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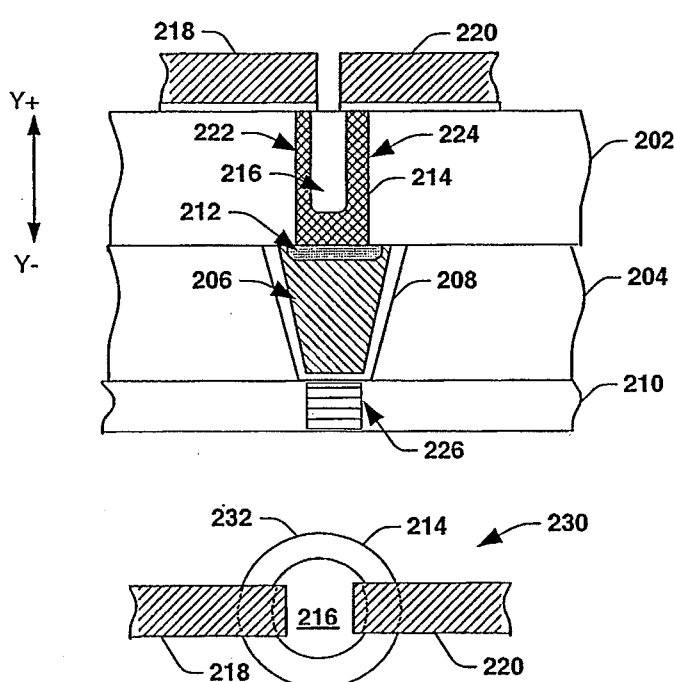
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(54) Title: MOCVD FORMATION OF Cu_2S



(57) Abstract: A system and methodology are disclosed for forming a passive layer (30, 106, 212) on a conductive layer (110, 402, 602, 808). The formation can be done during fabrication of an organic memory cell, where the passive layer (30, 106, 212) generally includes a conductivity facilitating compound (106, 406, 614, 1212), such as copper sulfide (Cu_2S). The conductivity facilitating compound (106, 406, 614, 1212) is deposited onto the conductive layer (110, 402, 602, 808) via plasma enhanced chemical vapor deposition (PECVD) (200, 800, 1200) utilizing a metal organic (MO) precursor (408, 616). The precursor (408, 616) facilitates depositing the conductivity facilitating compound (106, 406, 614, 1212) in the absence of toxic hydrogen sulfide (H_2S), and at a relatively low temperature and pressure (e.g., between about 400 to 600 K and 0.05 to 0.5 Pa., respectively). The deposition process

can be monitored and controlled to facilitate, among other things, depositing the conductivity facilitating compound to a desired thickness.



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.