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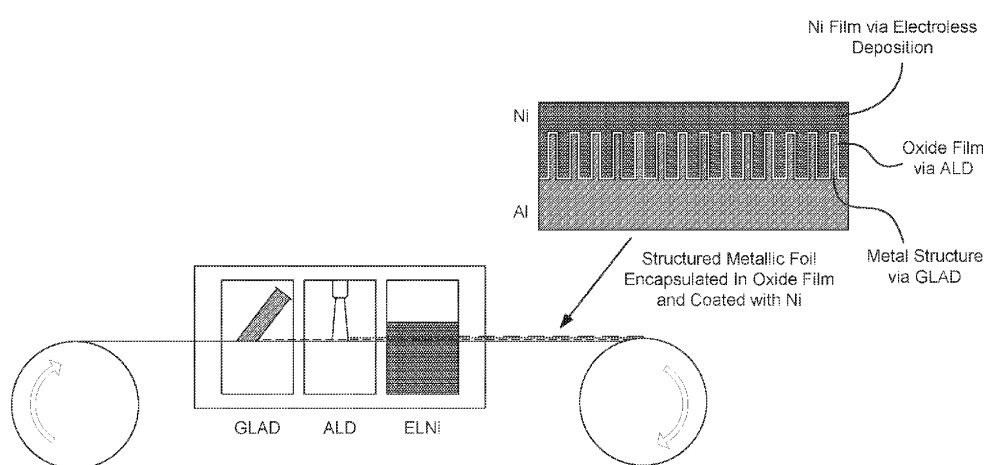


FIG. 1

(57) **Abstract:** Disclosed is a metal foil capacitor, preferably an aluminum capacitor, comprising a modified metal foil comprising a base metal, preferably an aluminum foil. The modified metal foil capacitor may satisfy at least two of the following conditions: (a) the modified metal foil has a surface area of at least 10 times greater than an unmodified metal foil; (b) the modified metal foil has a dielectric constant (k) of at least 5; (c) the modified metal foil has a thickness of at least 1 micron; and/or (d) the modified metal foil comprises at least one metal in addition to the base metal, wherein the at least one metal is present in an amount of at least 0.01 wt.% based on the total weight of the modified metal foil. Methods for preparing the metal foil capacitor are also disclosed.

[Continued on next page]

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