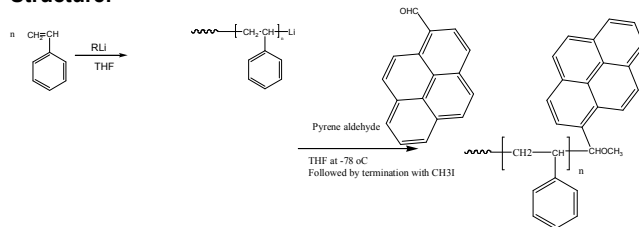


Sample Name:
 ω -Pyrene Terminated Polystyrene

Sample #: P4566-SPy

Structure:



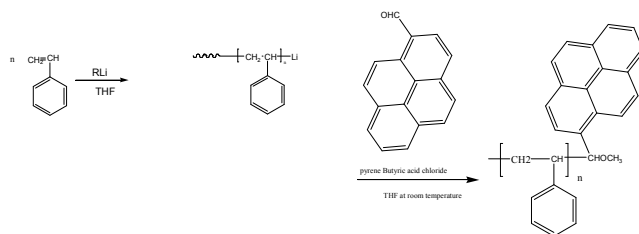
Composition:

Mn x 10 ³	PDI
1.8	1.25

Synthesis Procedure:

The functionalized polymer was prepared by anionic living polymerization of styrene using monofunctional as initiator. The reaction was terminated with 1-pyrene aldehyde

The obtained polymer was purified by passing through a column packed with neutral Al₂O₃ and the obtained polymer was precipitated in methanol. Polymer was dried at room temperature under vacuum. The scheme of the reaction is as follows:



Characterization:

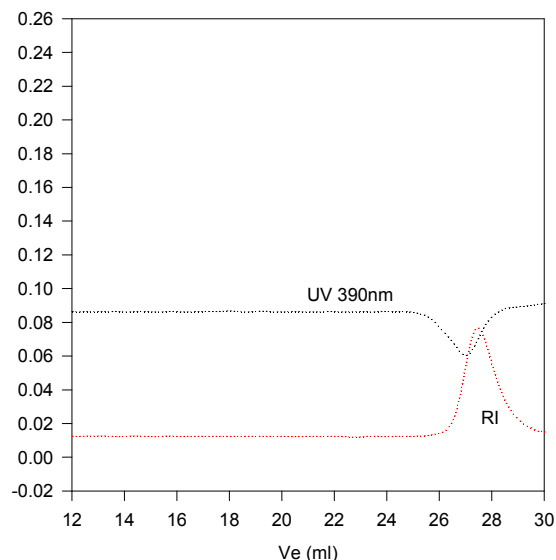
The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV (at 390 nm) and refractive index detector. Polymer functionality was determined by the FTIR/ HNMR. The Pyrene functionality close to 1.0

Solubility: Polymer is soluble in THF, Dioxane, CHCl₃ and precipitated out from methanol/water, and in cold hexane.

FTIR of the Polystyrene and Before reaction with Pyrene aldehyde the C=O of the aldehyde disappeared in their FTIR analysis indicating the reaction of polystyryllithium with pyrene aldehyde

SEC of Sample:

P4566-SPy



Size exclusion chromatography of Pyrene labeled polystyrene

..... Polystyrene (ω -pyran terminated), M_n=1800, M_w=2200, M_w/M_n=1.25

HNMR spectrum of the product;

