

Supplementary Information

Enhancement of Thermal Conducting Properties in Epoxy Thermoset Systems Using an Aligned Liquid-Crystalline Mesophase

Thi En Trinh,¹ Hyeonuk Yeo^{1,2,3,4}*

¹Department of Science Education, ²Department of Chemistry Education, ³Department of Pharmacy, ⁴Department of Nanoscience and Nanotechnology, Kyungpook National University, 80, Daehak-ro, Buk-gu, Daegu 41566, Republic of Korea

*E-mail: yeo@knu.ac.kr

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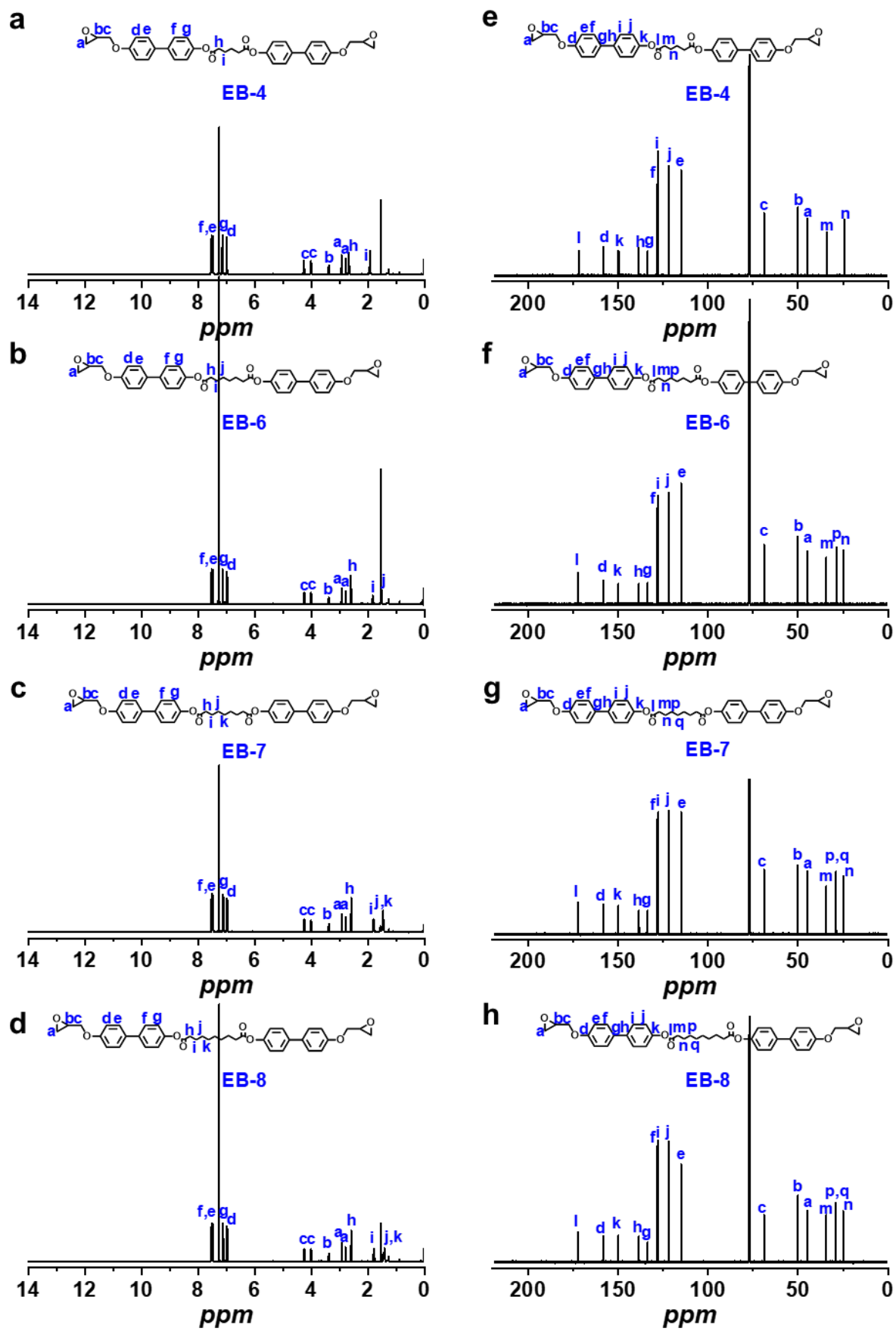


Figure S1. NMR spectra of EB-n in CDCl₃.

