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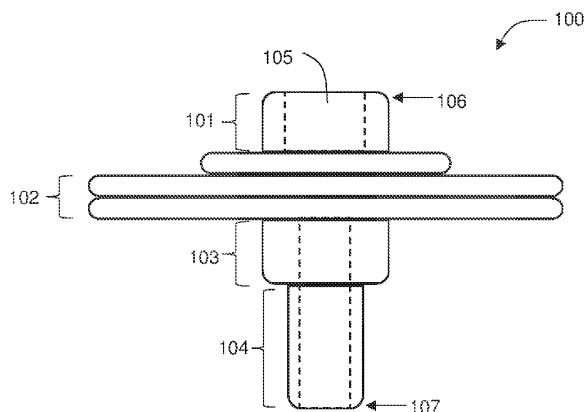


FIG. 1A

(57) Abstract: The present application discloses a novel DNA origami structure and a nanopore construct associated with the DNA origami structure. The DNA origami structure includes a first hydrophilic section at a first end of the DNA origami structure, a stopper section adjacent the first hydrophilic section, a second hydrophilic section at a second end of the DNA origami structure, a hydrophobic section between the stopper section and the second hydrophilic section, and an open cavity running through the DNA origami structure from the first end to the second end. The stopper section is configured to lay against the membrane when the DNA origami structure is inserted through the membrane.

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