

Title (en)

HEAT TREATMENT BY INJECTION OF A HEAT-TRANSFER GAS

Title (de)

WÄRMEBEHANDLUNG DURCH INJEKTION EINES WÄRMEÜBERTRAGUNGSGASES

Title (fr)

TRAITEMENT THERMIQUE PAR INJECTION D'UN GAZ CALOPORTEUR.

Publication

**EP 2707896 A1 20140319 (FR)**

Application

**EP 12725101 A 20120503**

Priority

- FR 1154015 A 20110510
- FR 2012050994 W 20120503

Abstract (en)

[origin: WO2012153046A1] The present invention relates to the heat treatment of a precursor that reacts with temperature, and that comprises in particular the steps of: preheating or cooling a heat-transfer gas to a controlled temperature, and injecting the preheated or cooled gas over the precursor. Advantageously, besides the temperature (T0) of the heat-transfer gas, the following are also controlled: the flow rate (D) of the gas at the injection over the precursor, and also a distance (x) between the precursor and an outlet (5) for injection of the gas over the precursor, in order to finely control the temperature of the precursor receiving the injected gas.

IPC 8 full level

**H01L 21/67** (2006.01); **H01L 21/428** (2006.01); **H01L 31/032** (2006.01)

CPC (source: CN EP KR US)

**H01L 21/02568** (2013.01 - CN EP US); **H01L 21/02614** (2013.01 - CN EP US); **H01L 21/02667** (2013.01 - CN EP US);  
**H01L 21/324** (2013.01 - KR); **H01L 21/428** (2013.01 - KR); **H01L 21/67109** (2013.01 - CN EP US); **H01L 21/67248** (2013.01 - US);  
**H01L 21/6776** (2013.01 - US); **H01L 31/032** (2013.01 - KR); **H01L 31/0322** (2013.01 - CN EP US); **H01L 31/1864** (2013.01 - US);  
**H01L 2924/0002** (2013.01 - EP US); **Y02E 10/541** (2013.01 - EP US)

Citation (search report)

See references of WO 2012153046A1

Citation (examination)

- WO 0244430 A1 20020606 - BOC GROUP PLC [GB], et al
- JP 2010001560 A 20100107 - PHILTECH INC
- US 4923396 A 19900508 - HARADA MASAHIRO [JP], et al

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)

**WO 2012153046 A1 20121115**; AU 2012252173 A1 20131114; AU 2012252173 A2 20140605; AU 2012252173 B2 20141218;  
CA 2834209 A1 20121115; CN 103703550 A 20140402; EP 2707896 A1 20140319; FR 2975223 A1 20121116; FR 2975223 B1 20161223;  
JP 2014519701 A 20140814; JP 5795430 B2 20151014; KR 20140035929 A 20140324; US 2014080249 A1 20140320

DOCDB simple family (application)

**FR 2012050994 W 20120503**; AU 2012252173 A 20120503; CA 2834209 A 20120503; CN 201280023001 A 20120503;  
EP 12725101 A 20120503; FR 1154015 A 20110510; JP 2014509791 A 20120503; KR 20137032641 A 20120503;  
US 201214115664 A 20120503