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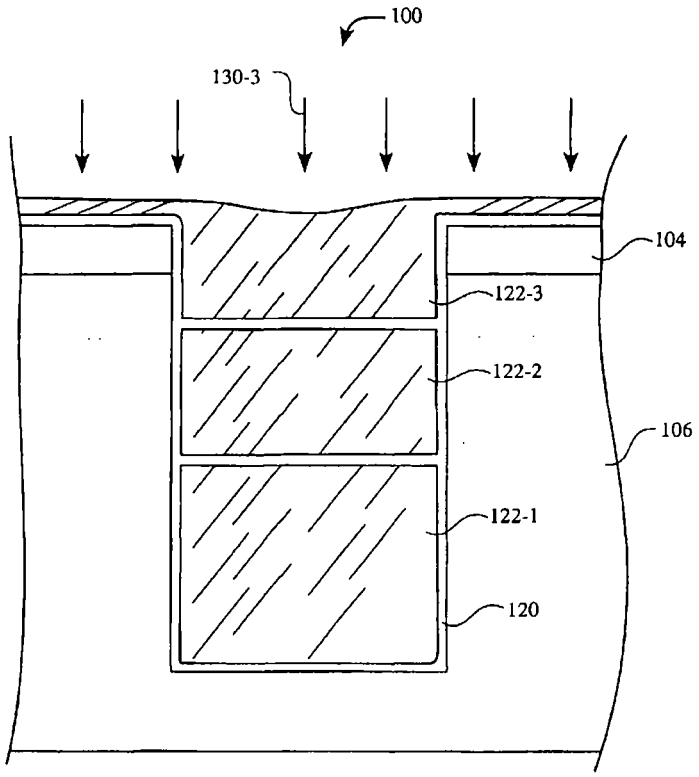
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(54) Title: METHOD FOR PLANARIZATION ETCH WITH *IN-SITU* MONITORING BY INTERFEROMETRY PRIOR TO RECESS ETCH



(57) Abstract: A method for processing recess etch operations in substrates is provided including forming a hard mask over the substrate and etching a trench in the substrate using the hard mask, and forming a dielectric layer over the hard mask and in the trench, where the dielectric layer lines the trench. A conductive material is then applied over the dielectric layer so that a blanket of the conductive material lies over the hard mask and fills the trench, and the conductive material is etched to substantially planarize the conductive material. The etching of the conductive material triggers an endpoint just before all of the conductive material is removed from over the dielectric layer that overlies the hard mask. The conductive material is recess etched to remove the conductive material over the dielectric layer that overlies the hard mask and removes at least part of the conductive material from within the trench.

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