Supplementary Information for

Ice-glue assisted shrinkage transfer printing of nanocarbon black and the application for electroplating ultrafine metal wires

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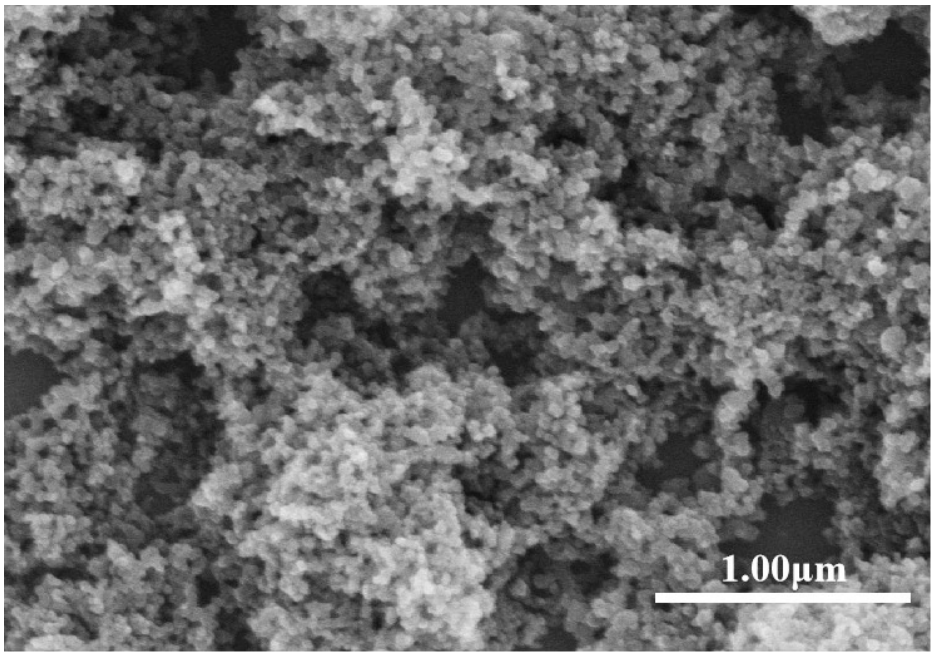

Fig. S1 SEM image of nano carbon black.

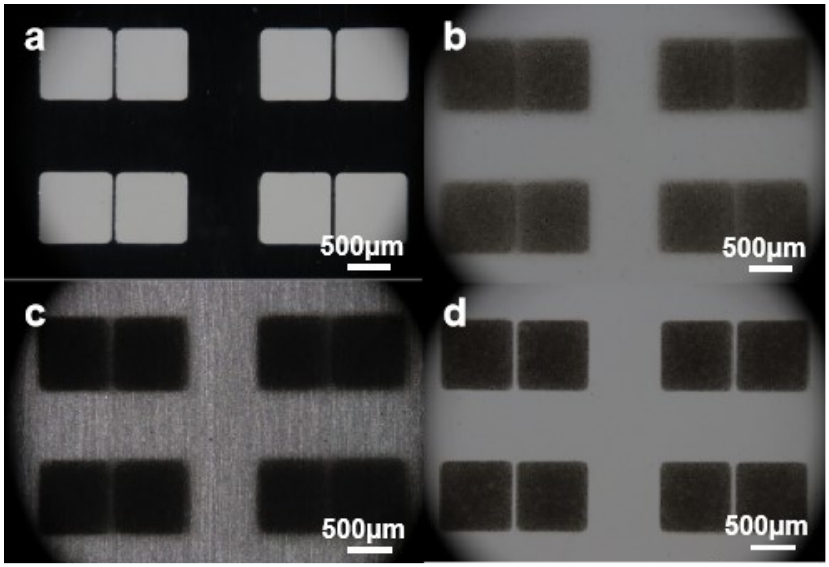

Fig. S2 Optical microscope images at 10X magnification mask (a), nano carbon black patterns obtained by mask-assisted spray coating on glass substrate (b), aluminum sheet substrate (c), PDMS substrate (d).