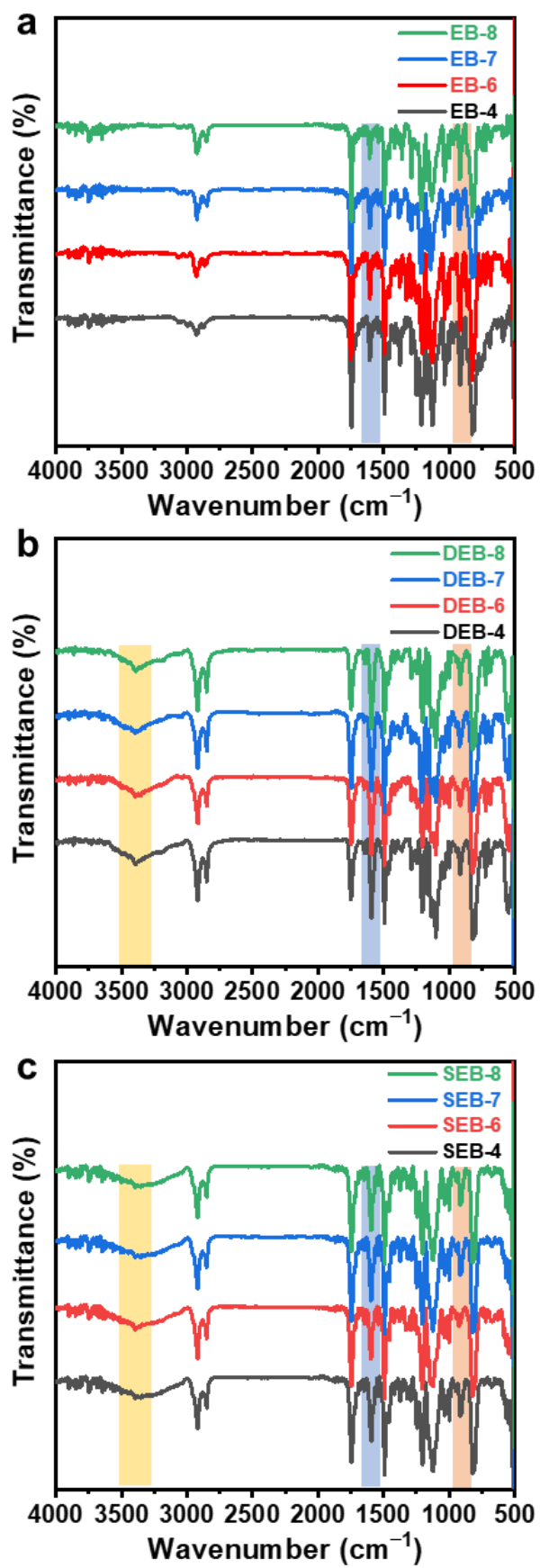


Figure S2. FT-IR spectra of a) EB-n, b) DEB-n, and c) SEB-n.

