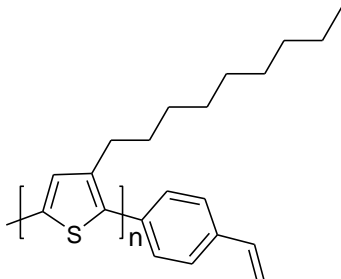


Sample Name: Vinyl phenyl terminated poly(3-nonyl thiophene)

Sample #: P14311-3NTVinyl

Structure:

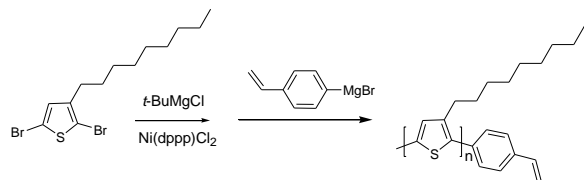


Composition:

Mn x 10 ³	PDI
2.1	1.70

Synthesis Procedure:

The vinyl phenyl terminated polymer was prepared by Grignard metathesis of 3-nonyl thiophene, followed by terminated by vinyl phenyl magnesium bromide. The polymer was purified by Soxhlet extraction using methanol and chloroform.



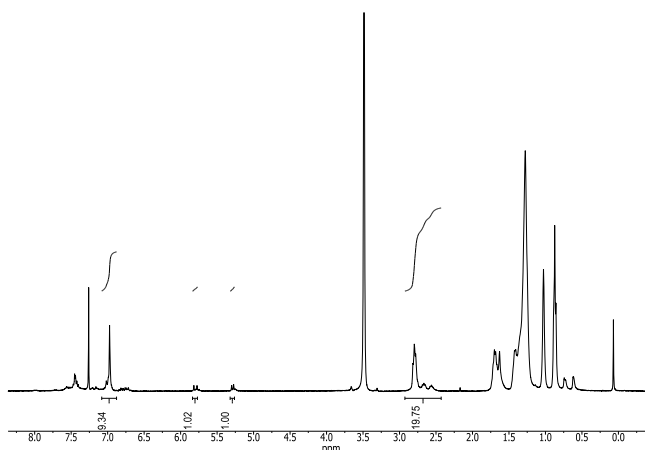
Characterization:

SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors. Three SEC columns from Supelco (G6000-4000-2000 HXL) were used with triple detectors from Viscotek Co. The molecular weight was calculated from ¹H NMR based on the ratio of integration of double bond and integration of thiophene proton at 7.0 ppm and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in THF.

Solubility:

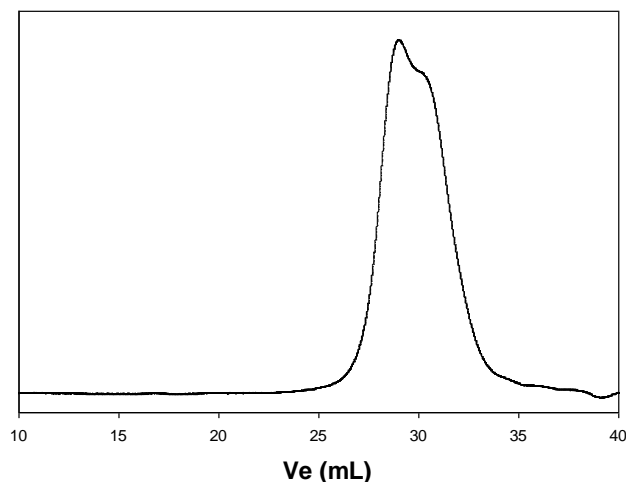
Vinyl phenyl terminated poly(3-nonyl thiophene) is soluble in THF, Toluene and CHCl₃

¹H NMR of vinyl phenyl terminated poly(3-nonylthiophene):



SEC of the polymer:

P14311



Size exclusion chromatography of polymer:
Mn = 2100, Mw = 3600, PDI = 1.70