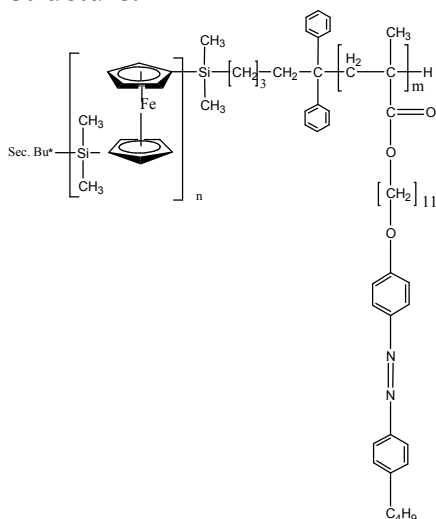


Sample Name:

Poly(ferrocenyldimethylsilane-b-11-(4-(4-butylphenylazo)phenoxy)-undecyl methacrylate)

Sample #: P9430-FESAzoMA

Structure:**Composition:**

Mn × 10 ³ FES-b-AZOMA	Mw/Mn (PDI)
8.5-b-2.0	1.3
T _g for FES block:	T _g for AZOMA block:

Synthesis Procedure:

Poly(ferrocenyldimethylsilane-b-11-(4-(4-butylphenylazo)phenoxy)-undecyl methacrylate) is prepared by anionic living polymerization by successive addition of ferrocenyldimethylsilane monomer (FES) followed by the addition of -11-(4-(4-butylphenylazo)phenoxy)-undecyl methacrylate (AzoMA).

Characterization:

Polymer is analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The final block copolymer composition was calculated from ¹H-NMR spectroscopy by comparing the peak area of the phenyl protons at 6.3-7.2 ppm with the peak area of Si(CH₃) at 0.2ppm or Ferrocene protons at 4.0 and 4.2ppm.

Thermal analysis:

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

Solubility:

Polymer is soluble in THF, CHCl₃, Toluene and precipitate out from ether and hexanes.

¹H NMR spectrum of the sample