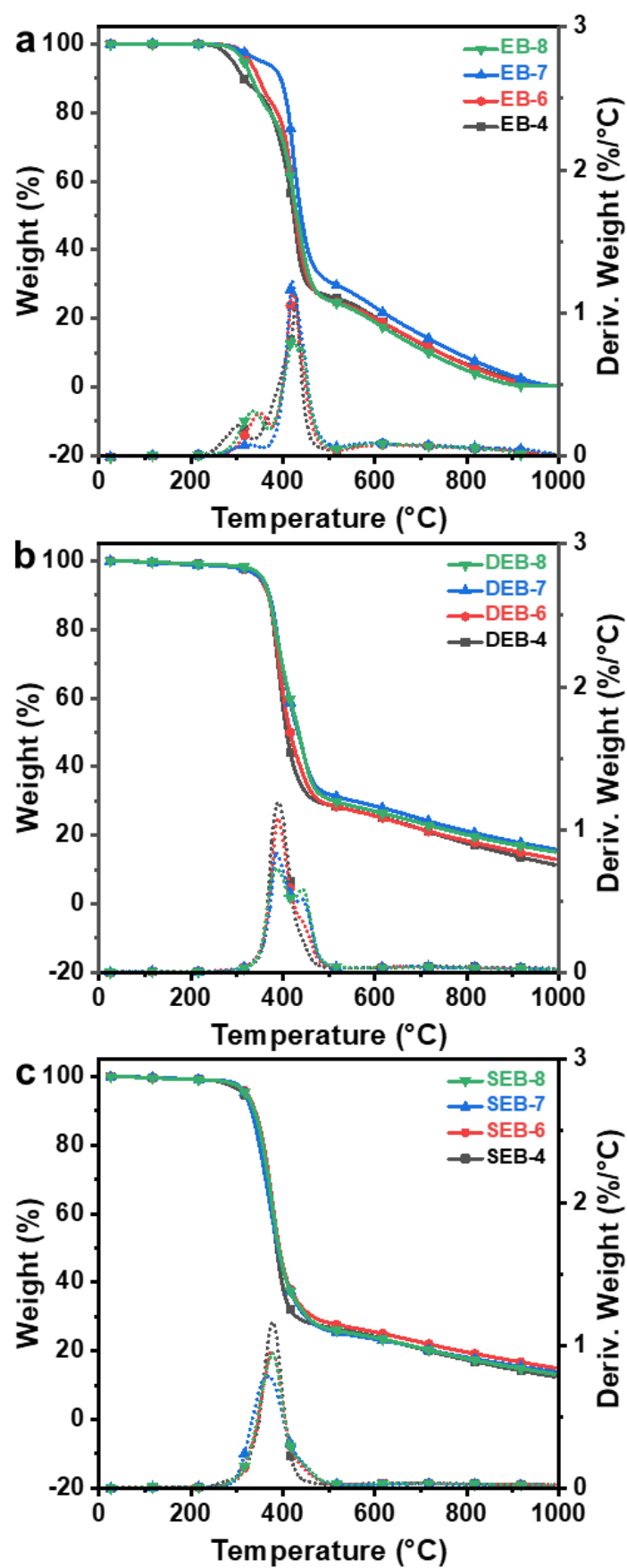


Figure S3. TGA curves obtained at a heating rate of 20 °C/min: a) EB-n. b) DEB-n. c) SEB-n.

Table S1. Thermal decomposition temperature of EB-n.

Sample	$T_{d,5\%}^a)$ [°C]	$T_{d,10\%}^a)$ [°C]
EB-4	291.2	316.4
EB-6	330.9	348.5
EB-7	354.7	394.6
EB-8	314.2	332.8

^{a)} Determined by TGA curves recorded at a heating rate of 20 °C/min.

