Fig. S1 The schematic diagram of the device for the liquid flow plating method and the way to deposit a dense nickel layer on the surface and sidewall of Si-MCP. Under the action of gravity and water pump, the deposition fluid flows continuously through the surface and interior of the Si-MCP that obtain the OMEP with a dense and uniform nickel layer.
Fig. S2 (a) The nickel layer fabricated through the traditional electroless plating method; (b) The nickel layer fabricated through the liquid flow plating method.
Fig. S3 (a) Front view of OMEP; (b) Sectional view of OMEP; (c) Samples based on OMEP after the electrochemistry tests (from left to right: CoMoO$_4$@Co$_3$O$_4$/OMEP, Co$_3$O$_4$/OMEP, and CoMoO$_4$/OMEP).
Fig. S4 EDS spectrum of the CoMoO₄@Co₃O₄/OMEP electrode.
Fig. S5 (a) CV curves of CoMoO$_4$/OMEP at different scanning rate; (b) First discharge curves of CoMoO$_4$/OMEP at different current density; (c) CV curves of Co$_3$O$_4$/OMEP at different scanning rates; (d) First discharge curves of Co$_3$O$_4$/OMEP at different current densities.
Fig. S6 (a) Variation of the interfacial capacitances of the CoMoO$_4$@Co$_3$O$_4$/OMEP, CoMoO$_4$/OMEP, Co$_3$O$_4$/OMEP electrodes at different scanning rates; (b) Variation of the interfacial capacitances of the CoMoO$_4$@Co$_3$O$_4$/OMEP, CoMoO$_4$/OMEP, Co$_3$O$_4$/OMEP electrodes at different current densities.
Fig. S7 (a) CV curves of the composite CoMoO₄@Co₃O₄/OMEP (0 to 0.45 V) and AC (-1.1 to 0 V) at a scanning rate of 40 mV s⁻¹; (b) Specific capacitance values of the CoMoO₄@Co₃O₄/OMEP/AC asymmetrical supercapacitor as a function of current density.