Electronic Supplementary Material (ESI) for CrystEngComm.

Supporting Information

Vapor phase dealloying-driven synthesis of bulk nanoporous cobalt with a face-centered cubic structure

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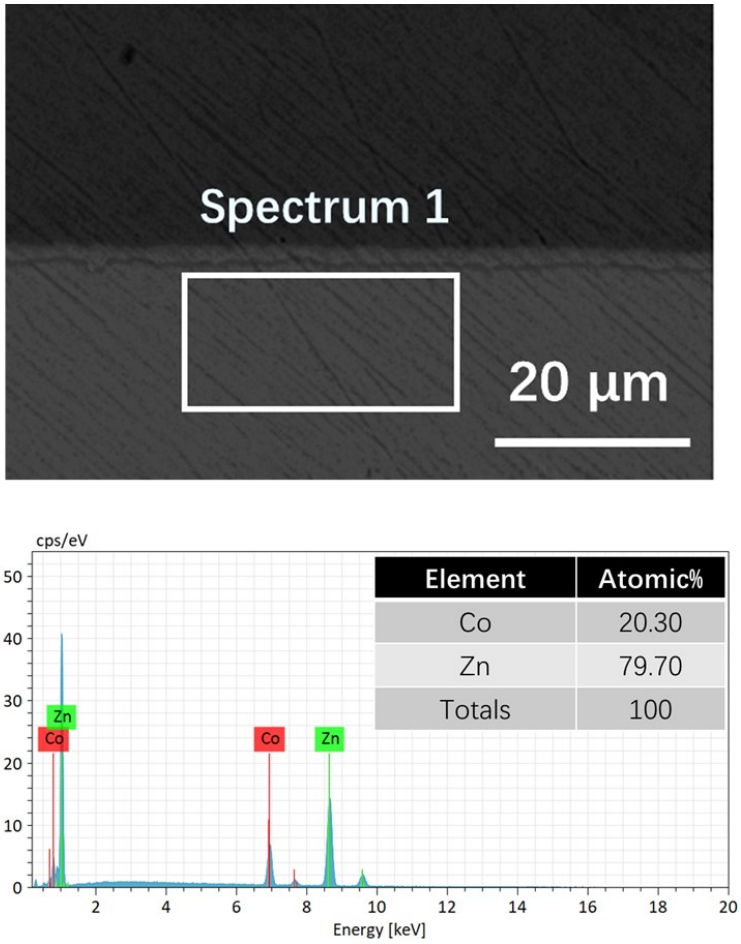


Fig. S1. The EDX result of the alloy layer after VPA at 550 °C for 9 h.

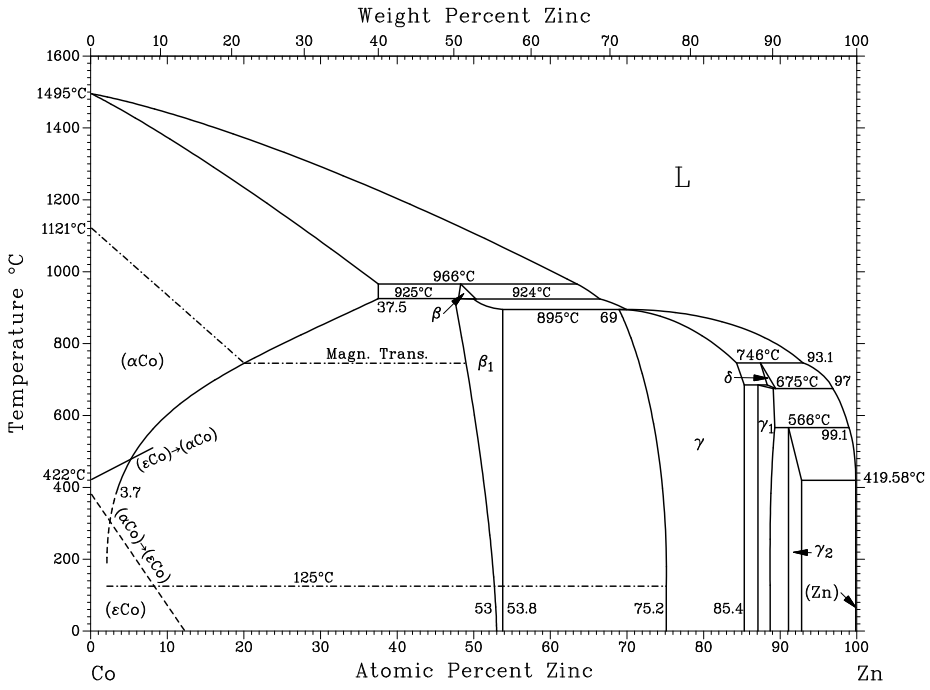


Fig. S2. The phase diagram of Co-Zn system [1].

