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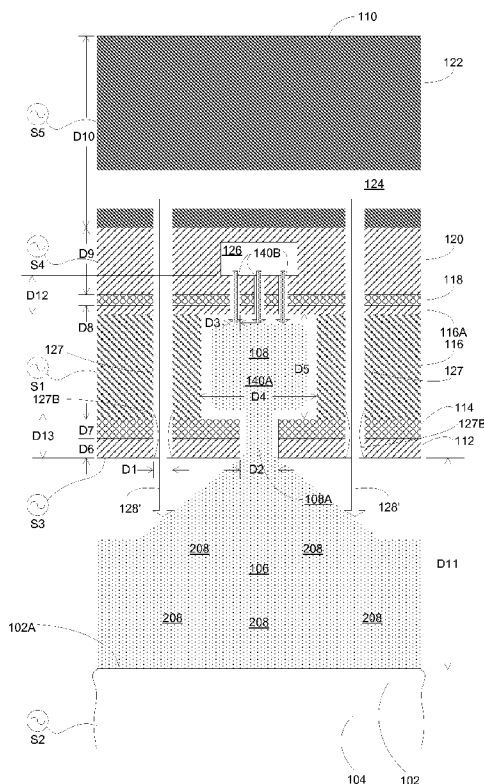


Fig. 2

(57) Abstract: A method of etching a semiconductor wafer including injecting a source gas mixture into a process chamber including injecting the source gas mixture into a multiple hollow cathode cavities in a top electrode of the process chamber and generating a plasma in each one of the hollow cathode cavities. Generating the plasma in the hollow cathode cavities includes applying a first biasing signal to the hollow cathode cavities. The generated plasma or activated species is output from corresponding outlets of each of the hollow cathode cavities into a wafer processing region in the process chamber. The wafer processing region is located between the outlets of the hollow cathode cavities and a surface to be etched. An etchant gas mixture is injected into the wafer processing region. A plasma can also be supported and/or generated in the wafer processing region.



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