

Visual detection of topology freezing transition temperature of vitrimers based on fluorescein-soaked coatings from photonic crystals and vitrimers

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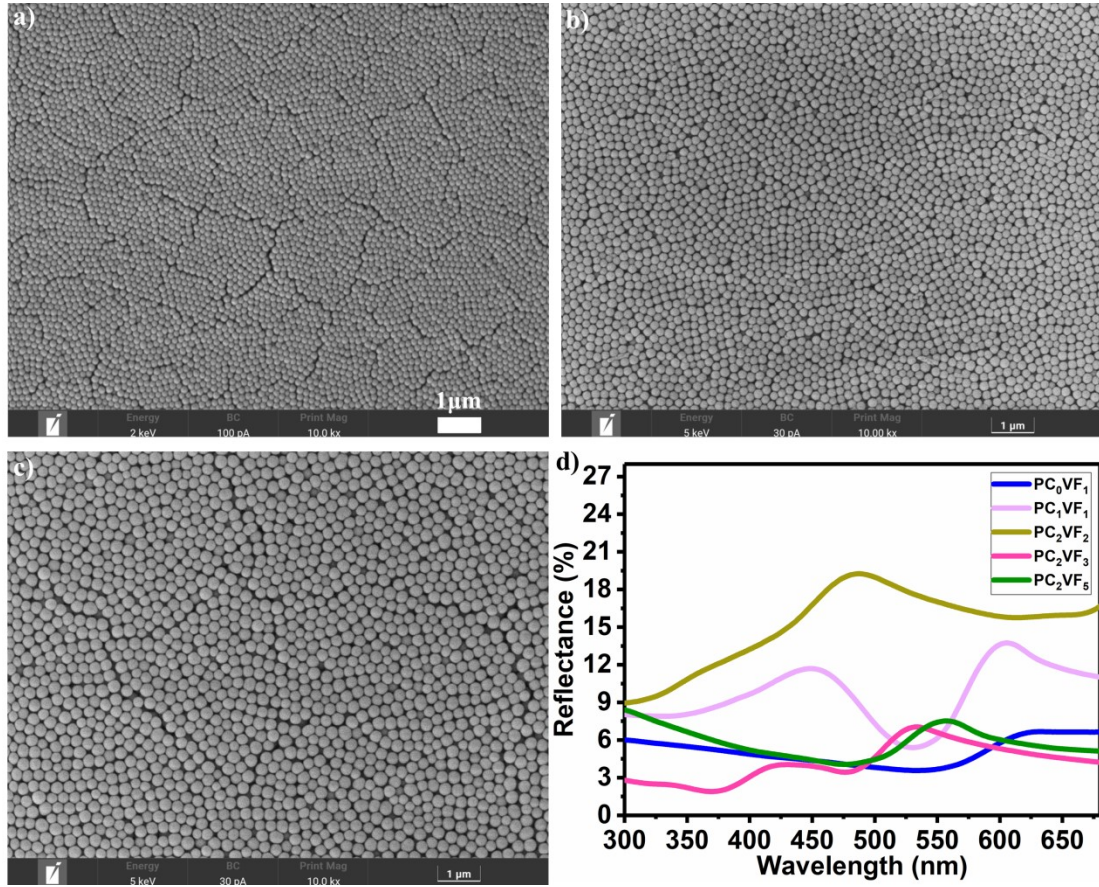


Figure S1 SEM images of a) PC₁, b) PC₂ and c) PC₄. d) Reflection spectra of the representative PCVF coatings under natural light.

