## CuCo<sub>2</sub>O<sub>4</sub> nanoneedle array with high stability for high performance asymmetric supercapacitors

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Fig. S1. SEM images of (a)  $CuCo_2O_4$ -3, (b)  $CuCo_2O_4$ -6, (c)  $CuCo_2O_4$ -9, (d)  $CuCo_2O_4$ -15.



Fig. S2. CV curves of (a)  $CuCo_2O_4$ -3, (b)  $CuCo_2O_4$ -6, (b)  $CuCo_2O_4$ -9, (c)  $CuCo_2O_4$ -15 electrodes at various scan rates.