Nickel Cobalt Phosphate/Phosphide as Promising Electrode Materials for Extrinsic Supercapacitors

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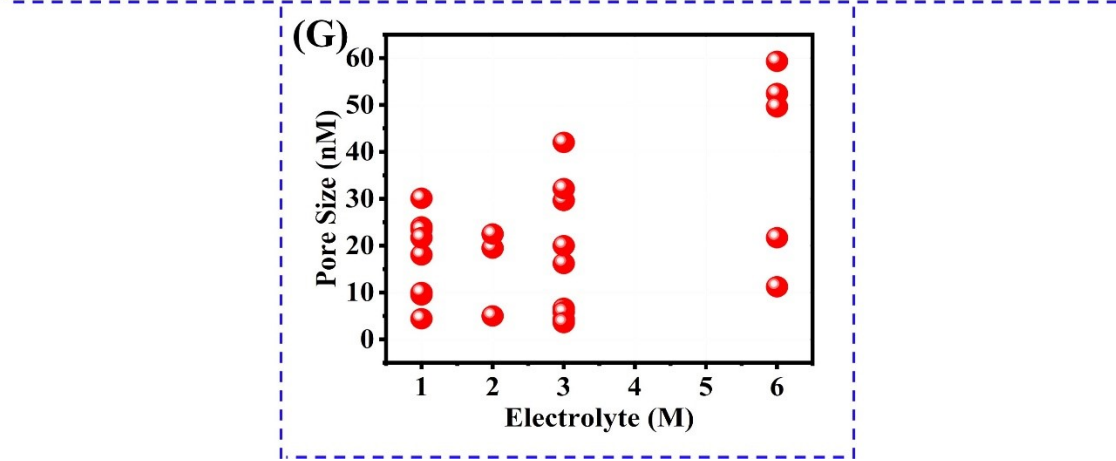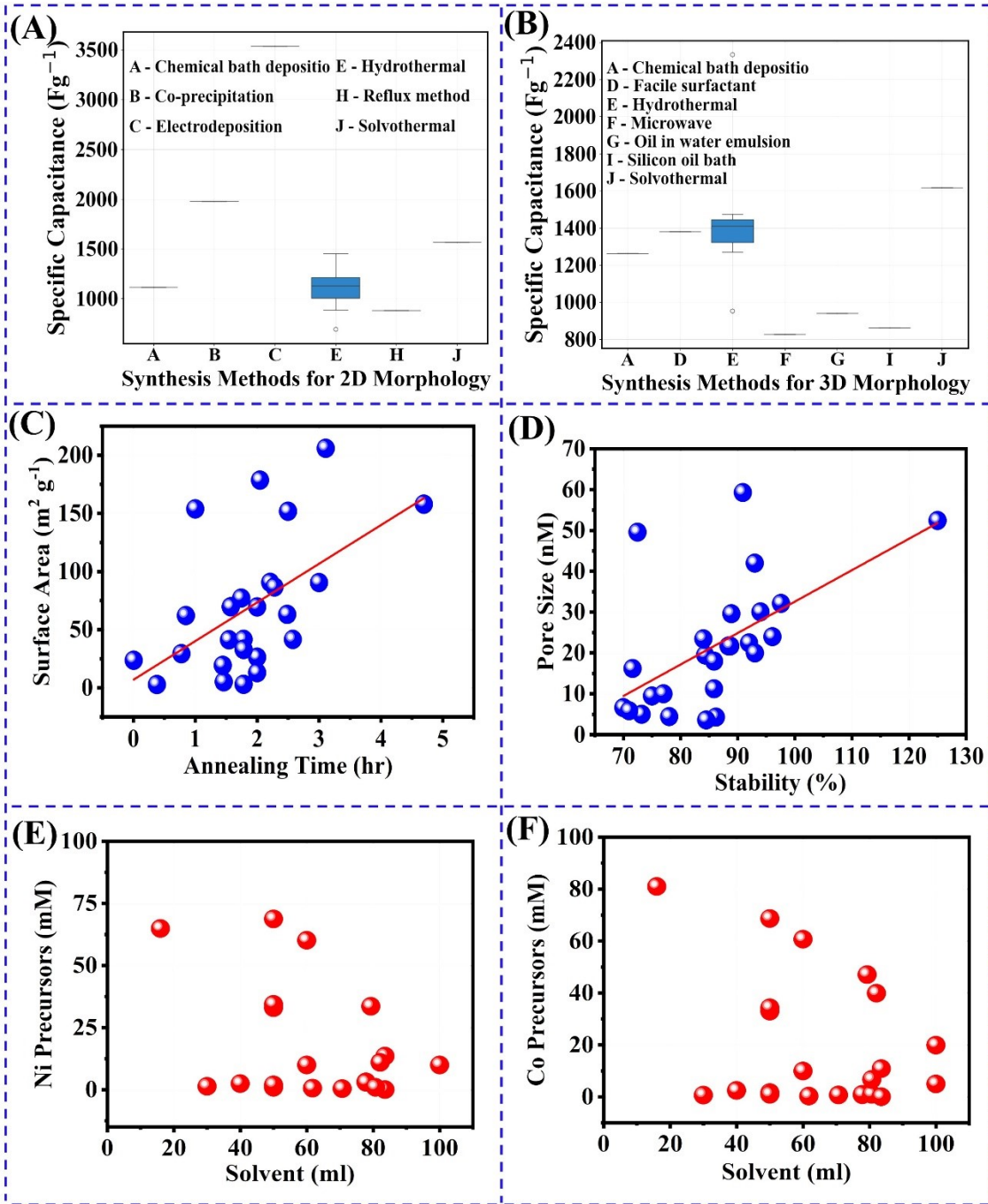
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Figure:

