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Winarski

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(54) **GRAPHENE OPTIC FIBER LASER**

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CPC ***C23C 16/44*** (2013.01); ***C23C 16/26*** (2013.01); ***G02B 6/02395*** (2013.01); ***H01S 3/06716*** (2013.01); ***H01S 3/06733*** (2013.01); *G02B 6/02042* (2013.01); *H01S 3/094007* (2013.01); *H01S 3/1608* (2013.01)

(58) **Field of Classification Search**

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See application file for complete search history.

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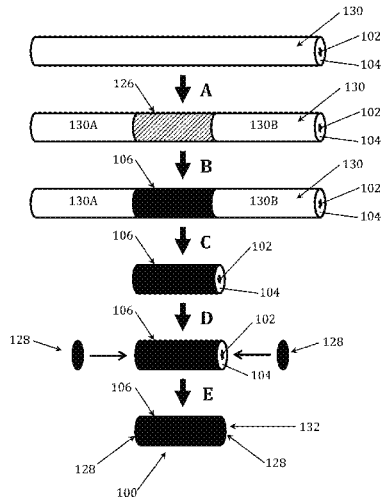
(57) **ABSTRACT**

A graphene coated optic-fiber laser is disclosed that includes a doped inner core and an undoped outer core surrounding the doped inner core. A graphene cylinder or capsule surrounds the undoped outer core, thereby forming a cladding layer around the undoped outer core.

19 Claims, 13 Drawing Sheets