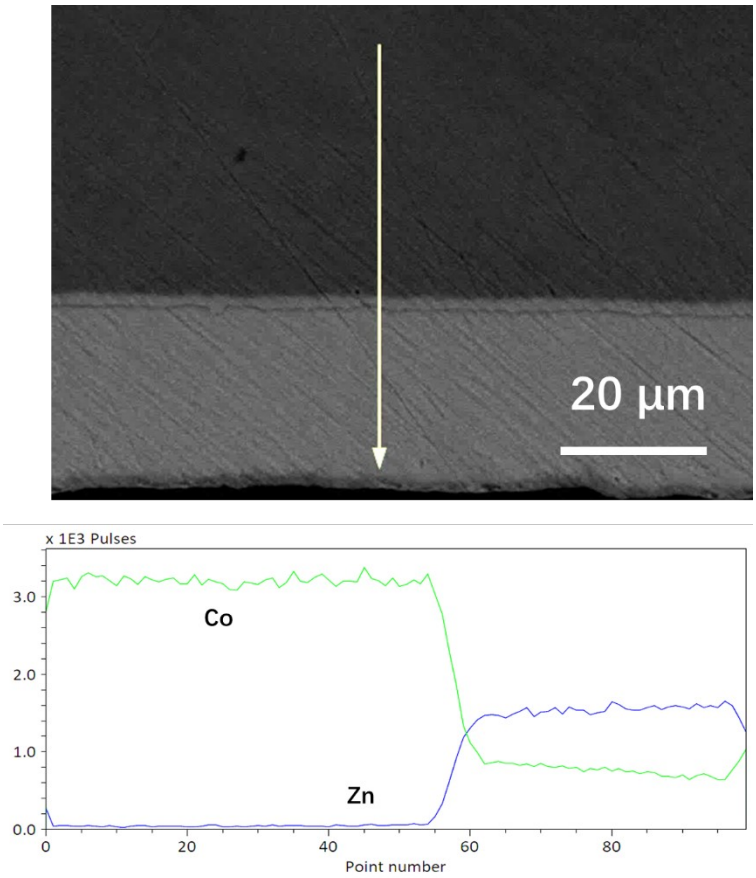


Fig. S3. The line-scan results of the alloy layer and Co substrate after VPA at 550 °C for 9 h.

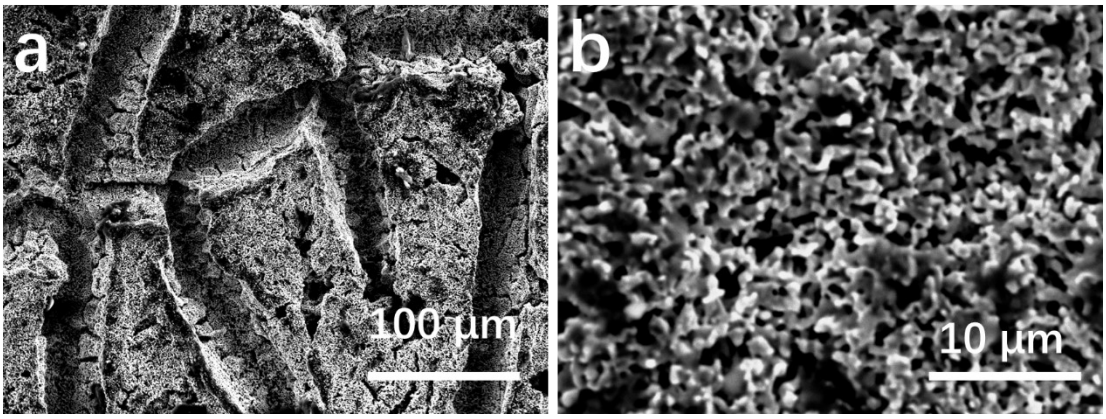


Fig. S4. (a, b) The surface SEM images of nanoporous Co fabricated by VPA at 550 °C for 9 h and VPD at 650 °C for 1 h.

