

Title (en)

PHYSICAL VAPOR DEPOSITION OF TITANIUM NITRIDE ON A NONCONDUCTIVE SUBSTRATE

Publication

**EP 0518879 A4 19930901 (EN)**

Application

**EP 91903996 A 19910122**

Priority

US 49085690 A 19900309

Abstract (en)

[origin: WO9114017A1] A process for physical vapor deposition of a refractory coating such as titanium nitride on a nonconductive substrate such as a ceramic substrate and the coated substrate produced thereby. The nonconductive substrate is coated by cleaning the nonconductive substrate surfaces and then depositing a first layer of a refractory metal such as titanium metal on the nonconductive substrate by physical vapor deposition. A second layer of a refractory compound such as titanium nitride is then deposited on the first layer by physical vapor deposition to produce a coated nonconductive substrate having enhanced coating adhesion.

IPC 1-7

**C23C 28/04**; **C23C 16/02**; **C23C 16/30**; **C04B 35/84**; **C04B 35/80**; **C04B 35/58**; **B32B 15/04**

IPC 8 full level

**C04B 35/80** (2006.01); **C04B 41/52** (2006.01); **C04B 41/53** (2006.01); **C04B 41/89** (2006.01); **C04B 41/91** (2006.01); **C23C 14/02** (2006.01); **C23C 14/06** (2006.01); **C23C 14/18** (2006.01)

CPC (source: EP)

**C04B 35/117** (2013.01); **C04B 35/119** (2013.01); **C04B 35/80** (2013.01); **C04B 41/009** (2013.01); **C04B 41/52** (2013.01); **C04B 41/5346** (2013.01); **C04B 41/89** (2013.01); **C04B 41/91** (2013.01); **C23C 14/022** (2013.01); **C23C 14/025** (2013.01); **C23C 14/0641** (2013.01); **C23C 14/18** (2013.01); **C04B 2235/3206** (2013.01); **C04B 2235/3839** (2013.01); **C04B 2235/5244** (2013.01); **C04B 2235/5276** (2013.01)

C-Set (source: EP)

1. **C04B 41/5346 + C04B 41/0072 + C04B 41/4515 + C04B 41/4517**
2. **C04B 41/52 + C04B 41/4529 + C04B 41/5133 + C04B 41/5346**
3. **C04B 41/52 + C04B 41/4529 + C04B 41/5068**
4. **C04B 41/009 + C04B 35/10**
5. **C04B 41/009 + C04B 35/803**
6. **C04B 41/009 + C04B 35/80**
7. **C04B 41/009 + C04B 35/58042**

Citation (search report)

- [X] US 4461799 A 19840724 - GAVRILOV ALEXEI G [SU], et al
- [X] PATENT ABSTRACTS OF JAPAN vol. 10, no. 74 (P-439)(2131) 25 March 1986 & JP-A-60 212 847 ( MATSUSHITA DENKI SANGYO KK ) 25 October 1985
- [X] PATENT ABSTRACTS OF JAPAN vol. 10, no. 90 (C-337)(2147) 8 April 1986 & JP-A-60 221 565 ( MATSUSHITA DENKI SANGYO KK ) 6 November 1985
- See references of WO 9114017A1

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

**WO 9114017 A1 19910919**; AU 648781 B2 19940505; AU 7327891 A 19911010; CA 2077757 A1 19910910; EP 0518879 A1 19921223; EP 0518879 A4 19930901; JP 2704317 B2 19980126; JP H05506062 A 19930902

DOCDB simple family (application)

**US 9100382 W 19910122**; AU 7327891 A 19910122; CA 2077757 A 19910122; EP 91903996 A 19910122; JP 50412091 A 19910122