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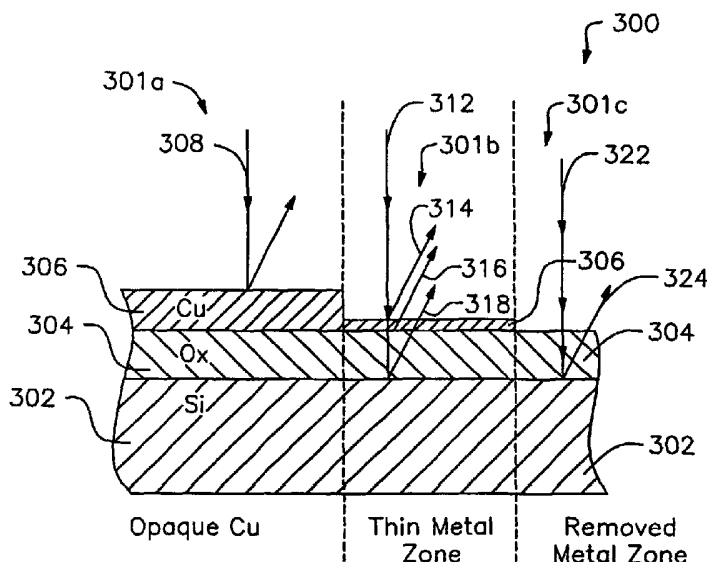
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(54) Title: SYSTEM AND METHOD OF BROAD BAND OPTICAL END POINT DETECTION FOR FILM CHANGE INDICATION



(57) Abstract: A system and method for detecting an endpoint during a chemical mechanical polishing process is disclosed that includes illuminating a first portion of a surface of a wafer (300) with a first broad beam of light (132). A first reflected spectrum data is received. The first reflected spectrum of data (308) corresponds to a first spectra of light reflected from the first illuminated portion of the surface of the wafer. The second reflected spectrum of data corresponds to a second spectra of light reflected from the second illuminated portion of the surface of the wafer. Endpoint is determined based on a difference between the normalized first spectrum data and the normalized second spectrum data.



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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.

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER IPC(7) : H01L 21/306; B24B 49/12; G01B 11/28 US CL : 356/630; 156/345,12,345.15-345.16,345.25;451/6 According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) U.S. : 356/630; 156/345,12,345.15-345.16,345.25;451/6 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Please See Continuation Sheet		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,106,662 A (BIBBY, JR. et al.) 22 August 2000, (22-08-2000), see entire document.	1-5, 7 and 10
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Y		11-12, 14-16, and 20
Y	US 6,077,452 A (LITVAK) 20 June 2000 (20-06-2000), see entire document.	1-20
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
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"O"	document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P"	document published prior to the international filing date but later than the priority date claimed	
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INTERNATIONAL SEARCH REPORT

Continuation of B. FIELDS SEARCHED Item 3:
EAST
search terms: endpoint, spectrum, thickness