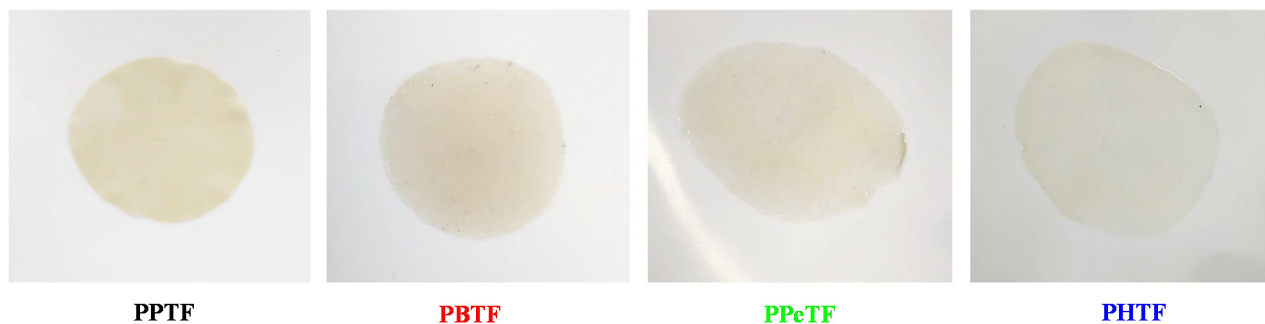
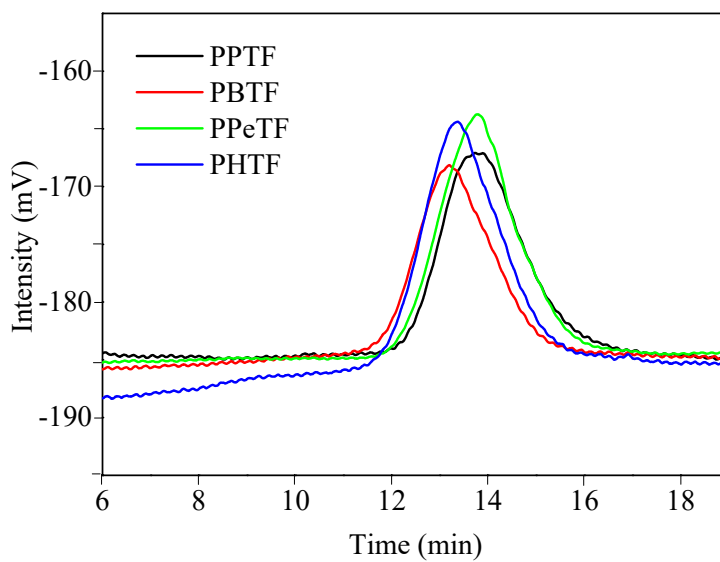


## Supplementary Materials



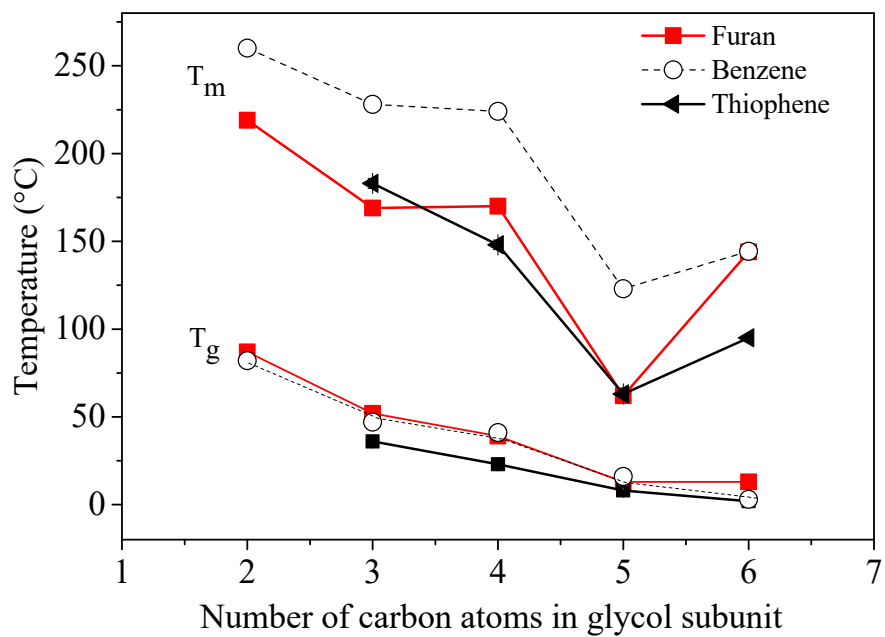
**Figure S1.** Pictures of compression moulded films.



**Figure S2.** Chromatograms of the synthesized polymers.

**Table S1.** DSC data of the homopolymers under study in form of purified powders.

	I scan				II scan					
	$T_g$ °C	$\Delta c_p$ J/g°C	$T_m$ °C	$\Delta H_m$ J/g	$T_g$ °C	$\Delta c_p$ J/g°C	$T_{cc}$ °C	$\Delta H_{cc}$ J/g	$T_m$ °C	$\Delta H_m$ J/g
PPTF	n.d	n.d	183	33	38	0.306	103	32	183	33
PBTF	25	0.130	147	33	25	0.320	93	23	147	23
PPeTF	4	0.128	67	29	4	0.324	-	-	-	-
PHTF	5	0.136	59 89	10 32	1	0.356	-	-	-	-



**Figure S3.**  $T_g$  and  $T_m$  trends as a function of glycolic subunit length for thiophene ring- ( $\blacktriangle$ ) containing polyesters compared to furan ring- ( $\blacksquare$ ) and benzene ring- ( $\circ$ ) containing ones [29].