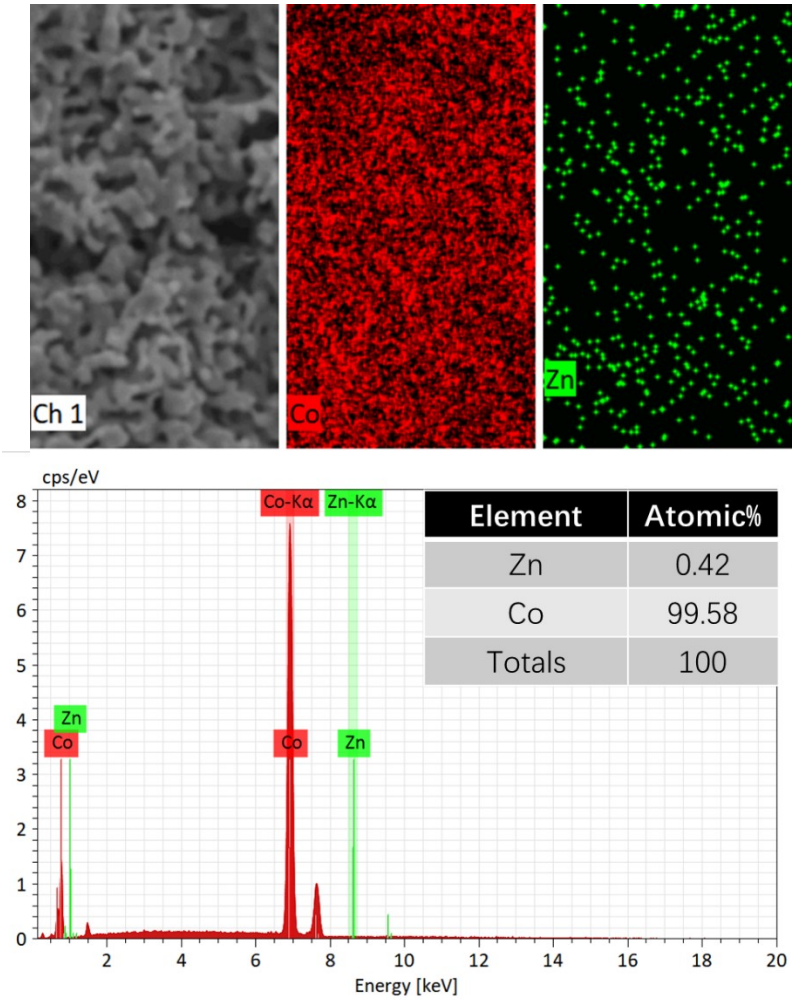


Fig. S5. The EDX results of the nanoporous Co after VPA at 550 °C for 4 h and VPD at 650 °C for 1 h.