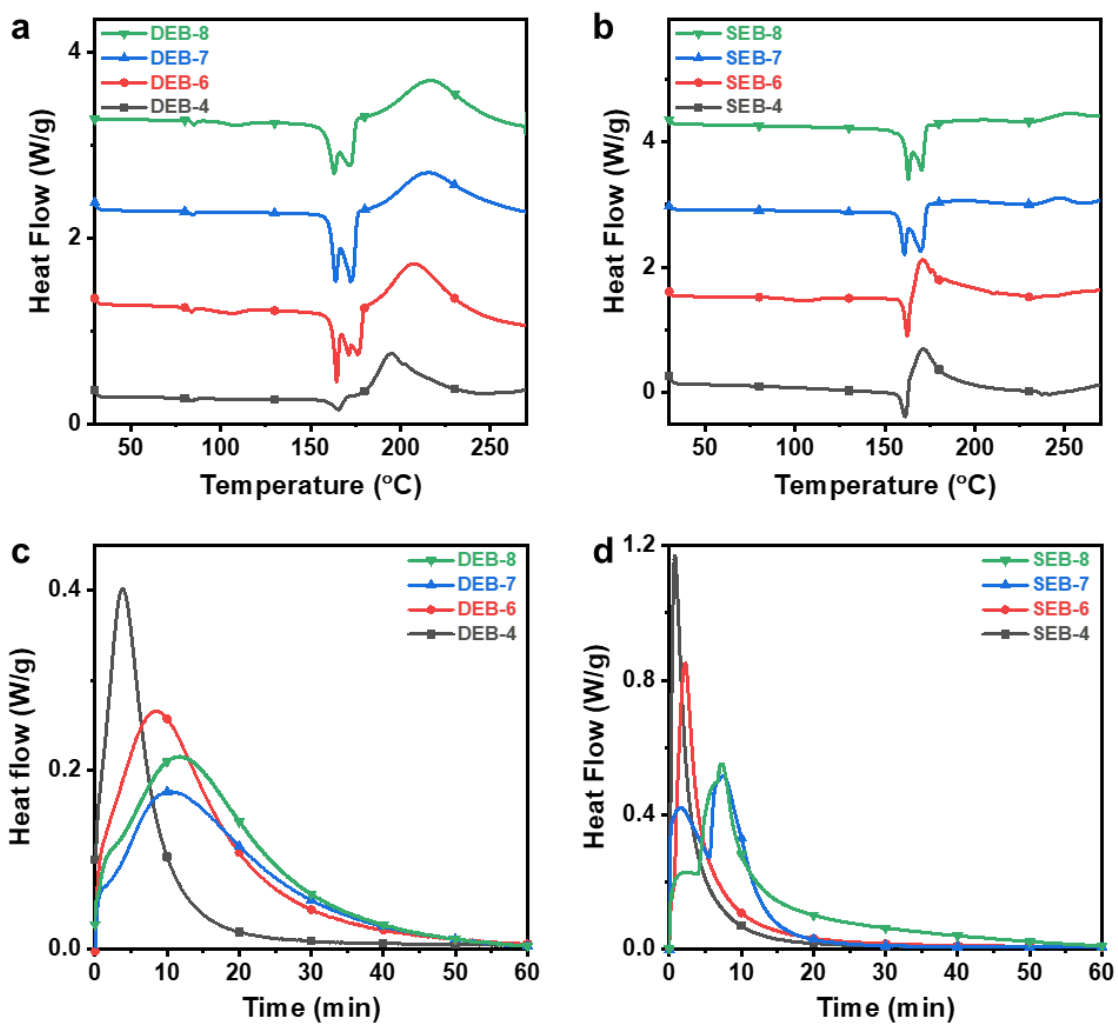


Figure S4. Investigation of the curing reaction by DSC: a,b) DSC curves of DEB-n and SEB-n obtained at a heating rate of 5 °C/min. c,d) Isothermal DSC curves of DEB-n and SEB-n recorded at 182 and 173 °C, respectively.

