Supporting Information

Fluoroalkyl POSS with Dual Functional Groups as a Molecular Filler for Lowering Refractive Indices and Improving Thermomechanical Properties of PMMA

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**Chart S1.** $^1$H NMR spectrum of F+MMA POSS in CDCl₃.

**Chart S2.** $^{13}$C NMR spectrum of F+MMA POSS in CDCl₃.
Chart S3. $^{29}\text{Si}$ NMR spectrum of F+MMA POSS in CDCl$_3$.

Chart S4. $^1\text{H}$ NMR spectrum of F+CP POSS in CDCl$_3$. 
Chart S5. $^{13}$C NMR spectrum of F+CP POSS in CDCl$_3$.

Chart S6. $^{29}$Si NMR spectrum of F+CP POSS in CDCl$_3$. 
Chart S7. $^1$H NMR spectrum of F+C18 POSS in CDCl$_3$.

Chart S8. $^{13}$C NMR spectrum of F+C18 POSS in CDCl$_3$. 
Chart S9. $^{29}$Si NMR spectrum of F+C18 POSS in CDCl$_3$. 
**Figure S1.** UV–vis transmittance spectra of PMMA hybrid films with variable concentrations of POSS fillers.
Figure S2 SEM images of PMMA hybrids containing POSS fillers (2 mol%). Scale bars represent 1 μm.
Figure S3. TGA thermograms of PMMA hybrids containing POSS fillers with a heating rate of 10 °C/min under nitrogen atmosphere.