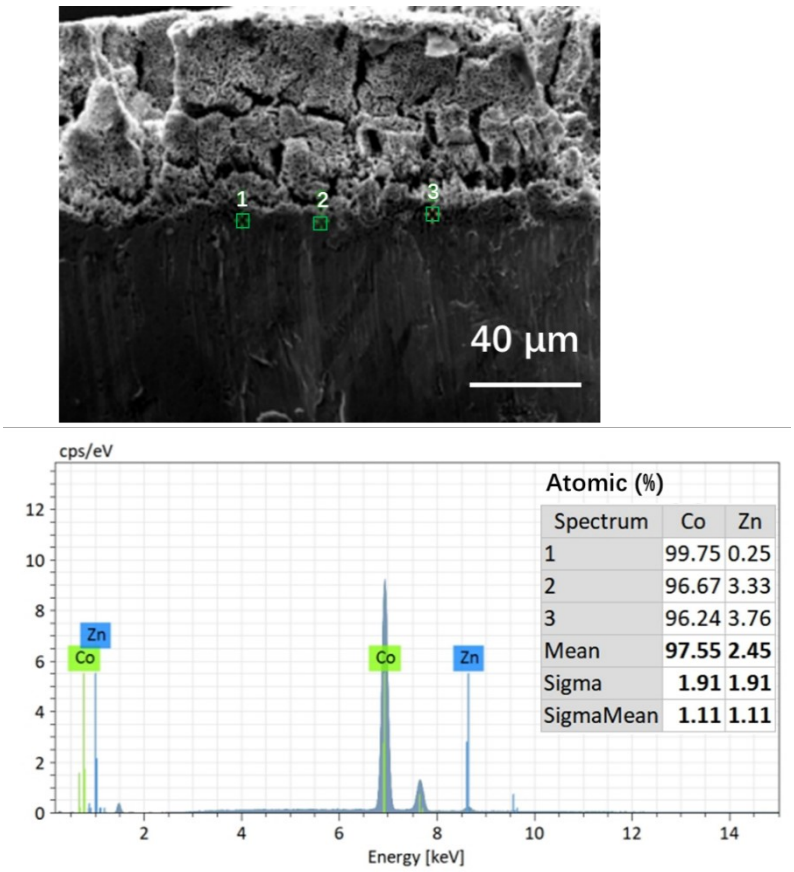


Fig. S6. The EDX results of the boundary of the nanoporous layer and pristine Co substrate.

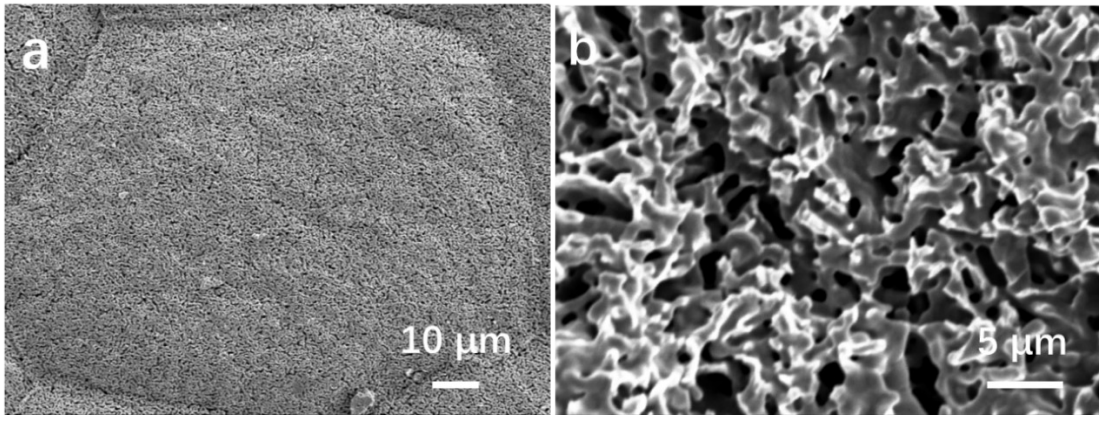


Fig. S7. (a) The surface and (b) cross-section SEM images of the sample for the BET test after the whole Co foil transformed to the nanoporous structure.

