

Title (en)

BOND LAYERS FOR CERAMIC OR CERAMIC MATRIX COMPOSITE SUBSTRATES

Title (de)

BINDUNGSSCHICHTEN FÜR KERAMISCHE ODER KERAMIKMATRIXVERBUNDSSUBSTRATE

Title (fr)

COUCHES DE LIAISON POUR DES SUBSTRATS CÉRAMIQUES OU EN COMPOSITE À MATRICE CÉRAMIQUE

Publication

EP 2688858 A1 20140129 (EN)

Application

EP 12714117 A 20120322

Priority

- US 201161466556 P 20110323
- US 2012030174 W 20120322

Abstract (en)

[origin: WO2012129431A1] A bond layer may include a composition that may be stable at temperatures above about 1410° C. An article may include a substrate, a bond layer formed on the substrate, and an overlayer formed over the bond layer. In some examples, the bond layer may include a substantially homogeneous mixture of Si and at least one of SiO₂, Al₂O₃, ZrO₂, a rare earth oxide, ZrSiO₄, TiO₂, Ta₂O₅, B₂O₃, an alkali metal oxide, or an alkali earth metal oxide. In other examples, the bond layer may include Si, an alkali metal oxide, and at least one of SiO₂, Al₂O₃, ZrO₂, HfO₂, a rare earth oxide, ZrSiO₄, HfSiO₄, TiO₂, Ta₂O₅, B₂O₃, or an alkali earth metal oxide. In other examples, the bond layer may include B₂O₃.

IPC 8 full level

C04B 41/89 (2006.01); **F01D 5/28** (2006.01)

CPC (source: EP US)

C04B 41/009 (2013.01 - EP US); **C04B 41/52** (2013.01 - EP US); **C04B 41/89** (2013.01 - EP US); **C23C 28/04** (2013.01 - EP US); **F01D 25/005** (2013.01 - US)

C-Set (source: EP US)

EP

1. **C04B 41/009 + C04B 35/565 + C04B 35/806**
2. **C04B 41/009 + C04B 35/584 + C04B 35/806**
3. **C04B 41/52 + C04B 41/5027 + C04B 41/5096**
4. **C04B 41/52 + C04B 41/5006 + C04B 41/5096 + C04B 41/522**
5. **C04B 41/52 + C04B 41/4529 + C04B 41/5035 + C04B 41/5042 + C04B 41/5045 + C04B 41/5096 + C04B 41/522**
6. **C04B 41/52 + C04B 41/502 + C04B 41/5042**
7. **C04B 41/52 + C04B 41/5024 + C04B 41/522**
8. **C04B 41/52 + C04B 41/5024 + C04B 41/5096 + C04B 41/522**
9. **C04B 41/52 + C04B 41/5031 + C04B 41/5035 + C04B 41/5045 + C04B 41/522**

US

1. **C04B 41/52 + C04B 41/5027 + C04B 41/5096**
2. **C04B 41/52 + C04B 41/5006 + C04B 41/5096 + C04B 41/522**
3. **C04B 41/52 + C04B 41/4529 + C04B 41/5035 + C04B 41/5042 + C04B 41/5045 + C04B 41/5096 + C04B 41/522**
4. **C04B 41/52 + C04B 41/502 + C04B 41/5042**
5. **C04B 41/52 + C04B 41/5024 + C04B 41/522**
6. **C04B 41/52 + C04B 41/5024 + C04B 41/5096 + C04B 41/522**
7. **C04B 41/52 + C04B 41/5031 + C04B 41/5035 + C04B 41/5045 + C04B 41/522**

Citation (search report)

See references of WO 2012129431A1

Citation (examination)

- WO 2007098152 A2 20070830 - LEE KANG N [US]
- WO 0064836 A1 20001102 - GEN ELECTRIC [US]
- EP 1925694 A2 20080528 - UNITED TECHNOLOGIES CORP [US]

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

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DOCDB simple family (application)

US 2012030174 W 20120322; EP 12714117 A 20120322; US 201214006848 A 20120322