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(54) Title: METHODS AND APPARATUS FOR ELECTRICAL, MECHANICAL AND/OR CHEMICAL REMOVAL OF CONDUCTIVE MATERIAL FROM A MICROELECTRONIC SUBSTRATE

(57) Abstract: A method and apparatus for removing conductive material from a microelectronic substrate. In one embodiment, the method can include engaging a microelectronic substrate with a polishing surface of a polishing pad,electrically coupling a conductive material of the microelectronic substrate to a source of electrical potential,and oxidizing at least a portion of the conductive material by passing an electrical current through the conductive material from the source of electrical potential. For example, the method can include positioning first and second electrodes apart from a face surface of the microelectronic substrate, disposing an electrolytic fluid between the face surface and the electrodes with the electrodes in fluid communication with the electrolytic fluid, and movingat least one of the microelectronic and the polishing pad relative to the other.