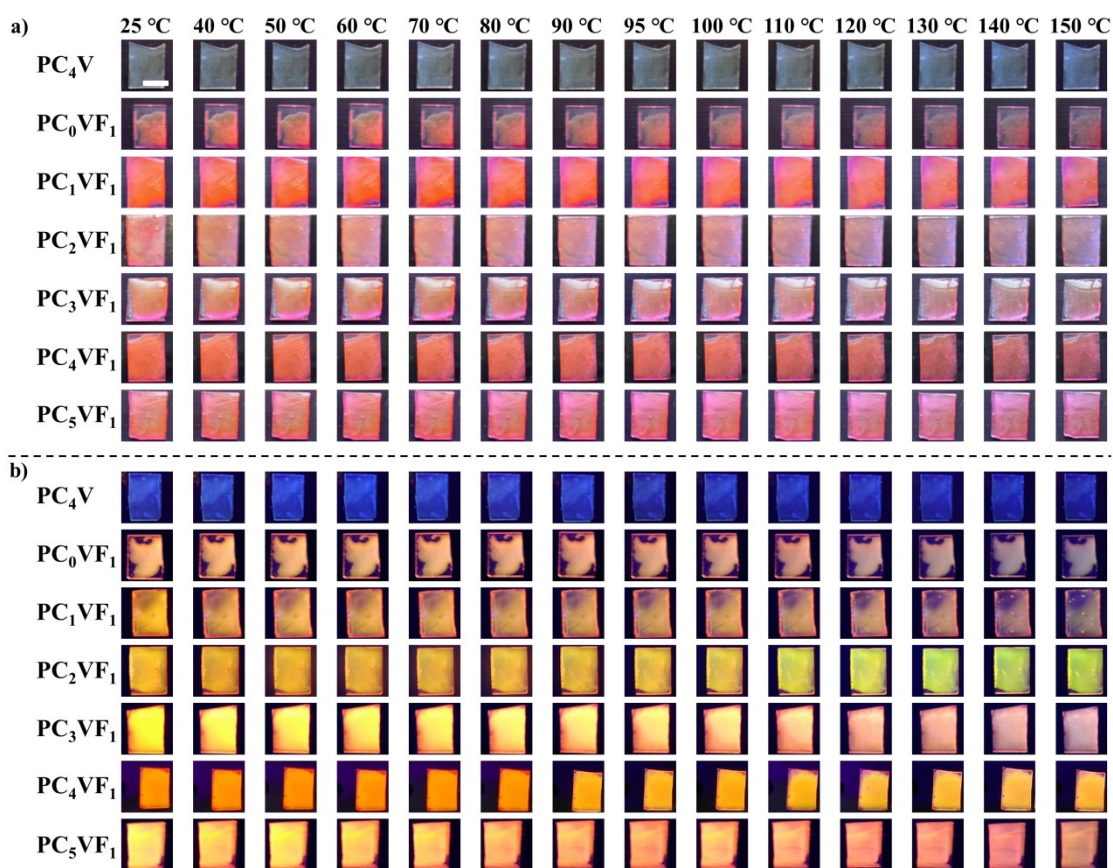


Figure S2 The whole photographs of PC₄V, PC₀VF₁ and PC₁VF₁~PC₅VF₁ at different temperatures under a) natural light and b) UV light. Scale bar: 1 cm.

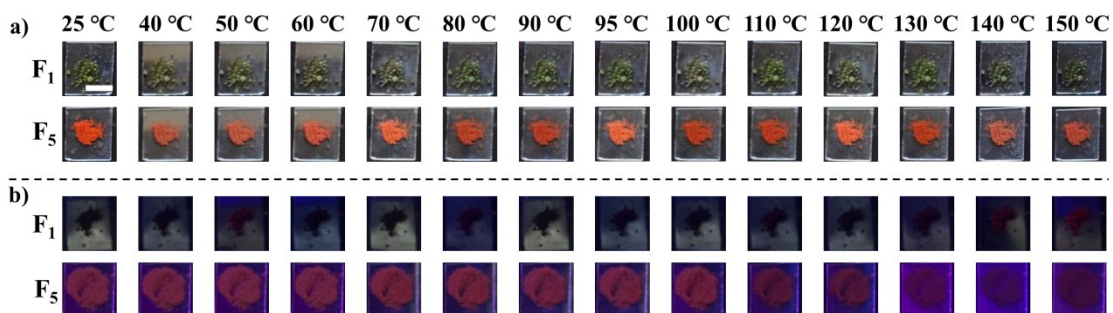


Figure S3 Photographs of the representative solid fluorescein (F₁=rhodamine B and F₅=fluorescein isothiocyanate isomer I) at different temperatures under a) natural light and b) UV light. Scale bar: 1 cm.

