epoxy resin was conveniently prepared via neutralization between DOPA and melamine.
- Flame retardance of the resulting material was significantly improved.
- Pyrolysis behavior was comprehensively investigated by Py-GC/MS and TG-FTIR.
- Flame retardant played the role of flame retardance in both condensed and gaseous phases.

ABSTRACT: A melamine-organophosphinic acid salt (MDOP) was synthesized via neutralization of dibenzo[c,e][1,2]oxaphosphinic acid (DOPA) with melamine, and used as an additive-type flame