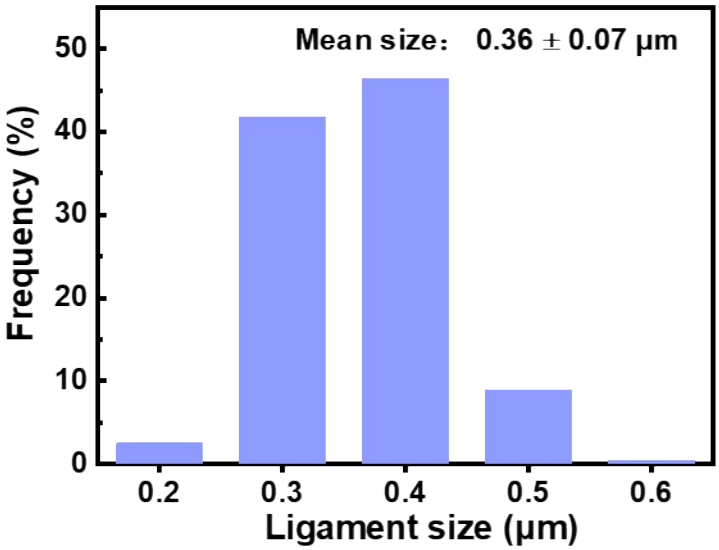
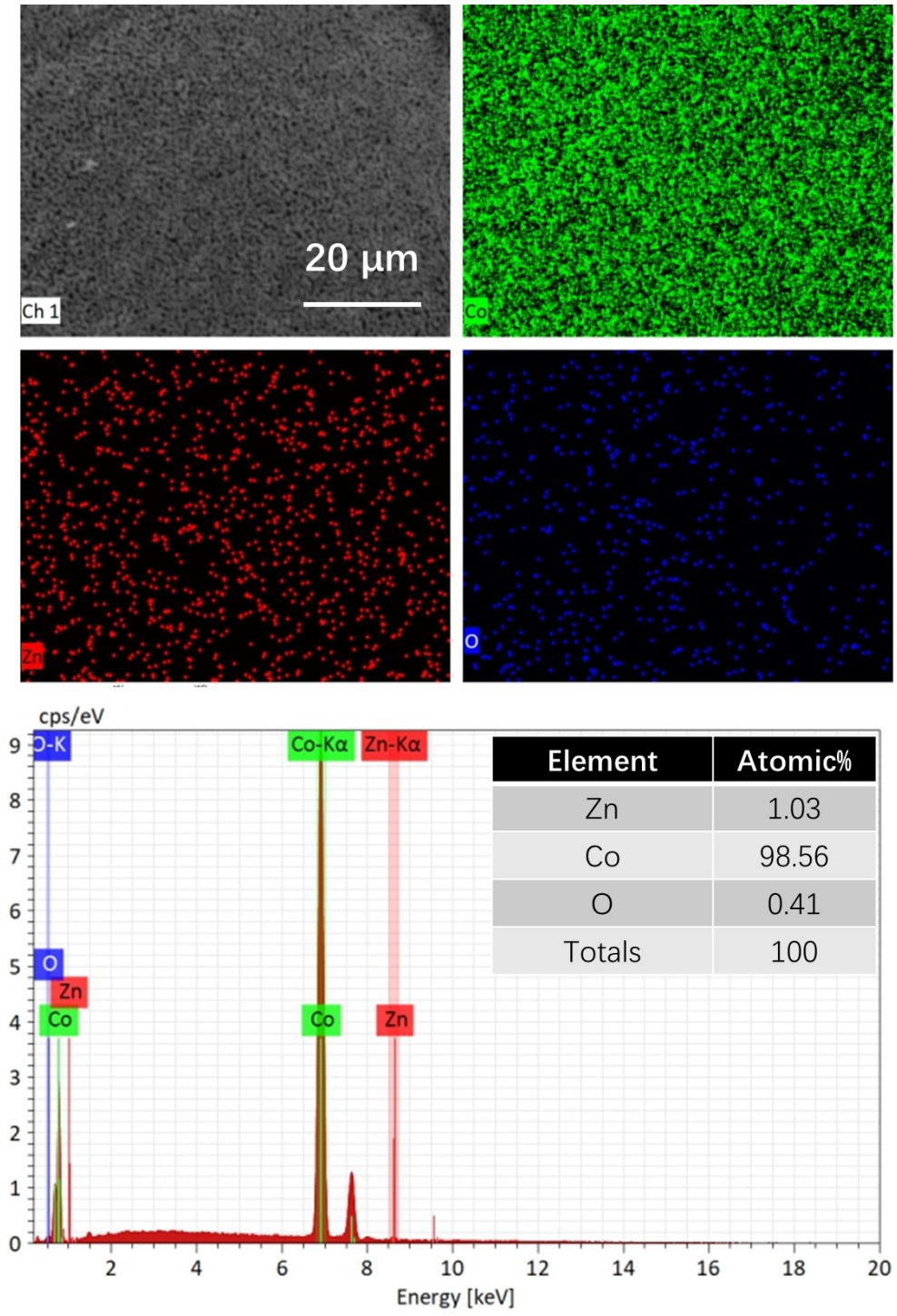


Fig. S8. The ligament size distribution of nanoporous Co for BET.



Element	Atomic%
Zn	1.03
Co	98.56
O	0.41
Totals	100

Fig. S9. The EDX results of the nanoporous Co for BET.