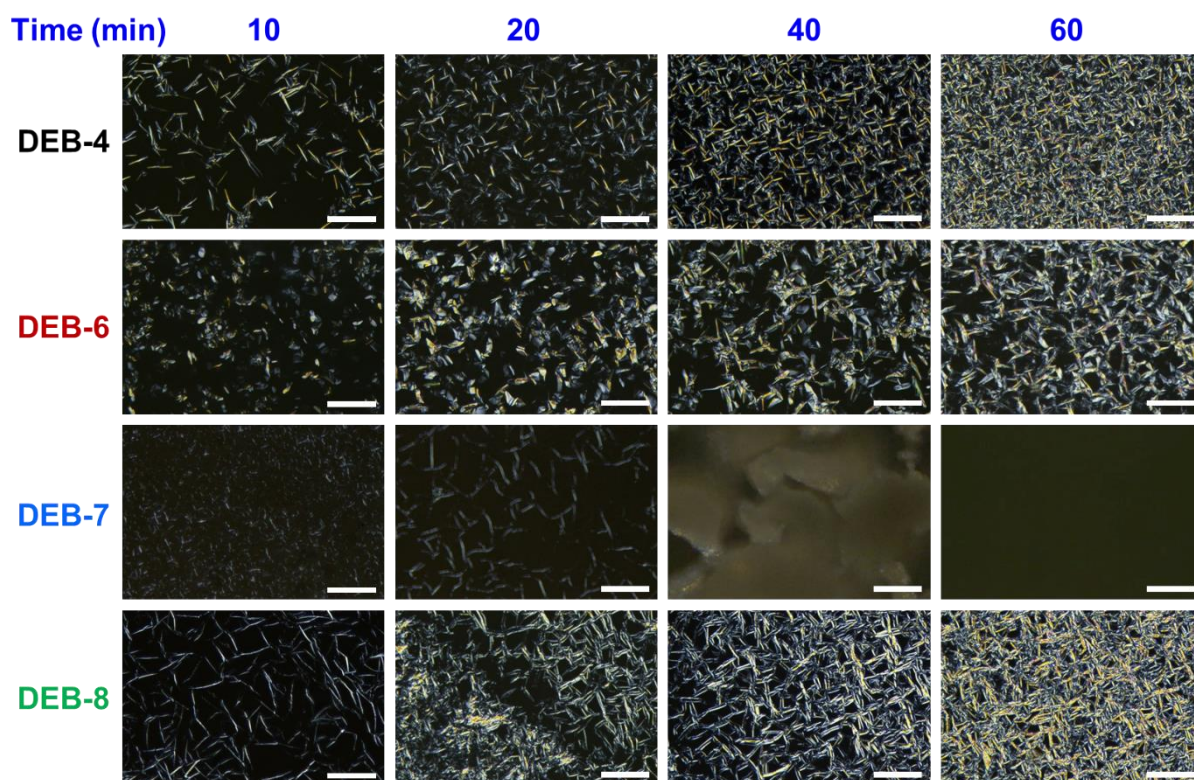


Figure S5. Mesophase images of DEB-n observed by POM during the curing process at 182 °C (scale bar = 100 μm).

