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[Continued on next page]

(54) Title: PERFORMANCE ENHANCED HEAT SPREADER

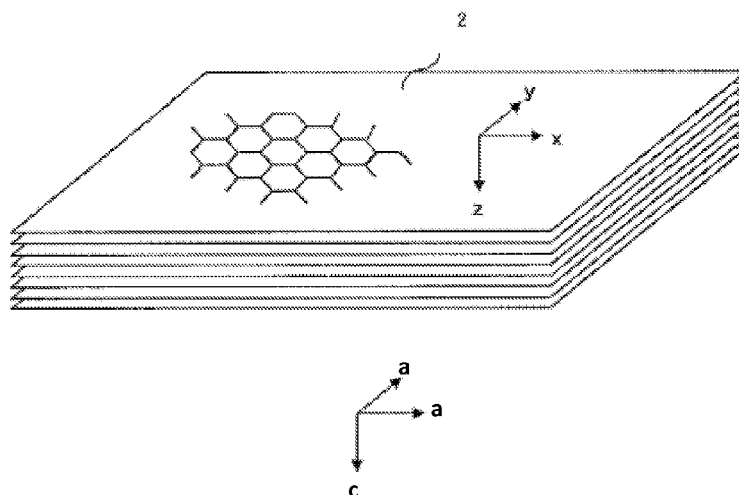


FIG. 1

(57) Abstract: Embodiments of the present invention include methods of disposing a metallic coating layer comprising a metal in an amorphous and/or fine grain microstructure over at least a portion of a surface of a pyrolytic graphite substrate, the metal comprising Nickel, Iron, a Nickel-Iron Alloy, or any combination thereof, and the grains of the metal being of 1 nm to 10000 nm in size. Embodiments of the invention also encompass the coated pyrolytic graphite articles. The coated substrate exhibits a thermal conductivity not less than the uncoated substrate.



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