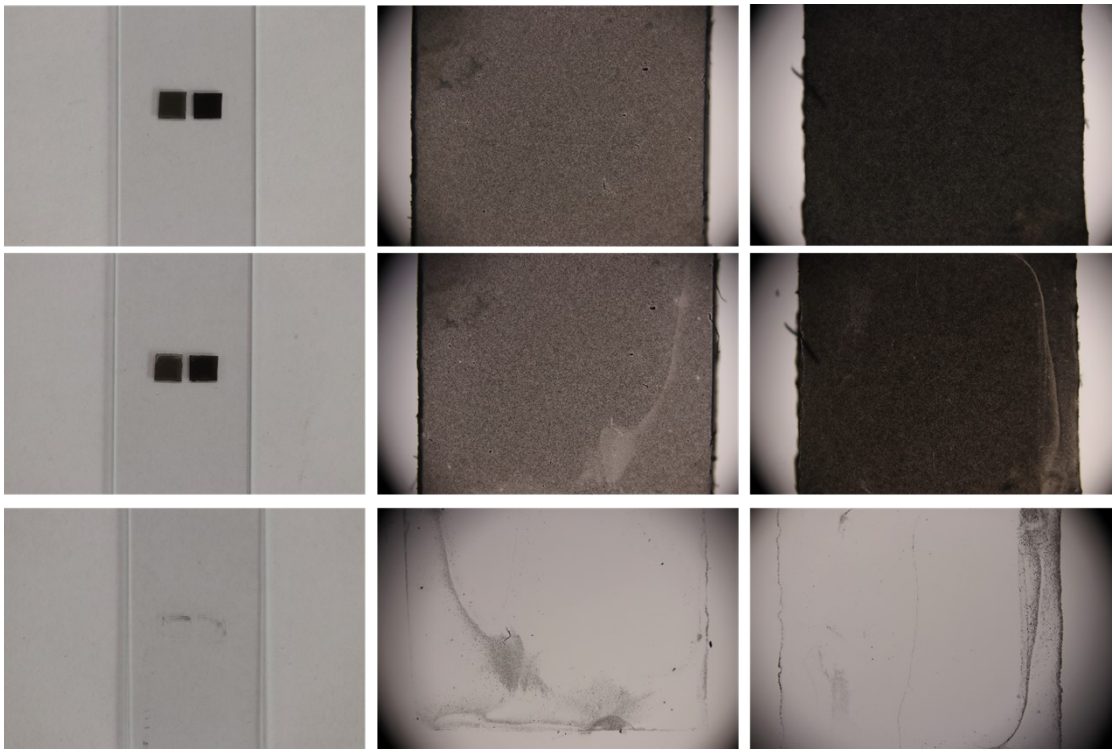

Fig. S3 Optical microscope image of PDMS stamp surface covered with different nanomaterials before (left) and after (middle) capillary force-assisted transfer printing, target substrate surface after capillary force-assisted transfer printing (right).