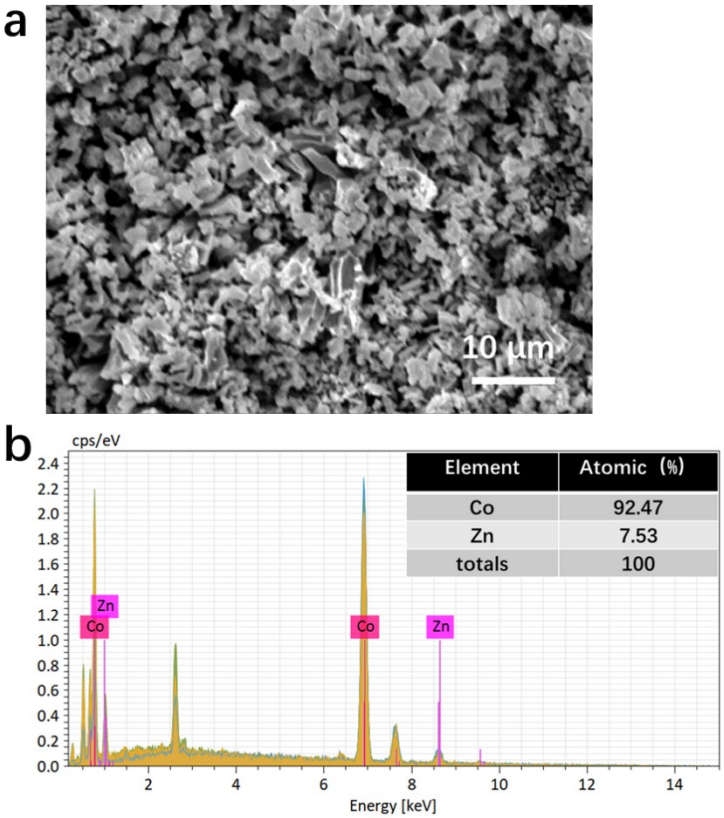


Fig. S10. (a) The SEM image and (b) the EDX result of the nanoporous Co fabricated by VPA at 550 °C for 4 h and chemical dealloying in 2 mol L^{-1} NaOH.

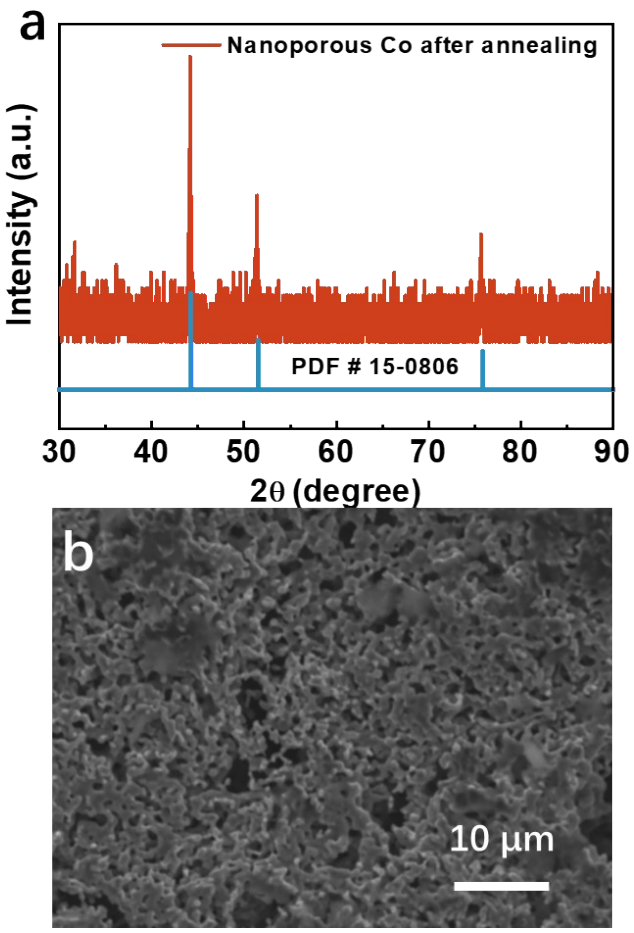


Fig. S11. (a) The XRD result and (b) SEM image of nanoporous Co (fabricated by VPA at 550 °C for 9 h and VPD at 650 °C for 1 h) after annealing at 350 °C for 24 h.

References

1 H. Cömert, J. N. Pratt, *Thermochim. Acta*, 1982, **59**, 267-285.