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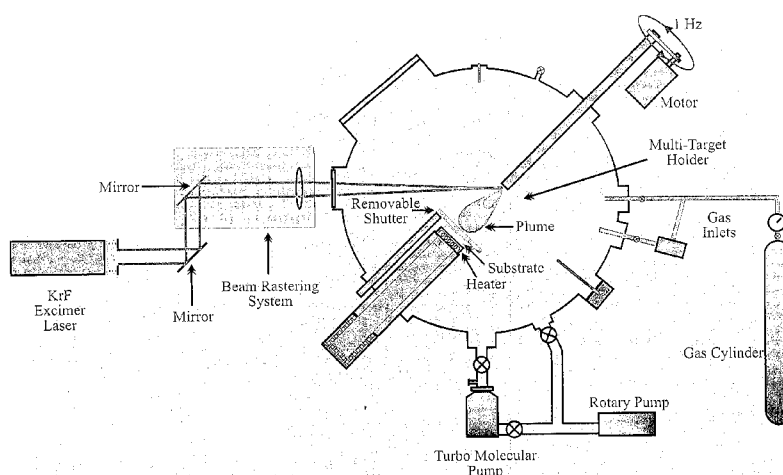


Fig. 1

(57) Abstract: The invention provides a transparent conducting film which comprises a compound of formula (I): $Zn_{1-x}[M]_xO_{1-y}[X]_y$ (I) wherein: x is greater than 0 and less than or equal to 0.25; y is from 0 to 0.1; [X] is at least one dopant element which is a halgen; and [M] is: (a) a dopant element which is selected from: a group 14 element other than carbon; a lanthanide element which has an oxidation state of +4; and a transition metal which has an oxidation state of +4 and which is other than Ti or Zr; or (b) a combination of two or more different dopant elements, at least one of which is selected from: a group 14 element other than carbon; a lanthanide element which has an oxidation state of +4; and a transition metal which has an oxidation state of +4 and which is other than Ti or Zr. The invention further provides coatings comprising the films of the invention, processes for producing such films and coatings, and various uses of the films and coatings.



INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
INV. C23C14/08

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHEDMinimum documentation searched (classification system followed by classification symbols)
C23C

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 practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	N. AWASTHI, P. BHATTACHARYA, R.S. KATIYAR: "optical properties of transition metal (mn, fe and v) doped zinc oxide ceramics and thin films" MAT. RES. SOC. SYMP. PROC., vol. 825, 2004, pages G2.7.1-G2.7.6, XP002559691 page G2.7.1 - page G2.7.2; figure 3 -----	1,3,5,7, 10, 13-16, 24,25
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X	US 2007/116986 A1 (GARG DIWAKAR [US] ET AL) 24 May 2007 (2007-05-24) paragraphs [0013], [0014], [0026], [0018], [0028] - [0046] ----- -/--	1,3,6, 8-10,25

 Further documents are listed in the continuation of Box C. See patent family annex.

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
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X	H. SATO, T. MINAMI, S. TAKATA: "Highly Transparent and conductive group IV impurity-doped ZnO thin films prepared by radio frequency magnetron sputtering" J. VA. SCI. TECHNOL., vol. 11, no. 6, November 1993 (1993-11), pages 2975-2979, XP002560009 abstract figure 2	1,3,4, 7-10, 25-29
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International application No
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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	EP 1 850 401 A (ROHM CO LTD [JP]) 31 October 2007 (2007-10-31) paragraphs [0025], [0026]; figure 1 -----	23

INTERNATIONAL SEARCH REPORT

Information on patent family members

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