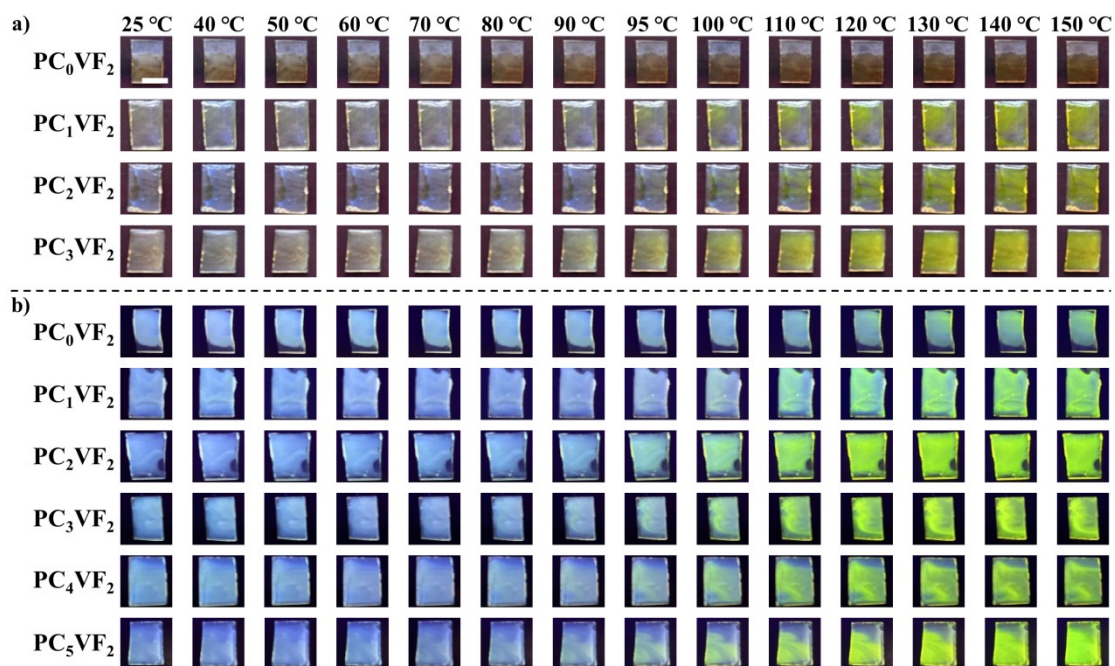


Figure S4 The whole photographs of PCVF soaked with fluorescein diacetate at different temperatures. a) Photographs of PC_0VF_2 and the representative $PC_1VF_2 \sim PC_3VF_2$ coatings under natural light. b) Photographs of PC_0VF_2 , $PC_1VF_2 \sim PC_5VF_2$ coatings under UV light. Scale bar: 1 cm.

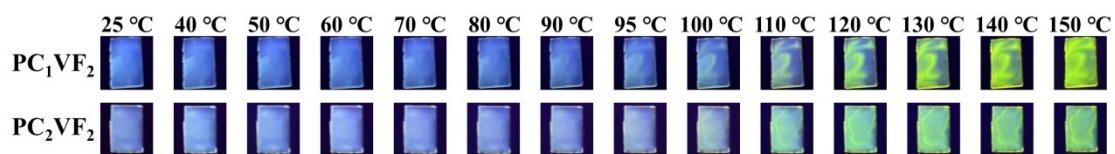


Figure S5 The representative repeated experiments: the whole photographs of PC_1VF_2 and PC_2VF_2 at different temperatures under UV light. Scale bar: 1 cm.

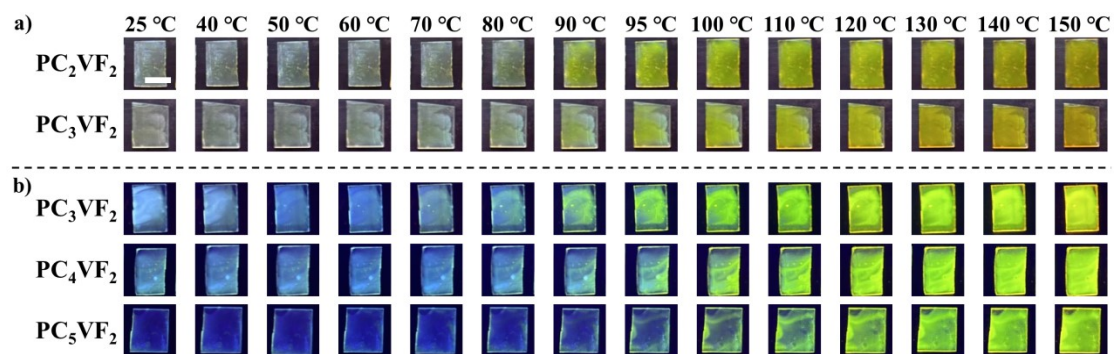


Figure S6 Photographs of the representative PCVF soaked with high concentration fluorescein diacetate methylbenzene solution (0.1 g/50 mL) at different temperatures under a) natural light and b) UV light. Scale bar: 1 cm.

