

## Supplementary Information

**Table S1.** Mechanical Properties of polymer film for SEM images in different literatures.

Samples	Raw materials	Stress (MPa)	Strain (%)	Dispersion of phase separation
PBFMO- <i>b</i> -GAP	GAP, PBFMO, TDI	5.75	1660	Uniformly dispersion
GAP-ETPE [1S]	GAP, N-(2-cyanoethyl) diethanolamine, HMDI	7.58	490	Nearly uniformity
poly(TFEE- <i>r</i> -GA) based polyurethane [40]	poly(TFEE- <i>r</i> -GA), TMP, IPDI	5.52	162.8	Relative uniformity
FGAP-based polyurethane [2S]	FGAP, Desmodur N-100	1.5	81.6	nonuniform

### Supplementary References

- 1S. Z. Wang, T.F. Zhang, B.B. Zhao and Y.J. Luo, Effect of nitrocellulose (NC) on morphology, rheological and mechanical properties of glycidyl azide polymer based energetic thermoplastic elastomer/NC blends, *Polym. Int.* 66 (2017) 705-711.
- 2S. M.H. Xu, Z.X. Ge, X.M. Lu, H.C. Mo, Y.P. Ji and H.M. Hu, Structure and mechanical properties of fluorine-containing glycidyl azide polymer-based energetic binders, *Polym. Int.* 66 (9) (2017) 1318-1323.