(A) Specific Capacitance (Fg⁻¹) vs Synthesis Methods for 2D Morphology

A - Chemical bath depositio   E - Hydrothermal
B - Co-precipitation   H - Reflux method
C - Electrodeposition   J - Solvothermal

(B) Specific Capacitance (Fg⁻¹) vs Synthesis Methods for 3D Morphology

A - Chemical bath depositio
D - Facile surfactant
E - Hydrothermal
F - Microwave
G - Oil in water emulsion
I - Silicon oil bath
J - Solvothermal

(C) Surface Area (m² g⁻¹) vs Annealing Time (hr)

(D) Pore Size (nM) vs Stability (%)

(E) Ni Precursors (mM) vs Solvent (ml)

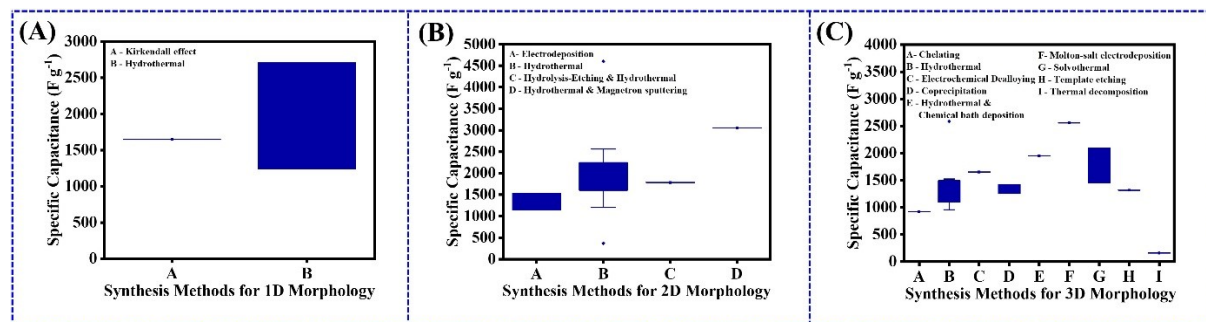**(F)** Co Precursors (mM) vs Solvent (ml)

(G) Pore Size (nM) vs Electrolyte (M)

Fig. S1 Machine learning analysis of Supercapacitor behavior of nickel cobalt phosphate material: (A) Box plot of specific capacitance versus synthesis method for 2D materials, **(B)** Box plot of specific capacitance versus synthesis method for 3D materials, Scattered plot of **(C)** surface area versus annealing time, **(D)** pore size versus stability, **(E)** Ni precursors versus solvent, **(F)** Co precursors versus solvent, **(G)** Pore size versus electrolyte.
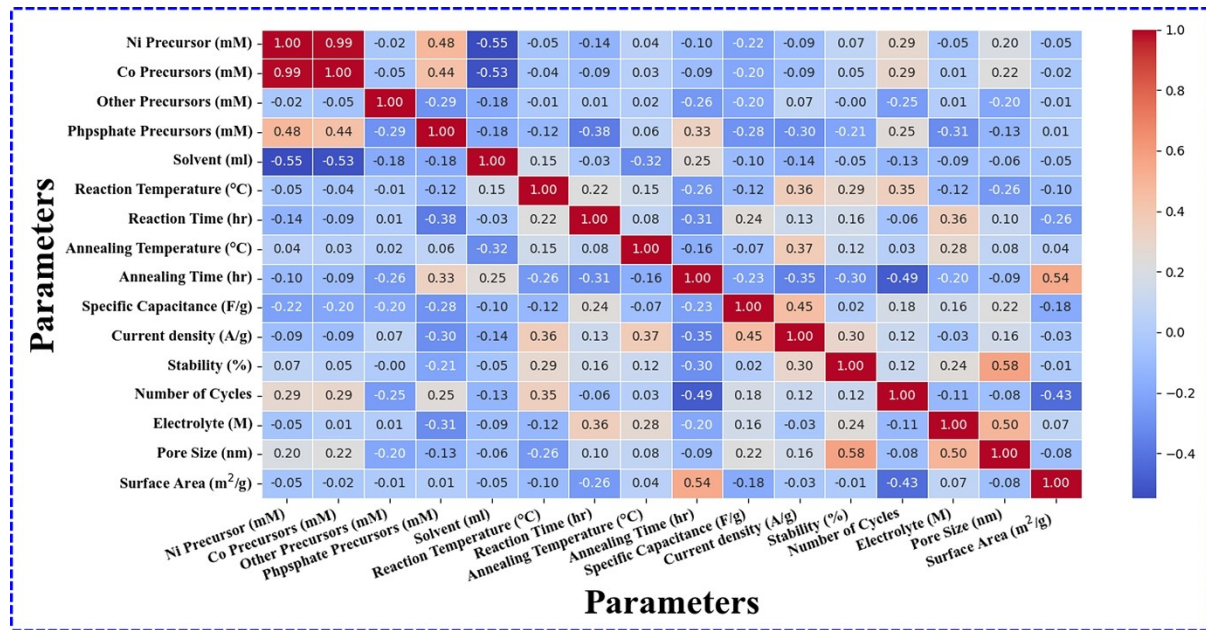
Fig. S2 Heatmap of correlation coefficients for features.

Fig. S3 Machine learning analysis of Supercapacitor behavior of nickel cobalt phosphide material: (A) Box plot of specific capacitance versus synthesis method for 1D materials, **(B)** Box plot of specific capacitance versus synthesis method for 2D materials, **(C)** Box plot of specific capacitance versus synthesis method for 3D materials.