Supplementary material (ESI) for Journal of Materials Chemistry

Electronic Supplementary Information for

Time-Temperature Indicators for High Temperature Applications

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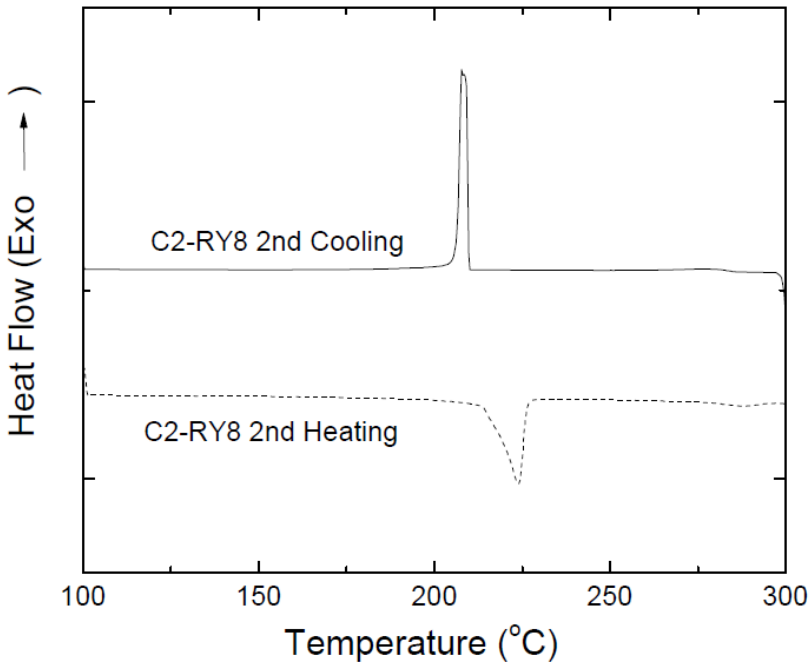

Figure S1. DSC traces of neat **C2-RY8**. All experiments were conducted under N_2 at heating and cooling rates of 10 K/min.

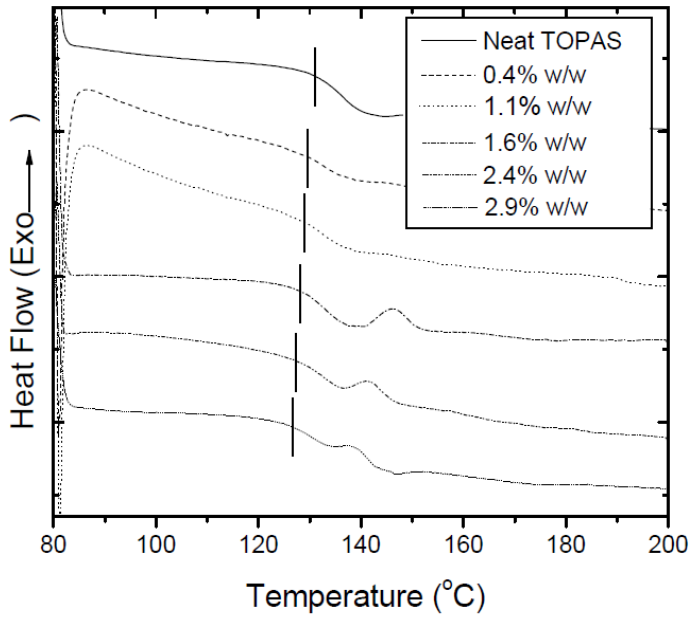

Figure S2. DSC traces of **BBS**/TOPAS 5013 blends. Vertical markers indicate the onset of the transition, which was taken as T_g. Experiments were conducted under N_2 at 10 K/min.

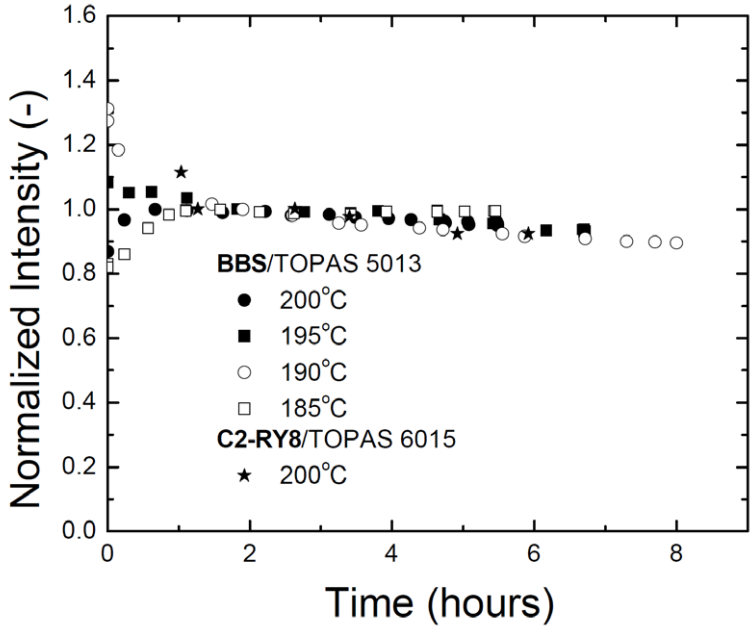

Figure S3. Normalized fluorescence intensity of 0.5 wt.-% **BBS**/TOPAS 5013 blend and 0.7 wt.-% **C2-RY8**/TOPAS 6015 blend annealed at various temperatures.

