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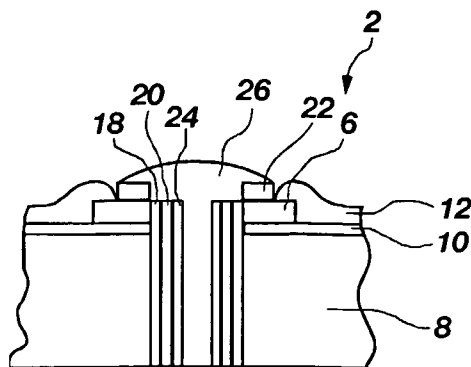
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(54) Title: SELECTIVE NICKEL PLATING OF ALUMINIUM, COPPER AND TUNGSTEN STRUCTURES



(57) Abstract: A method of selectively plating nickel on an intermediate semiconductor device structure. The method comprises providing an intermediate semiconductor device structure having at least one aluminum or copper structure and at least one tungsten structure. One of the aluminum or copper structure and the tungsten structure is nickel plated while the other remains unplated. The aluminum or copper structure or the tungsten structure may first be activated toward nickel plating. The activated aluminum or copper structure or the activated tungsten structure may then be nickel plated by immersing the intermediate semiconductor device structure in an electroless nickel plating solution. The unplated aluminum or copper structure or the unplated tungsten structure may subsequently be nickel plated by activating the unplated structure and nickel plating the activated structure. A method of simultaneously plating the aluminum or copper structure and the tungsten structure with nickel is also disclosed, as is an intermediate semiconductor device structure.

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