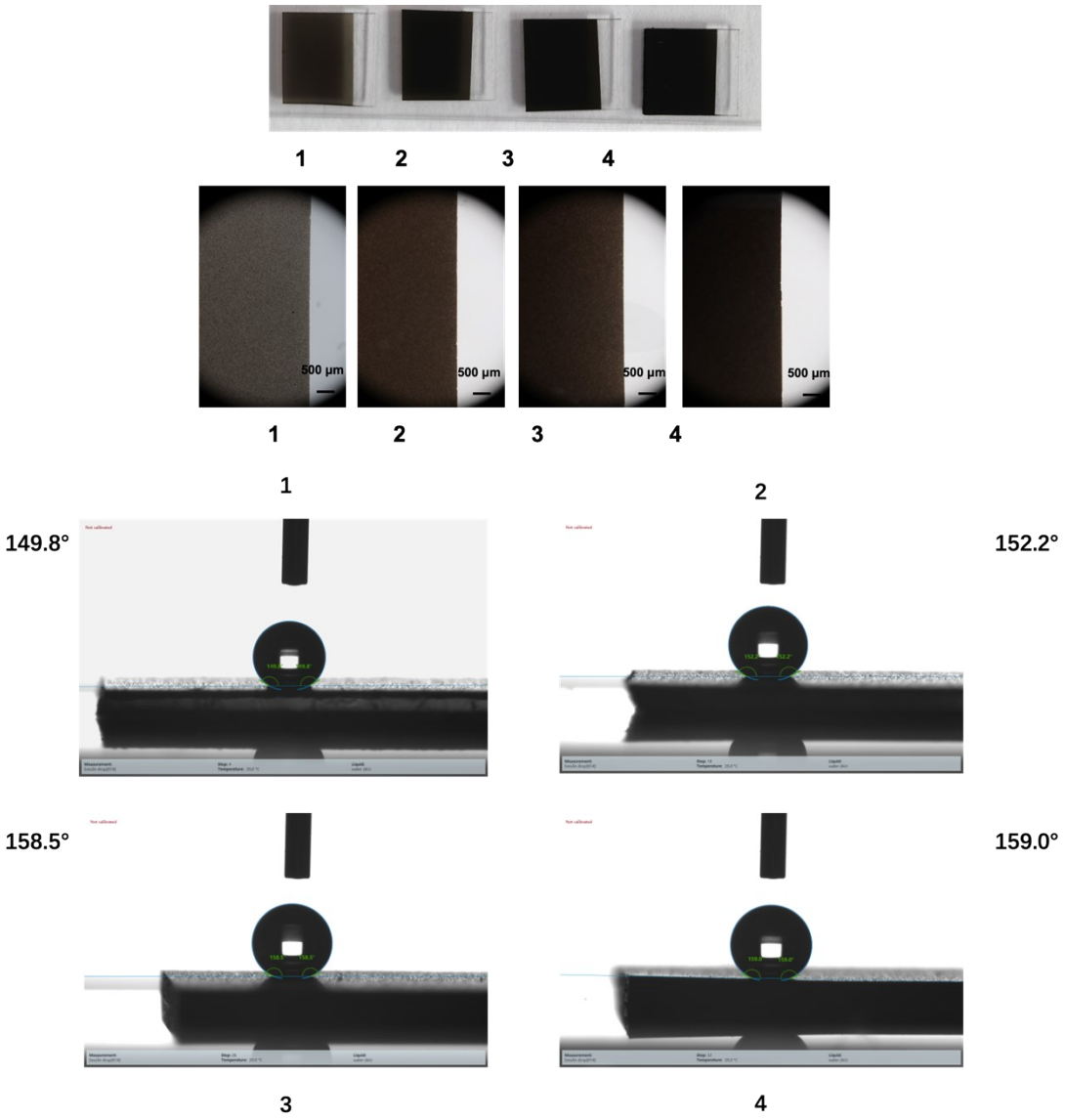

Fig. S4 Optical images of nano-carbon black spay coated on glass substrate with different thicknesses and the corresponding contact Angle to water.