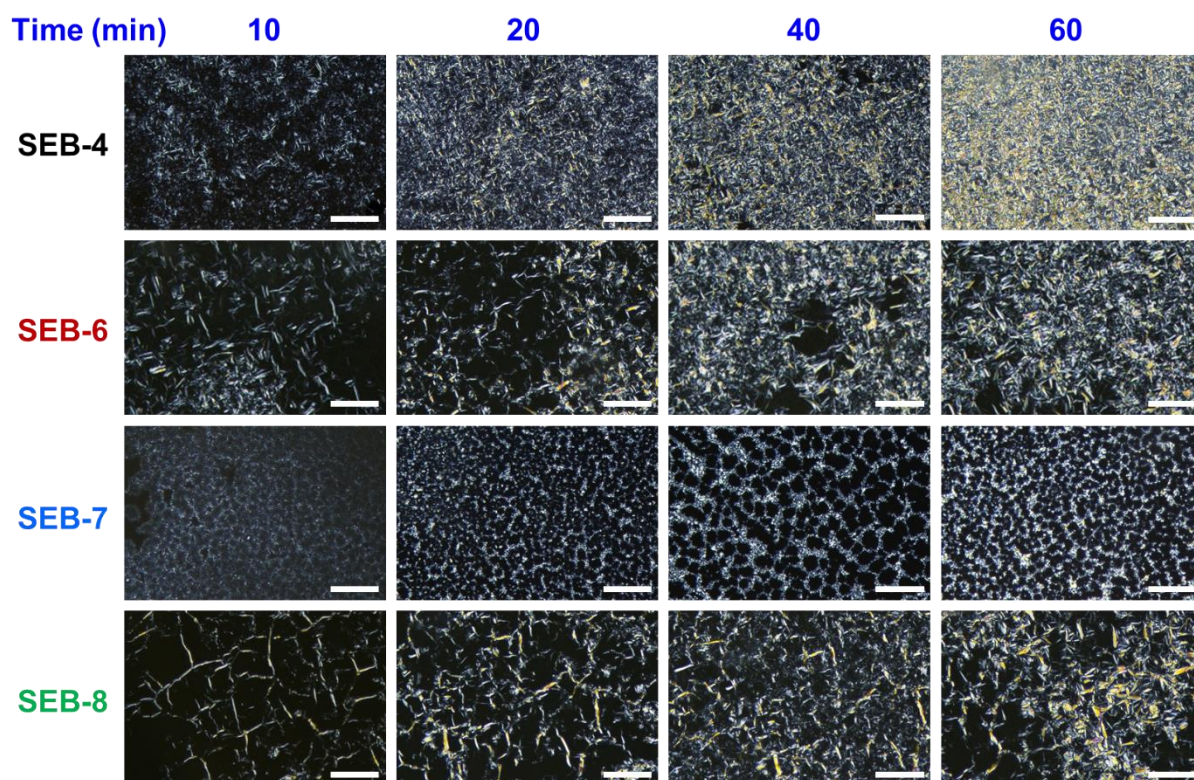


Figure S6. Mesophase images of SEB-n observed by POM during the curing process at 173 °C (scale bar = 100 μm).

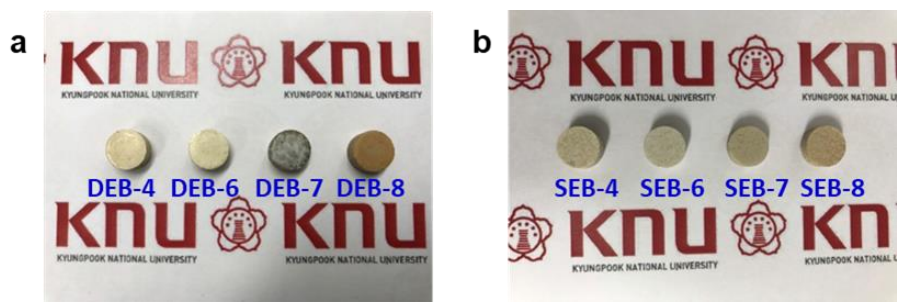


Figure S7. Cured sample images of a) DEB-n and b) SEB-n.

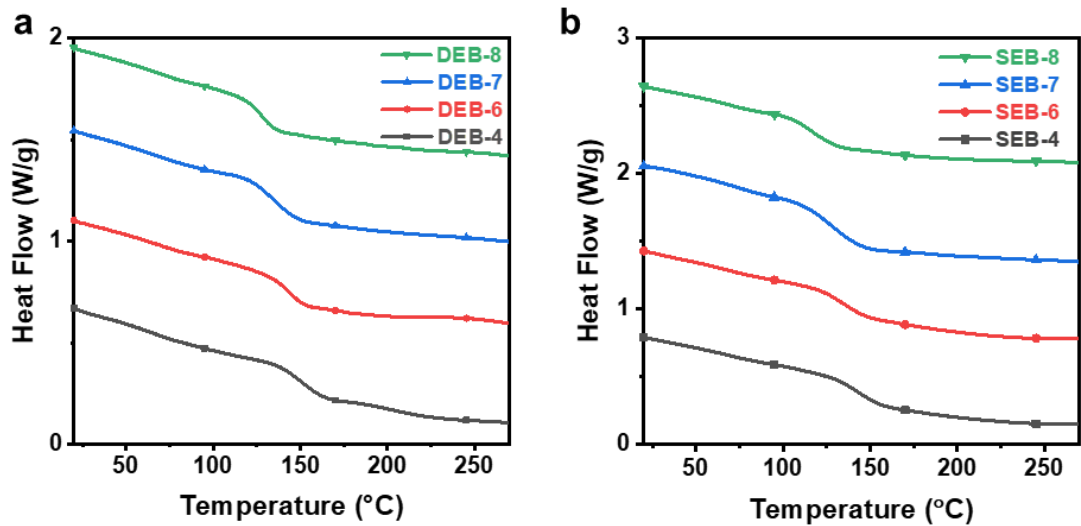


Figure S8. DSC curves obtained at a heating rate of 5 °C/min: a) Cured DEB-n. b) Cured SEB-n.