

INFORME DE BÚSQUEDA DE PATENTES				
N° de solicitud: 16-148499-00000-0000				
CRITERIOS PARA LA BÚSQUEDA (Anexar pantallazo o reporte en PDF, junto con los boléanos utilizados*. Para el caso de secuencias, anexar alineamientos)				
PALABRAS CLAVE UTILIZADAS		(biocompatibility and doped hydroxyapatite and zinc) and (2005 or 2008 or 2011 or 2013 or 2012 or 2015 or 2014)/PY STAC=(nanoparticle*) AND STAC=(combustion) AND SP=(hydroxyapatite and doped*) (zinc doped hydroxyapatite) and (2016 or 2014 or 2012 or 2015 or 2011 or 2010 or 2008 or 2007 or 2009 or 1999)/PY and P/DT ((nanoparticle+)/TI AND (combustion)/TI/AB/IW/CLMS AND (hydroxyapatite)/CLMS/AB/IW AND (doped)/TI/AB/IW/CLMS) AND PD <= 2016-06-07 doped AND hydroxyapatite AND nanoparticle AND /PD<20160607		
CLASIFICACIONES UTILIZADAS PARA LA BÚSQUEDA		CIP: B82B 3/00, B82Y 30/00, C01F 11/36		
		CPC:		
DOCUMENTOS CONSIDERADOS RELEVANTES (documentos patentes, literatura no patente, etc...)				
Informes/Base de datos	N° de solicitud/ Autor**	Fecha de Publicación/Presentación (DD/MM/AAAA)	Reiv. afectadas (Con indicación, si procede, de las partes relevantes o números de secuencias)	Categorías especiales de los documentos citados***
SIPI (Obligatoria)	08091695	02/09/2008		A
	14181624	20/08/2014		A
	14181628	20/08/2014		A
	92367998	17/09/1992		A
	NC2017/0007978	04/08/2017		P
EPOQUENET	CN103820102	28/05/2014		A
Orbit	WO2014005753	09/01/2014		A
Patbase	US2007196259			A
STN	Jallot (2005)	25/05/2005		P
	Marti (2008)	2008		A
	Take (2011)	24/11/2011		A
	Radovanovic (2012)	2012	1 a 7 (Experimental)	Y
	Swetha (2012)	01/2012		A
	Samani (2013)	01/2013		A
	Zhou (2014)	2014		A
STN	IN2012MU02171	07/09/2012	1 a 7 (Rev. 2)	Y
	CN101508863	19/08/2009		A
*** Categorías especiales de documentos citados:				
“A” documento que define el estado general de la técnica no considerado como particularmente relevante. “E” solicitud de patente o patente anterior pero publicada en la fecha de presentación internacional o en fecha posterior. “P” documento publicado antes de la fecha de presentación internacional pero con posterioridad a la fecha de prioridad reivindicada.		“X” documento particularmente relevante; la invención reivindicada no puede considerarse nueva o que implique una actividad inventiva por referencia al documento aisladamente considerado. “Y” documento particularmente relevante; la invención reivindicada no puede considerarse que implique una actividad inventiva cuando el documento se asocia a otro u otros documentos de la misma naturaleza, cuya combinación resulta evidente para un experto en la materia.		
**** Indicar entre paréntesis la Autoridad que realizó la búsqueda o el informe preliminar Ejs: EPO, JP, INAPI.				

Literatura no patente

**Se incluye entre otros, toda la referencia de la literatura no patente.

Jallot, et al. STEM and EDXS characterization of physico-chemical reactions at the periphery of sol-gel derived Zn-substituted hydroxyapatites during interactions with biological fluids. Colloids and Surfaces, B: Biointerfaces (20050525), 42(3-4), pp. 205-210.

Marti, et al. Magnetron-sputtered zinc-doped hydroxyapatite thin films for orthopedic applications. Materials Research Society Symposium Proceedings(Advances in Material Design for Regenerative Medicine, Drug Delivery, and Targeting/Imaging) (2008), Volume Date: 2009, 1140E.

Take, et al. The preparation of plasma spray Zn doped hydroxyapatite biocompatible coatings on titanium. International Corrosion Congress, 18th, Perth, Australia, Nov. 20-24, 2011 (2011), 2, pp. 790-795.

Radovanovic, et al. Biocompatibility and antimicrobial activity of zinc(II)-doped hydroxyapatite, synthesized by a hydrothermal method. Journal of the Serbian Chemical Society (2012), 77(12), pp. 1787-1798.

