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(54) Title: ELECTROLYTIC COPPER PLATING SOLUTIONS

(57) Abstract: Disclosed are copper electroplating solutions, methods for using the solutions and products formed by using such methods and solutions in which the solutions contain copper alkanesulfonate salts and free alkanesulfonic acids, wherein the free acid has a concentration from about 0.05 to about 2.50 M, and which are intended for the metallization of micron-sized dimensioned trenches or vias, through-holes and microvias.



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**INTERNATIONAL SEARCH REPORT**

International application No.

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<b>A. CLASSIFICATION OF SUBJECT MATTER</b>		
IPC(7) : C25D 3/38; C23C 16/00 US CL : 205/296; 106/1.26		
According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b>		
Minimum documentation searched (classification system followed by classification symbols) U.S. : 205/296; 106/1.26		
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		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2,525,943 A (PROELL) 17 October 1950 (17.10.1950), col. 3, lines 13-46.	1-27
Y	DE 43 38 148 A1 (ATOTECH DEUTSCHLAND GMBH) 11 May 1995 (11.05.95), abstracts.	1-27
Y	JP 10-310881 A (TOPPAN PRINTING CO. LTD.) 24 November 1998 (24.11.98), abstracts.	1-27
X, E	US 6,605,204 B1 (MARTYAK et al.) 12 August 2003 (12.08.2003), cols. 11-14, claims 1-14.	1-27
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
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"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O"	document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
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**Continuation of B. FIELDS SEARCHED Item 3:**

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