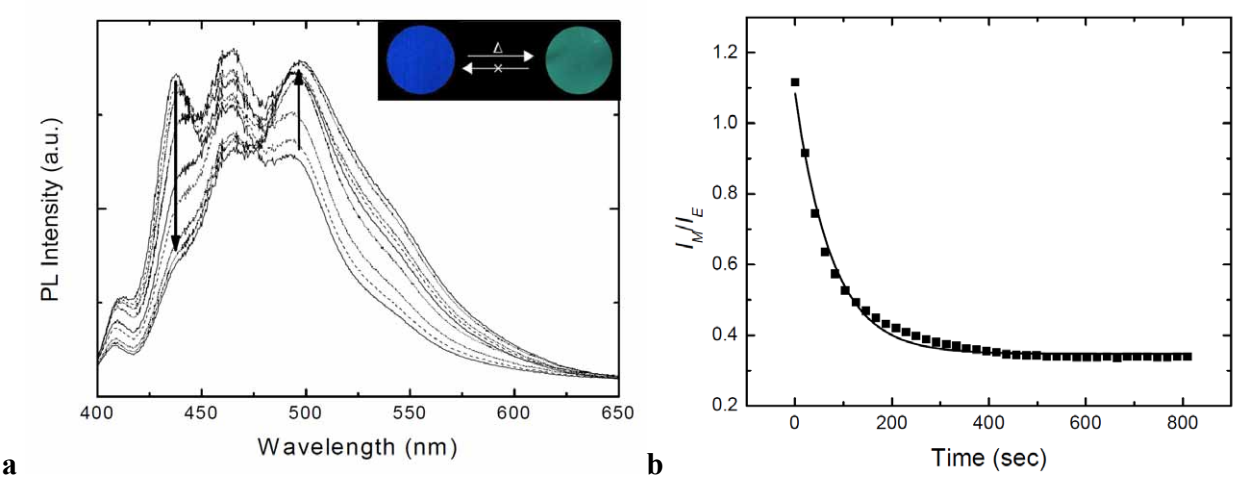

Figure S4. Uncorrected PL emission spectra (a), and (b) I_M/I_E extracted from the emission spectra in (a) as a function of annealing time at 170 °C for a 2.0 wt.-% **BBS**/TOPAS 6015 blend. The line represents a least squares fit according to Equation 1. The inset shows pictures of typical samples excited by 365 nm light before and after annealing.

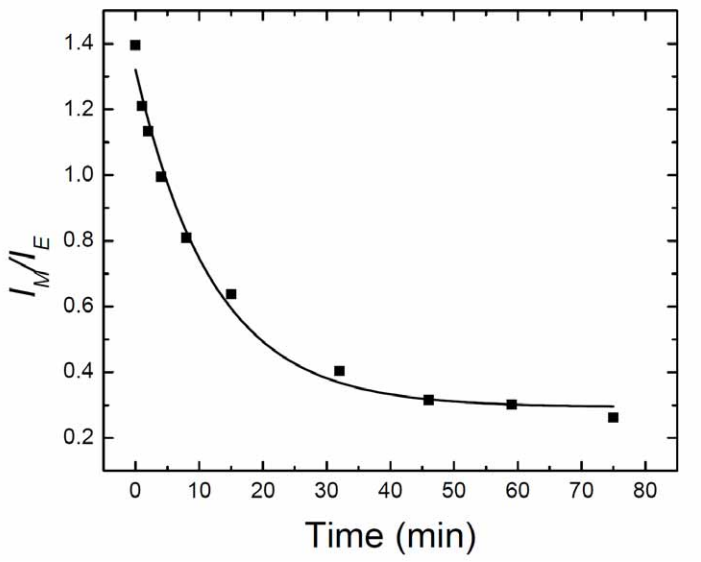

Figure S5. I_M/I_E extracted from the *in-situ* emission spectra in **Figure 7a** as a function of annealing time at 170 °C for 0.74 wt.-% **C2-RY8**/TOPAS 6015 blend. The line represents a least squares fit according to Equation 1.

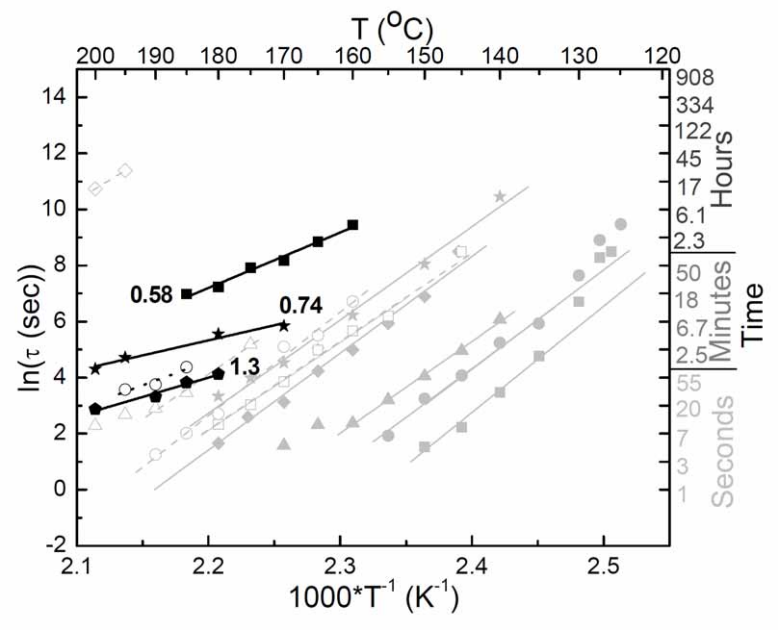

Figure S6. Arrhenius plot expressing the temperature dependence of ln(τ) for 1.3 wt.-% **C2-RY8**/TOPAS 6015 blends measured *in-situ* with an Ocean Optics spectrometer (○) and *ex-situ* (all other data, extracted from **Figure 7b**) measured with a PTI spectrometer (cf. experimental section for details).