Swetha, et al. Synthesis, characterization, and antimicrobial activity of nano-hydroxyapatite-zinc for bone tissue engineering applications, Journal of Nanoscience and Nanotechnology (20120131), 12(1), pp. 167-172.

Samani, et al. In vitro antibacterial evaluation of sol-gel-derived Zn-, Ag-, and (Zn + Ag)-doped hydroxyapatite coatings against methicillin-resistant Staphylococcus aureus. Journal of Biomedical Materials Research, Part A (20130131), 101A(1), pp. 222-230.

Zhou, et al. Low-toxic Mn-doped ZnSe@ZnS quantum dots conjugated with nano-hydroxyapatite for cell imaging. Nanoscale (2014), 6(23), pp. 14319-14325.

Fecha del reporte de búsqueda:

30/11/2018

Fecha de presentación	desde hasta	Número de prioridad	
Fecha de orden de publicación	desde hasta	Fecha de prioridad	desde hasta
Fecha de Concesión	desde hasta	País de prioridad	
Fecha de Vencimiento para Anualidad	desde hasta	Vigencia	desde hasta
Fecha de publicación	desde hasta	Fecha de entrada en fase nacional	desde hasta
Estado(s)	Seleccionar	Clasificación IPC	Seleccionar
Sector Tecnológico	Productos Químicos	Texto IPC	 la clasificación completa del IPC
Tipo de solicitud		Tipo de Patente	
Solicitante/Titular de la patente	Número de identificación 8999999003 Nombre(s) UNIVERSIDAD NACIONAL DE COLOMBIA Apellido(s) Mostrar / Ocultar columnas Buscar Apoderado Buscar		
Contacto de la solicitud	Buscar	Inventor	Buscar
Referencia			
Número de solicitud internacional PCT		Fecha de Solicitud Internacional PCT	desde hasta
Número de Publicación Internacional PCT		Fecha de Publicación Internacional PCT	desde hasta
Número de la gaceta		Fecha de la Gaceta	desde hasta
Fórmula Química		Nombre(s) común(es)	

6 Casos asociados

Expediente No.	Título	Figura Característica	Estado(s)	Examinador Principal	Titular	Sector Tecnológico
☐ 03091095	PROCESO DE PREPARACIÓN DE CATALIZADORES ÚTILES EN LA LIQUEFACCIÓN DIRECTA DE CARBÓN Y EL CATALIZADOR ASÍ OBTENIDO					

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CPlus

(L20 and L15) and (2005 or 2008 or 2011 or 2013 or 2012 or 2015 or 2014)/PY

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QUERIES (21) STRUCTURES (0) SAVED (0)

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L11 zinc
CPlus
CPlus 1,350,890

L12 L11 and L8
CPlus
CPlus 258

L13 zinc doped hydroxyapatite
CPlus
CPlus 46

L14 doped hydroxyapatite
CPlus
CPlus 741

L21 COUNTS RESULTS

CPlus (27)

Filters: Apply Clear

7 filters (13) Remove Filters Update Query

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Notes: prepn. or plasma spray **zinc doped hydroxyapatite** biocompatible coatings on titanium

4. Journal 2012 **Biocompatibility and antimicrobial activity of zinc (II)-doped hydroxyapatite, synthesized by a hydrothermal method**

Radovanovic, Zeljko • Veljovic, Djordje • Jokic, Bojan • Dimitrijevic, Suzana • Bogdanovic, Gordana More
University of Belgrade, Faculty of Technology and Metallurgy, Belgrade 11000, Serbia and Montenegro (YY)
Journal of the Serbian Chemical Society (2012), 77(12), pp. 1787-1798 *In English*
10.2298/jsc121019131r
2013:203476 (DN 160:464007)

Abstract
In order to obtain multifunctional materials with good **biocompatibility** and antimicrobial effect, hydroxyapatite (HAp) doped with Zn²⁺ was synthesized by a hydrothermal method. Powders with different content of **zinc** ions were synthesized and compared with undoped HAp to investigate the influence of Zn²⁺ on the antimicrobial activity of HAp. Analyses of undoped and Zn²⁺-doped powders before and after thermal treatment at 1200 °C were performed by SEM and IRD. The antimicrobial effects of the powders were examd. in relation to *Escherichia coli*, *Staphylococcus aureus*, *Pseudomonas aeruginosa* and *Candida albicans* in liq. medium. The results showed that the obtained powders had good antimicrobial activity, but higher antimicrobial activities of the powders doped with Zn²⁺ were obsd. after annealing at 1200 °C. For powders annealed at 1200 °C, in vitro **biocompatibility** tests: redn. of the tetrazolium salt 3-(4,5-dimethylthazol-2-yl)-2,5-diphenyl tetrazolium bromide (MTT test) and Trypan Blue dye exclusion test (DET test) with MRC-5 fibroblast cells in liq. medium were performed. Based on the MTT and DET tests, it was shown that the powders do not have a significant cytotoxic effect, which was confirmed by SEM anal. of MRC-5 fibroblast cells after their in vitro contact with the powders.