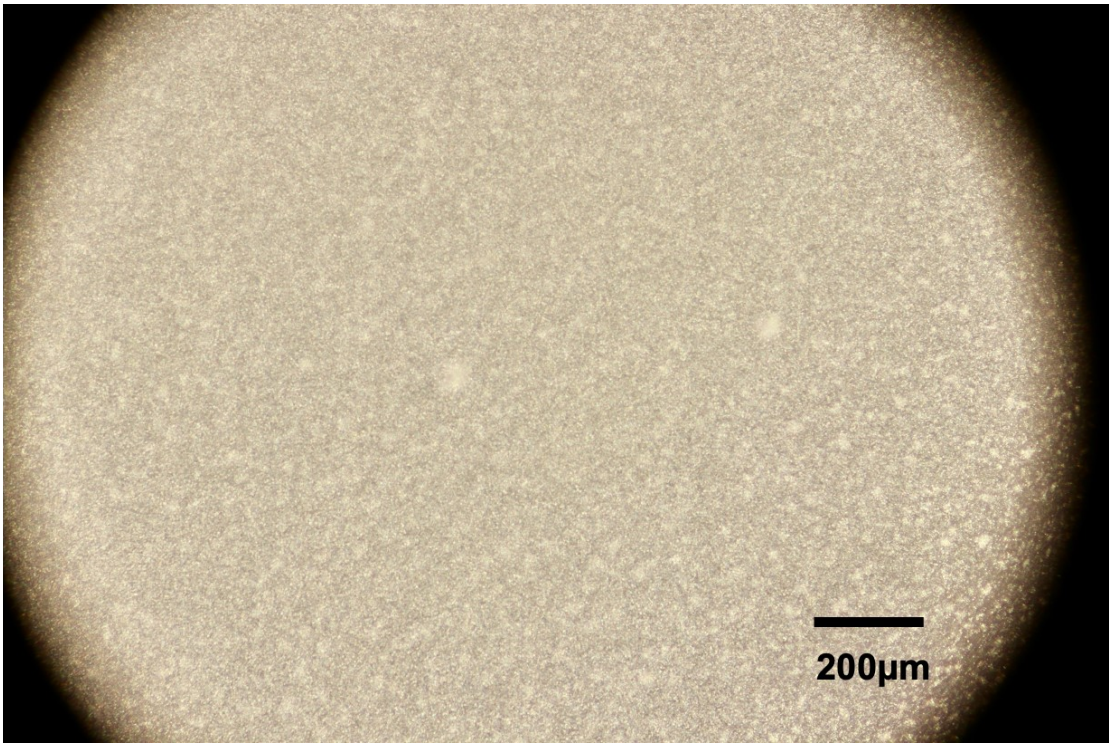

Fig. S5 Optical microscope image of condensed ice film on glass substrate.

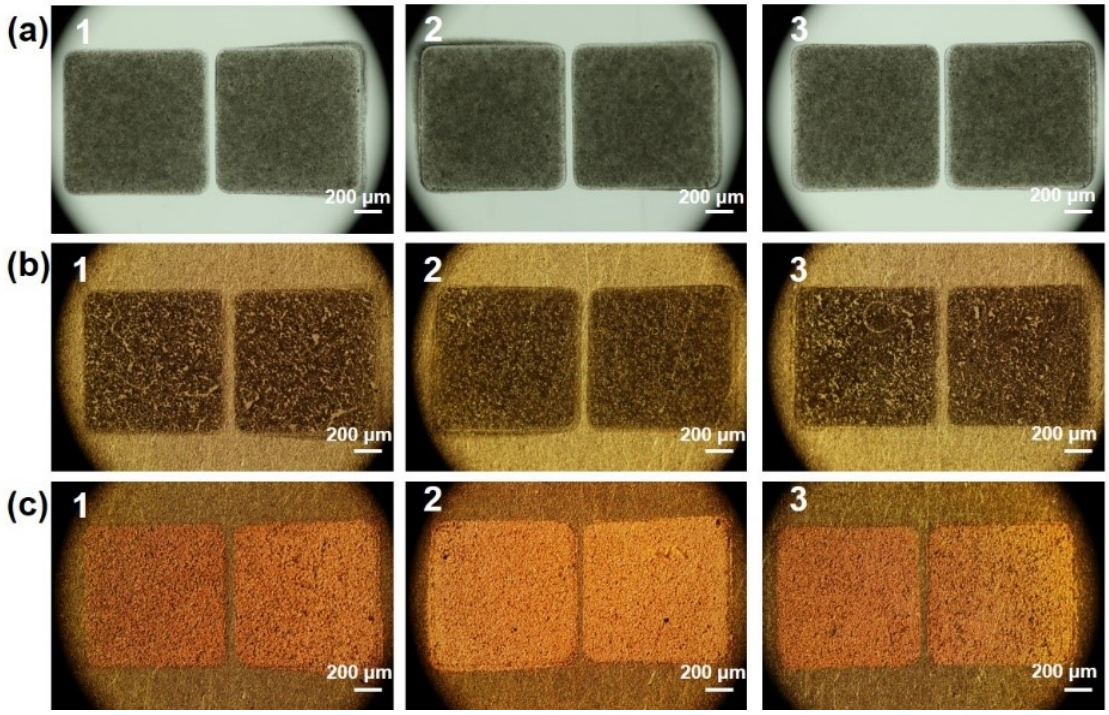

Fig. S6 (a) Optical microscope images of nano carbon black patterns on PDMS; (b) Optical microscope images of nano carbon black patterns transferred to aluminum sheet; (c) Optical microscope images of copper films obtained by electroplating.

