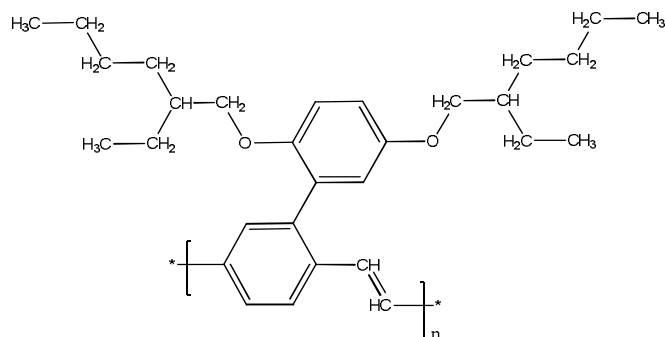


Sample name: Poly[2-(2',5'-bis(2"-ethylhexyloxy) phenyl) -1,4-phenylenevinylene]

Sample #: P16007-BEHP-PPV

CAS No: 160894-98-4

Structure:

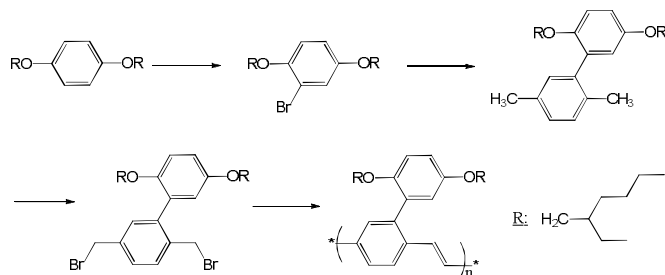


Composition:

$M_n \times 10^3$	PDI
71.0	5.1

Synthesis procedure:

Scheme of the polymer synthesis is presented below:



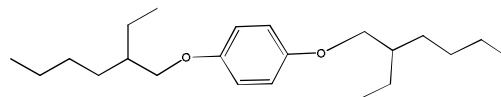
Characterization:

The molecular structure of the polymer was confirmed by ^1H NMR spectroscopy. The molecular weight and polydispersity index were obtained by size exclusion chromatography (SEC) using THF as an eluent. It was observed that RI signal is weak in spite of concentration of polymer solution was 10 mg/mL. Light scattering signal was taken into account to determine molecular weights using dn/dc for polystyrene.

Solubility:

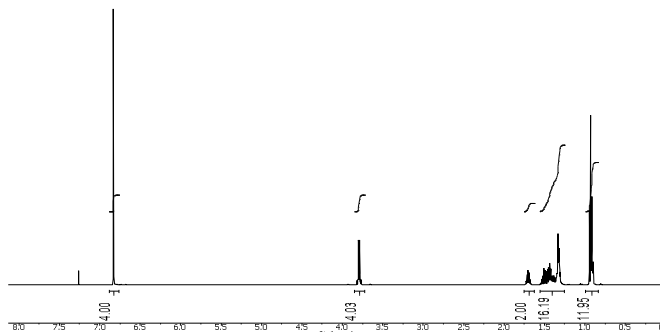
BEHP-PPV polymer is soluble in THF, CHCl_3 , xylene.

^1H NMR of 1,4-bis((2'-ethylhexyloxy) benzene:

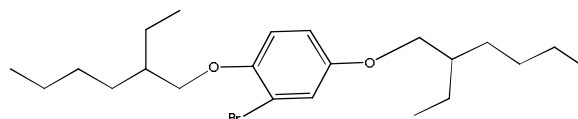


Chemical Formula: $\text{C}_{22}\text{H}_{38}\text{O}_2$
Exact Mass: 334.29

Chemical shift:	Protons:	Peak:
0.9 ppm	12H	multiplet
1.3–1.5 ppm	16H	multiplet
1.7 ppm	2H	multiplet
3.8 ppm	4H	doublet
6.8 ppm	4H	singlet

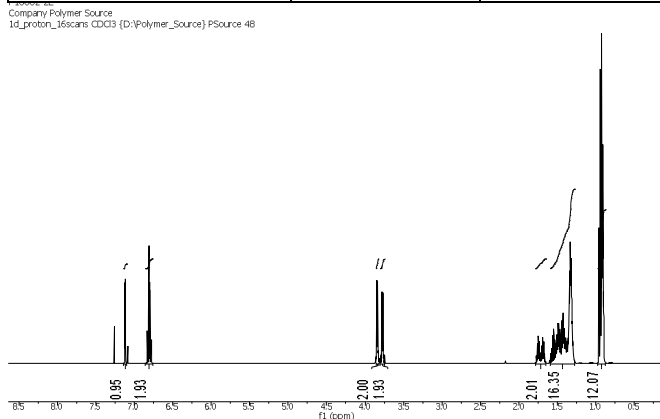


^1H NMR of 2-bromo-1,4-bis(2'-ethylhexyloxy) benzene:

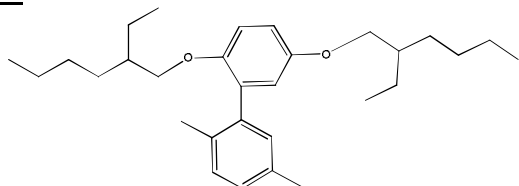


Chemical Formula: $\text{C}_{22}\text{H}_{37}\text{BrO}_2$
Molecular Weight: 413.43

Chemical shift:	Protons:	Peak:
0.9 ppm	12H	multiplets
1.3–1.5 ppm	16H	multiplets
1.7 ppm	2H	multiplets
3.7 ppm	2H	doublet
3.8 ppm	2H	doublet
6.8 ppm	1H	doublet
6.8 ppm	1H	singlet
7.1 ppm	1H	doublet