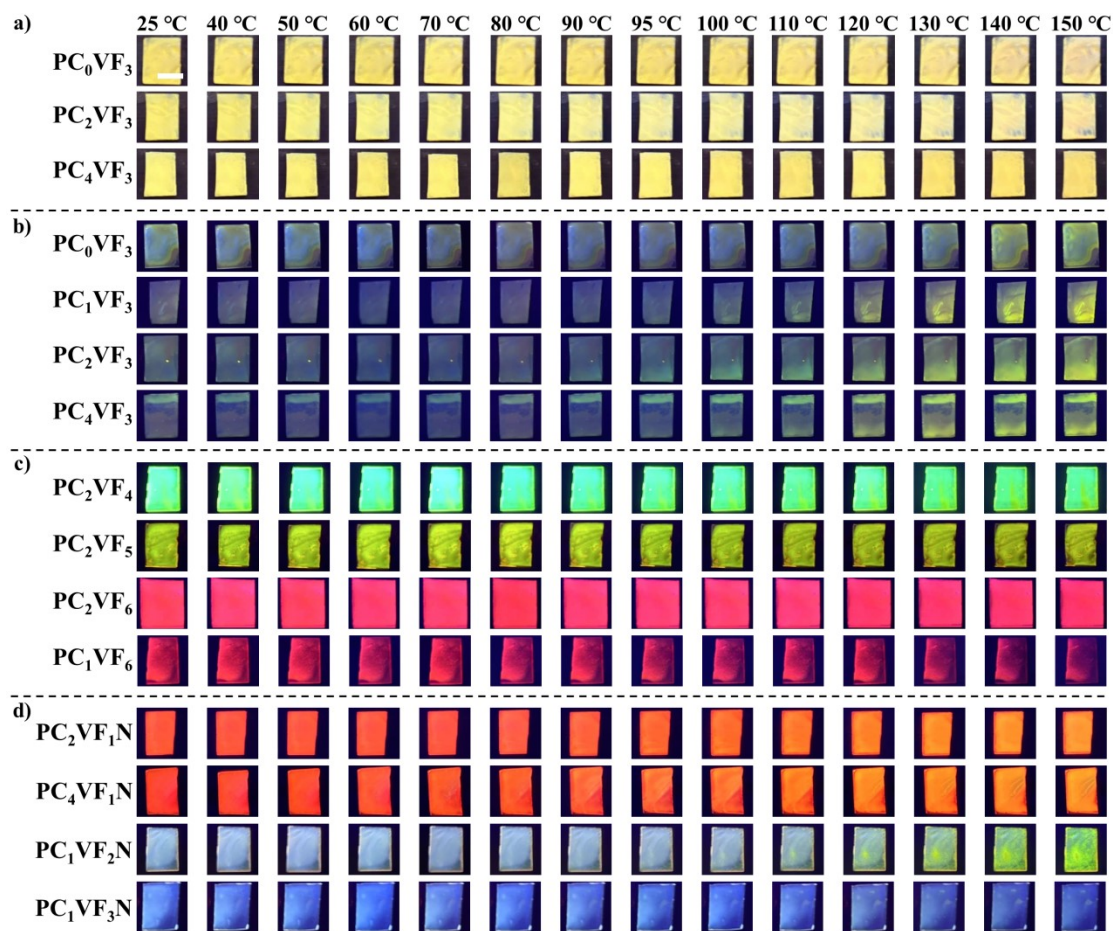


Figure S7 The whole photographs of the representative PCVF coatings at different temperatures. a) Photographs of PC₀VF₃, PC₂VF₃ and PC₄VF₃ coatings under natural light. b) Photographs of PC₀VF₃, PC₁VF₃, PC₂VF₃ and PC₄VF₃ coatings under UV light. c) Photographs of the PCV soaked in fluorescein without ester group (PC₄VF₄, PC₂VF₅, PC₂VF₆ and PC₁VF₆) under UV light. d) Photographs of the PCVF soaked in NaOH solution (PC₂VF₁N, PC₄VF₁N, PC₁VF₂N and PC₁VF₃N) under UV light. Scale bar: 1 cm.

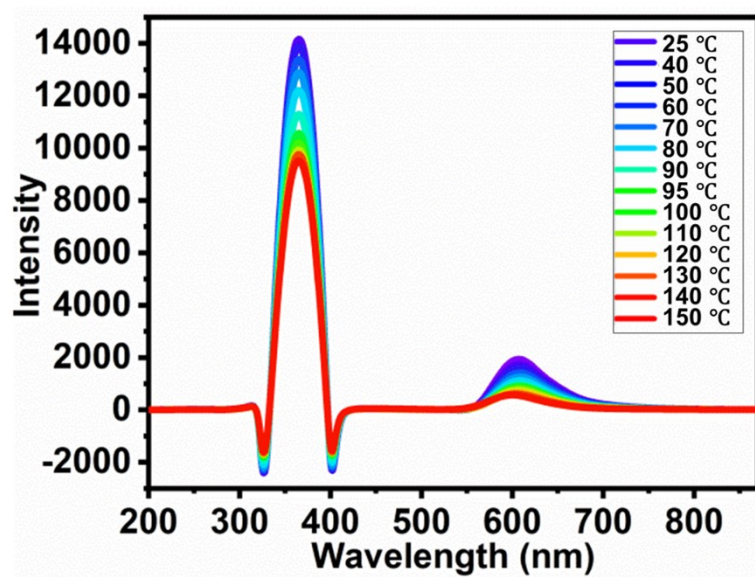


Figure S8 Fluorescence spectra of PC₁VF₁ in full wave band at different temperatures.