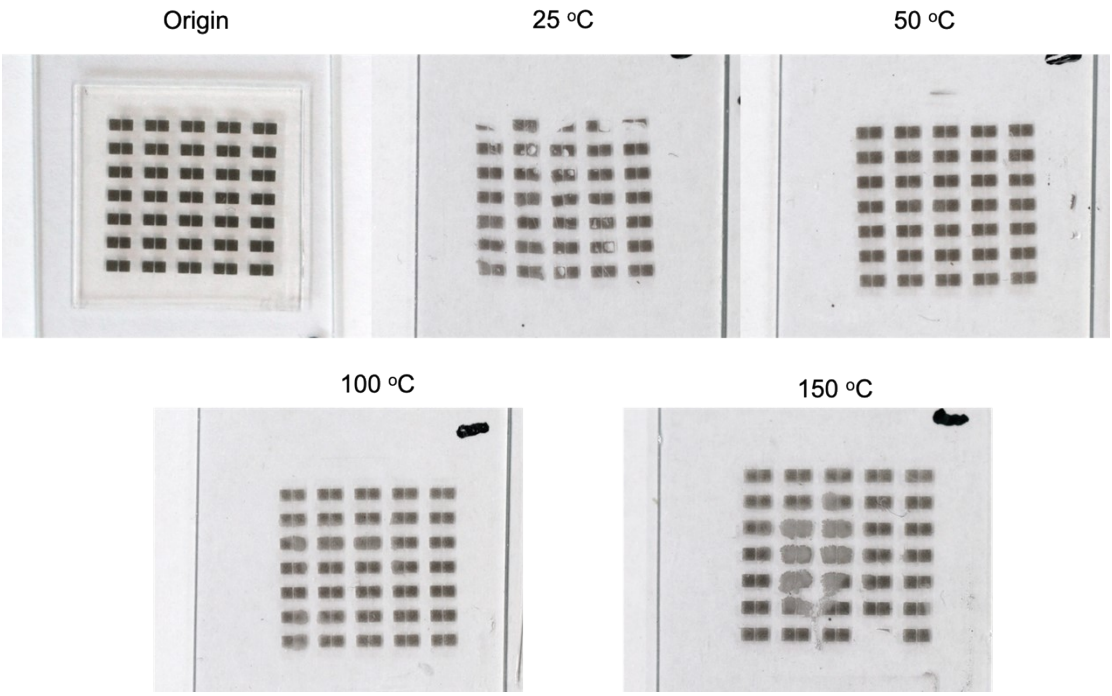

Fig. S7. The effect of post-processing temperature on pattern accuracy.

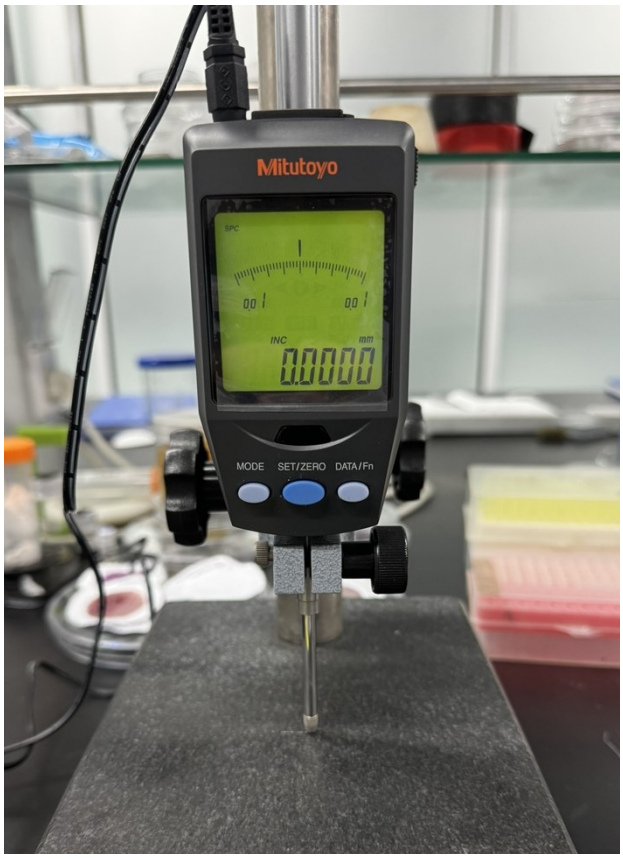

Fig. S8 The photograph of the micrometer