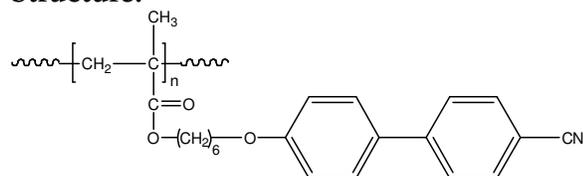


Sample Name:

Poly(6-(4'-cynaobiphenyl-4-yloxy)hexyl methacrylate)

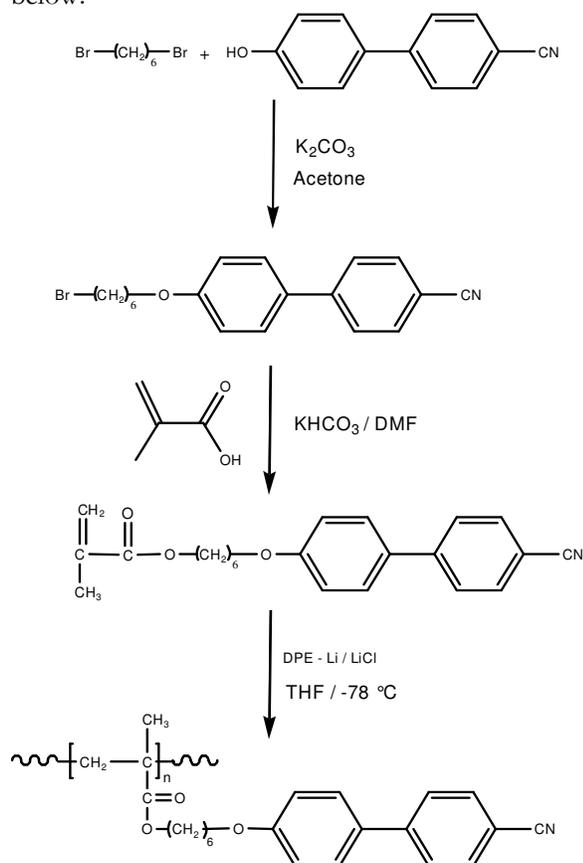
Sample #: P3410-4CNBPHMA

Structure:**Composition:**

Mn x 10 ³	PDI
35.0	1.13
Liquid crystal transition, T _g (°C)	50
T _m (°C)	106

Synthesis Procedure:

Poly(6-(4'-cynaobiphenyl-4-yloxy)hexyl methacrylate) is obtained by living anionic polymerization of the monomer. The reaction scheme used for the polymer synthesis is shown below:

**Characterization:**

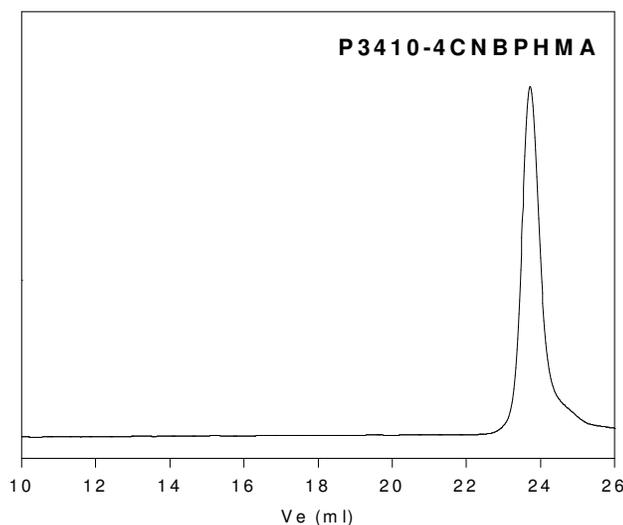
The molecular weight and polydispersity index (PDI) of Poly(6-(4'-cynaobiphenyl-4-yloxy)hexyl methacrylate) are obtained by size exclusion chromatography.

Thermal Analysis:

Thermal analysis 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). The melting temperature (T_m) was taken as the maximum of the endothermic peak during heating ramp.

Solubility:

Poly(6-(4'-cynaobiphenyl-4-yloxy)hexyl methacrylate) is soluble in THF, acetone, dichloromethane and chloroform but insoluble in hexane, ethanol and water.

SEC of Homopolymer:

Size exclusion chromatography of 4CNBPHMA:
M_n=35000, M_w=39500, PI=1.13

DSC thermogram for the sample: