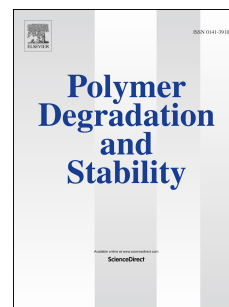


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**A novel oligomer containing DOPO and ferrocene groups: synthesis,
characterization, and its application in fire retardant epoxy resin**

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Abstract

A novel oligomer (PFDCHQ) based on 9,10-dihydro-9-oxa-10-phosphaphenanthrene
-10-oxide (DOPO) and ferrocene groups was synthesized successfully, aiming at
improving the flame retardant efficiency of diglycidyl ether of bisphenol A epoxy
resin (DGEBA). FTIR, ¹H NMR and ³¹P NMR were used to confirm the chemical
structure of PFDCHQ. The high char yields of 60.3 wt% and 20.1 wt% were obtained
for PFDCHQ from TGA results in nitrogen and air atmosphere, respectively. The

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