

Supplementary Information

Modelling of thermal transport through the nanocellular polymer foam: Toward the generation of a new superinsulating material

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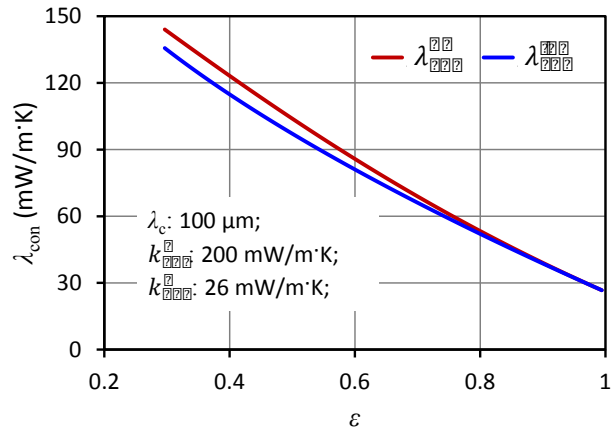


Fig. S1 Comparison of the calculated upper and lower limits of the effective thermal conductivity contributed by thermal conduction

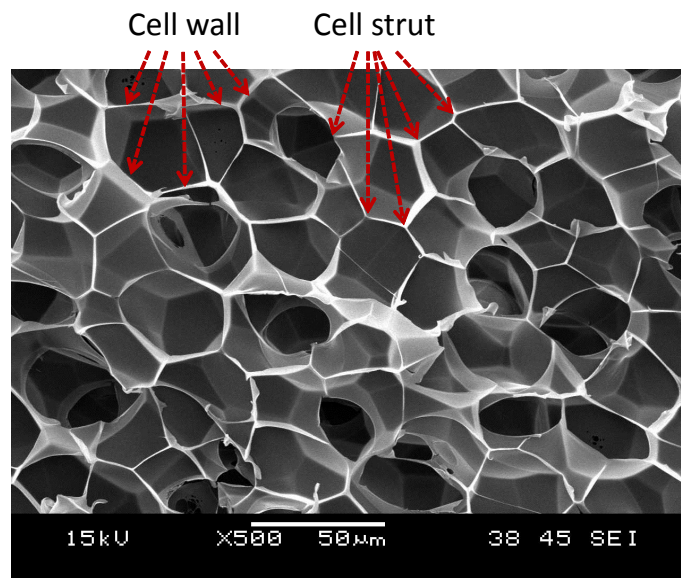


Fig. S2 SEM images of the cellular structure of a typical polymer foam fabricated by batch foaming

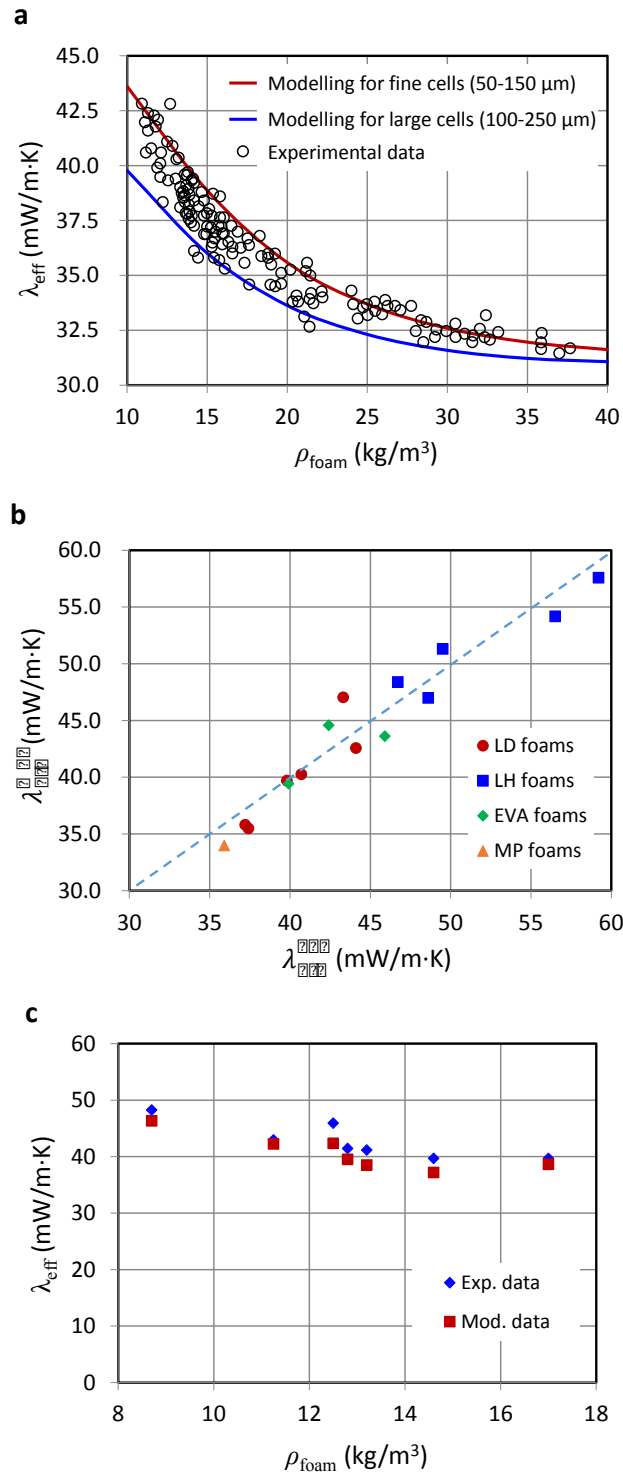


Fig. S3 Comparison of modelling results with experimentally measured data. (a) EPS foams.¹ (b) Polyolefin foams (Low-density polyethylene (LD) foam, Low-density polyethylene (50%) + High-density polyethylene (50%) (LH) foam, Ethylene vinyl acetate copolymer (EVA) foam, and Metallocene polyethylene (MP) foam).² (c) Low-density EPS foams.³ **Note:** In Fig. S3a, the EPS foam's structure parameters are not available in reference 1. The equation provided by Schellenberg and Wallis⁴ was used to correlate the cell size with the foam density.

References

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