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(54) Title: METAL COATING OF OBJECTS USING A PLASMA POLYMERISATION PRETREATMENT

(57) Abstract: A method for applying a metal on a substrate comprises: a) applying a coating by treatment in a plasma, comprising a compound selected from alkanes up to 10 carbon atoms, and unsaturated monomers, and b) producing polymers on the surface of said substrate, said polymers comprising carboxylic groups and adsorbed ions of a second metal, reducing said ions to the second metal, or alternatively b2) producing polymers on the surface, bringing the surface of said substrate in contact with a dispersion of colloidal metal particles of at least one second metal, and c) depositing said first metal on said second metal. Advantages include that materials sensitive to for instance low pH or solvents can be coated. Substrates including glass, SiO₂ with very few of no abstractable hydrogen atoms as well as polymer materials containing halogen atoms can be coated with good adhesion.



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A. CLASSIFICATION OF SUBJECT MATTER INV. C23C18/16 C23C18/18 C23C18/20 H05K3/18 ADD.		
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B. FIELDS SEARCHED		
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
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C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 2007/116057 A2 (LINEA TERGI LTD [CY]; HULT ANDERS [SE]; LARSSON KARL-GUNNAR [SE]) 18 October 2007 (2007-10-18) cited in the application the whole document -----	1-36
Y	US 6 106 904 A (STROTMANN MARKUS [DE] ET AL) 22 August 2000 (2000-08-22) column 1, line 22 - column 2, line 58 column 3, line 6 - line 29 -----	1-36
Y	DE 102 48 085 A1 (FRAUNHOFER GES FORSCHUNG [DE]) 6 May 2004 (2004-05-06) paragraph [0017] - paragraph [0028] ----- -/--	1-36
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
* Special categories of cited documents :		
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention	
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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5 962 138 A (KOLLURI OMPRAKASH S [US] ET AL) 5 October 1999 (1999-10-05) column 4, line 50 - column 5, line 33 column 9, line 43 - column 10, line 26 table 1	6-10
Y	----- US 2009/155553 A1 (NAGASAKI HIDEO [JP]) 18 June 2009 (2009-06-18) paragraph [0009] - paragraph [0017] paragraph [0270] - paragraph [0284] -----	11,12,14

INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2007116057	A2	18-10-2007	AT 434082 T 15-07-2009
			DK 2004908 T3 19-10-2009
			EP 2004908 A2 24-12-2008
			ES 2328749 T3 17-11-2009
			HK 1122076 A1 31-12-2009
			JP 2009533858 A 17-09-2009
			US 2009205853 A1 20-08-2009
			WO 2007116057 A2 18-10-2007

US 6106904	A	22-08-2000	DE 19815182 A1 14-10-1999
			EP 0949013 A2 13-10-1999
			ES 2243021 T3 16-11-2005
			US 6106904 A 22-08-2000

DE 10248085	A1	06-05-2004	AU 2003298086 A1 04-05-2004
			DE 10248085 A1 06-05-2004
			WO 2004035857 A2 29-04-2004

US 5962138	A	05-10-1999	CA 2213328 A1 26-06-1997
			EP 0809659 A1 03-12-1997
			JP 2001511192 A 07-08-2001
			US 5723219 A 03-03-1998
			US 5962138 A 05-10-1999
			US 6277449 B1 21-08-2001
			WO 9722631 A1 26-06-1997

US 2009155553	A1	18-06-2009	JP 2009164575 A 23-07-2009
			US 2009155553 A1 18-06-2009