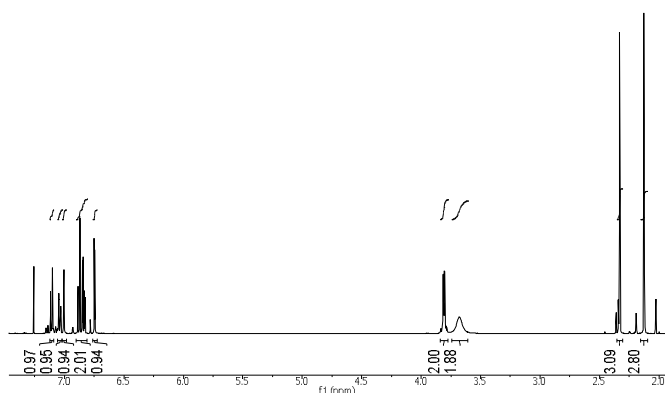


¹H NMR of 2-(1',4'-bis(2''-ethylhexyloxy)benzene-p-xylene:

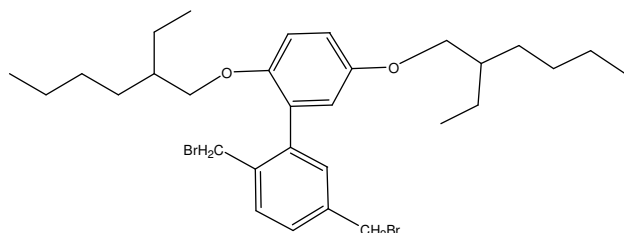


Chemical shift:	Protons:	Peak:
0.72	3H	t
0.80	3H	t
0.91	12H	m
1.1-1.2	7H	m
1.3-1.5	8H	m
1.70	1H	m
3.68	2H	dd
3.83	2H	dd
4.39	2H	dd (not clear)
4.48	2H	dd (not clear)
6.87	1H	s
6.89	2H	s
7.24	1H	d
7.36	1H	dd
7.49	1H	d

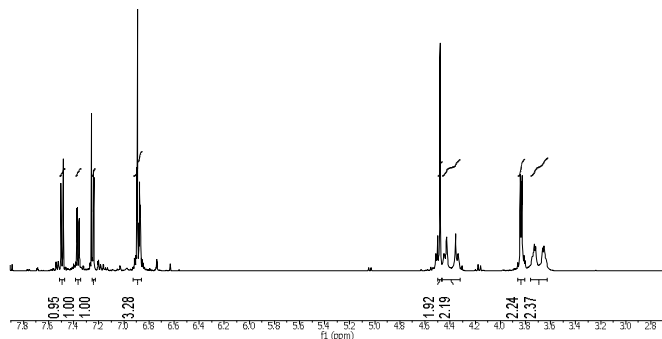
Company Polymer Source
1d_proton_16scans CDCl3 (D:\Polymer_Source) PSource 45



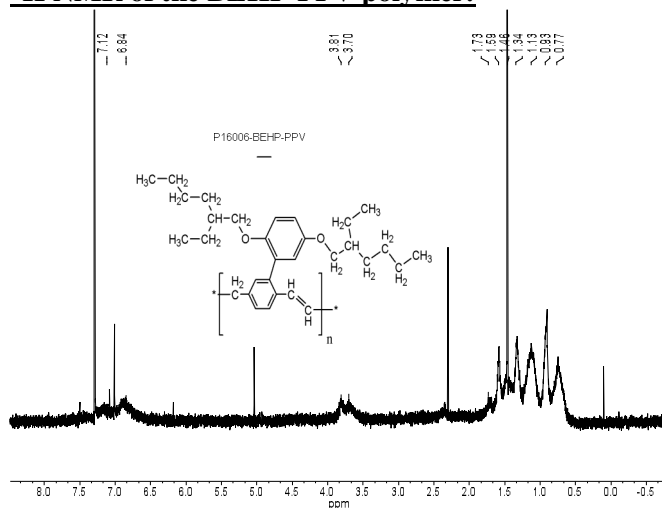
¹H NMR of 2-(1',4'-bis(2''-ethylhexyloxy)benzene)-1,4-bis(bromomethyl)benzene:



Company Polymer Source
1d_proton_16scans CDCl3 (D:\Polymer_Source) PSource 29

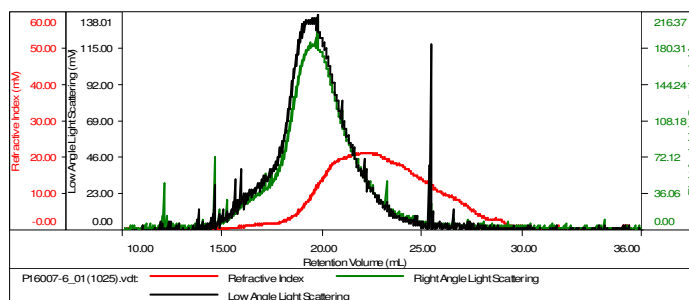


¹H NMR of the BEHP-PPV polymer:



SEC elugram of the BEHP-PPV polymer: Sample ID: P16007-6-BEHP-PPV

Concentration (mg/mL)	1.7604
Sample dn/dc (mL/g)	0.1850
Method File	PS80K-April-18-2016-0001.vom
Column Set	3x PL 1113-6300
Solvent	THF



Sample	Mh (Da)	Mw (Da)	Mw/Mh	IV (dL/g)	Rh (nm)	Ret Vol (mL)
P16007-6_01(102)	70,971	362,087	5.102	1.0220	19.93	21.972