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(54) Title: APPARATUSES, METHODS, AND SYSTEMS FOR FABRICATING GRAPHENE MEMBRANES

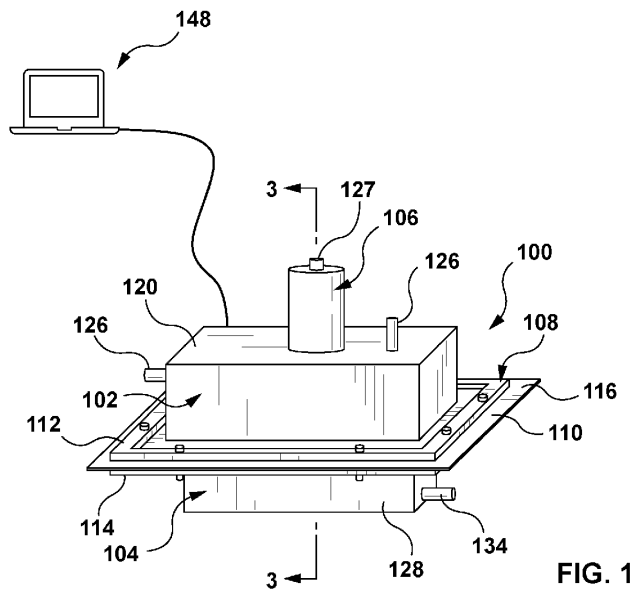


FIG. 1

(57) Abstract: An apparatus for fabricating a graphene membrane includes a first section having a first fluid chamber for housing a suspension of graphene platelets in a fluid. A second section is positionable adjacent the first section. The second section has a second fluid chamber and a porous support housed in the second fluid chamber for supporting a porous substrate. When the first section is positioned adjacent to the second section and the porous substrate is supported by the porous support, the first fluid chamber and the second fluid chamber are in fluid communication via the porous substrate. The apparatus further includes a pressurizer for creating a pressure differential between the first fluid chamber and the second fluid chamber and thereby forcing the fluid through the porous substrate and into the second fluid chamber and lodging the graphene platelets in the pores of the porous substrate.

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