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Supplementary information

Laser co-ablation of bismuth antimony telluride and diamond-like carbon nanocomposites for enhanced thermoelectric performance

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Table S1 Estimated grain sizes using full width at half maximum (FWHM) of some selected XRD peaks

BST Deposition temperature	(015) Grain size (nm)	(0015) Grain size (nm)
400 °C	47.8	74.9
500 °C	117.8	63.2
600 °C	134.9	80.6
BST:DLC Deposition temperature	(015) Grain size (nm)	(0015) Grain size (nm)
400 °C	43.3	21.5
500 °C	51.0	28.3
600 °C	89.9	47.5

Table S2 Energy dispersive X-ray spectroscopy (EDX) characterization

BST:DLC	at %			
	Bi	Sb	Te	C
400 °C	5.0	14.7	28.5	51.7
500 °C	5.0	15.5	28.9	50.5
600 °C	4.7	19.0	31.6	44.7

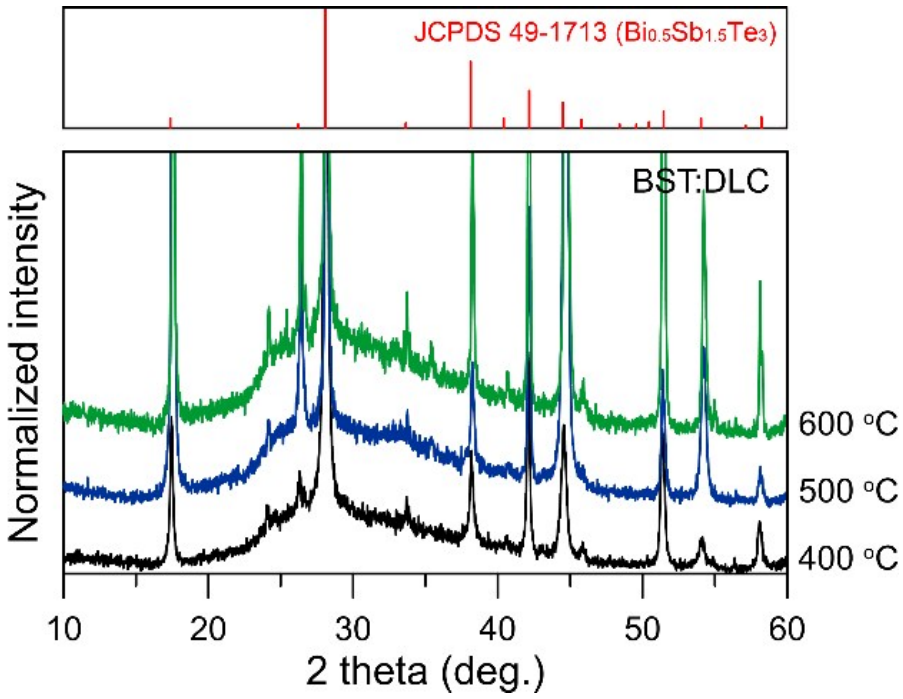

Fig. S1 The XRD patterns clearly displaying the extremely broadening diffraction peak around 2θ=24°-26° which can be indexed as (002) of DLC (carbon).

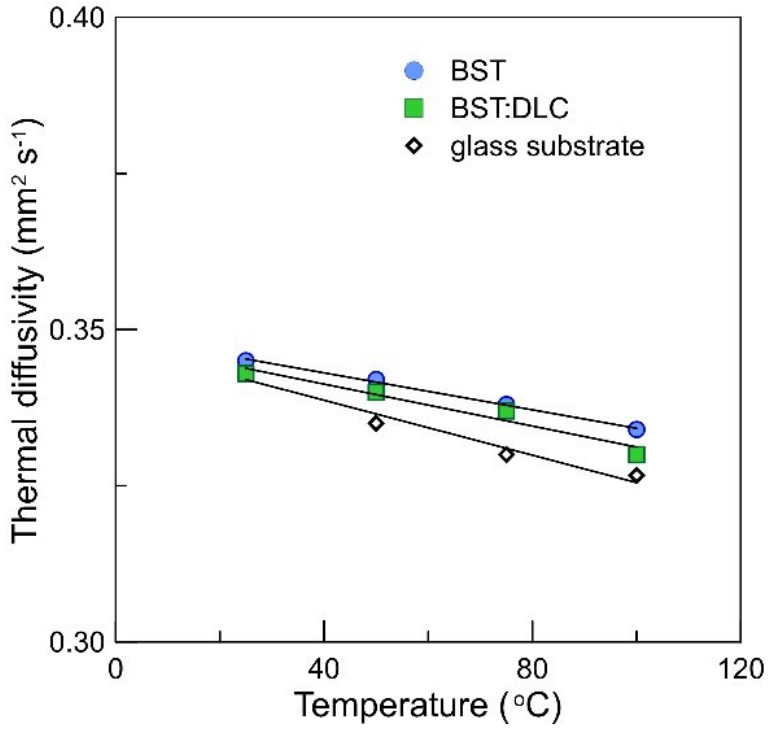

Fig. S2 Temperature dependent thermal diffusivities obtained from the BST and BST:DLC films deposited at 500 °C on glass substrates.