Supporting information

Achieving High Performances of Ultra-Low Thermal Expansion and High Thermal Conductivity in $0.5PbTiO_3$-$0.5(Bi_{0.9}La_{0.1})FeO_3$@Cu Core-Shell Composite

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Supplementary Figures

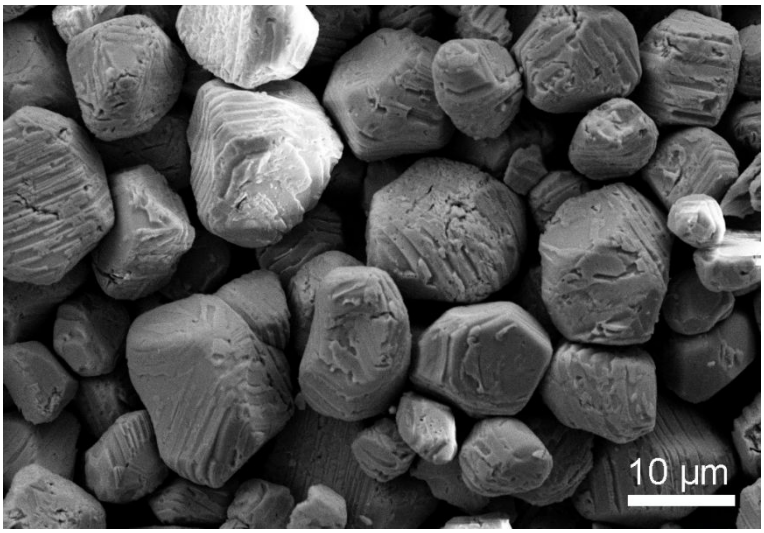

Figure S1. The SEM micrograph of coarsened PTBLF powders.

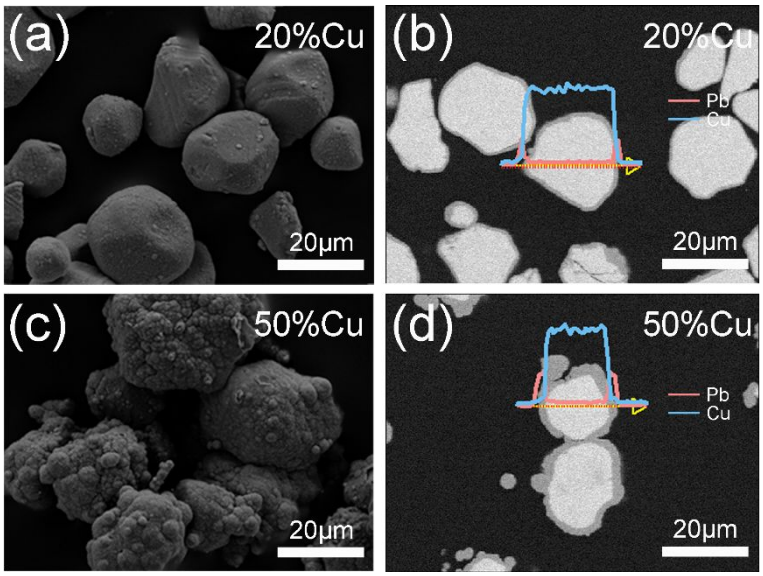

Figure S2. The SEM micrographs and EDS lines of coated PTBLF particles with (a,b) 20 vol.% Cu and (c,d) 50 vol.% Cu, respectively.

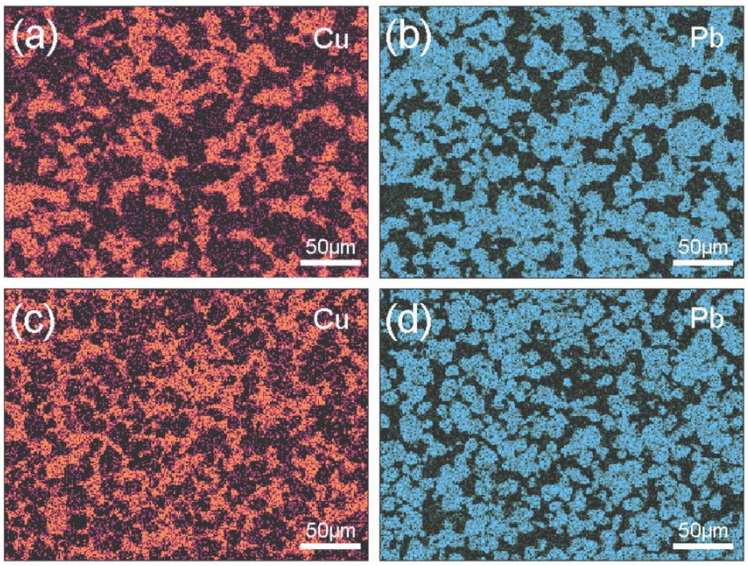

Figure S3. The EDS mapping of (a) Cu and (b) Pb in the uncoated 35 vol.% Cu composite, and (c) Cu and (d) Pb in the coated 35 vol.% Cu composite.

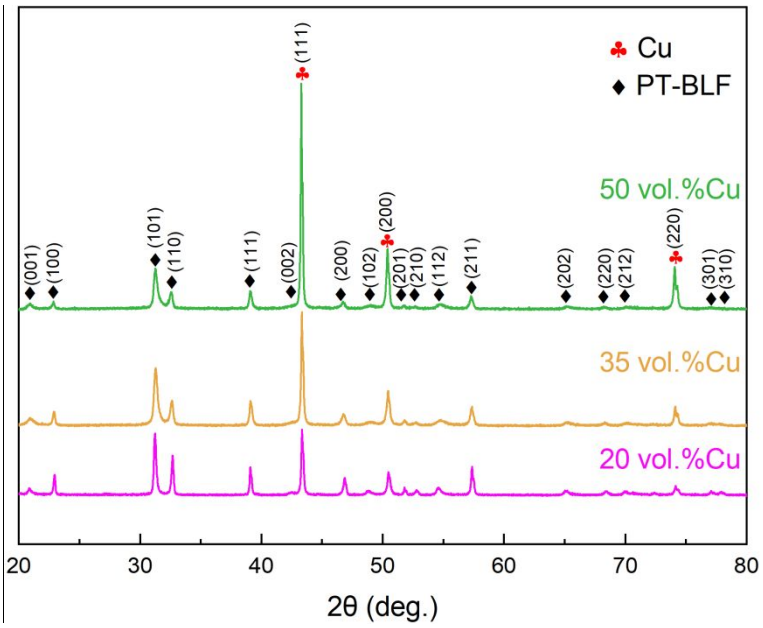

Figure S4. The XRD patterns of the sintered samples with 20 vol.% Cu, 35 vol.% Cu, and 50 vol.% Cu, respectively.