Supplementary Terms: **biocompatibility** antimicrobial **zinc doped hydroxyapatite** powder hydrothermal method

Selected: 0 | Total: 0

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CPlus

(zinc doped hydroxyapatite) and (2016 or 2014 or 2012 or 2015 or 2011 or 2010 or 2008 or 2007 or 2009 or 1999)/PY and P/DI

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QUERIES (13) STRUCTURES (0) SAVED (0)

Expand All Collapse All

L10 L8 AND L9
CPlus
CPlus 14

L11 zinc
CPlus
CPlus 1,350,890

L12 L11 and L8
CPlus
CPlus 258

L13 zinc doped hydroxyapatite
CPlus
CPlus 46

L13 COUNTS RESULTS

CPlus (46)

11 filters (2) Remove Filters Update Query

Publication Year 2016 2014 2012 2015 2011 2010 2008 2007 2009 1999 more

Document Type Patent (P)

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1. Patent 2012 **Invention of nanorods of zinc doped hydroxyapatite biomaterial**

Rau, Bamane Sambhaji • Nivas, Jagadale Pramod
Indian Pat. Appl., pp. 12 *In English*
2012:1318954 (DN 158:87155)

Abstract
This is the outcome of intense research and it involves the method for prep. nanostructured zinc doped hydroxy apatite. The research involves the prepn. of nanorods of **zinc doped hydroxyapatite** by subsequent mixing of metal nitrates and org. fuel. The chem. and phys. properties of biomaterials are related to their size and shape. This is essential in the treatment of fractured bones, degenerated bones, bone deformities, degenerated spines, dental corrosion and disorders. Hydroxyapatite and **zinc doped hydroxyapatite** were prepd. by auto-combustion method. The anal. grade reagent citric acid, calcium nitrate tetrahydrate, diammonium phosphate and zinc nitrate hexahydrate were used as raw materials.

Substance Indexing
1306-06-5DP, Hydroxyapatite, zinc doped
1306-06-5P, Hydroxyapatite

Notes: invention of nanorods of **zinc doped hydroxyapatite** biomaterial

Roles: Biological Study (BIOL), Preparation (PREP), Synthetic Preparation (SPN), Therapeutic Use (THU), Uses (USES)

10196-18-6, Zinc nitrate hexahydrate
13477-34-4, Calcium nitrate tetrahydrate
77-92-9, Citric acid
More

Notes: invention of nanorods of **zinc doped hydroxyapatite** biomaterial

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Search 9: 6 and 8 and 3
Results 11

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#	Search query	Results	Options
9	6 and 8 and 3	11	View Browse Hits Optimise more...
8	SFT=(combustion)	more than 1,000,000	View Browse Hits Optimise more...
7	6 and 2 and 3	2	View Browse Hits Optimise more...
6	STAC=(nanoparticle*)	68583	View Browse Hits Optimise more...
5	[SP]: flame synthesis of metal salt nanoparticles, in particular calcium and phosphate comprising nanoparticles described is a method for the production of metal salts, wherein the cationic metal is preferably selected from group I to IV metals and mixtures thereof and the anionic group is selected from phosphates, silicates, sulfates, carbonates, hydroxides, fluorides and mixtures thereof, and wherein said method comprises forming a mixture of at least one metal source that is a meta... show full search	61	View Browse Hits Optimise more...
4	1 and 2 and 3	2	View Browse Hits Optimise more...
3	SP=(hydroxyapatite and doped*)	457	View Browse Hits Optimise more...
2	STAC=(combustion)	875633	View Browse Hits Optimise more...
1	ti=(nanoparticle*)	19312	View Browse Hits Optimise more...

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Search 7: "6 and 2 and 3" 1-2 of 2

Display results

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1) Family number: 68203703 (CO16148499A)

[Similar](#) • [Translate](#) • [Full-text](#) • [Status](#) • [Citations](#) [+](#) [-](#) [x](#) [y](#) [z](#)PROCESO PARA OBTENER NANOPARTICULAS DE FOSFATOS DE CALCIO DOPADAS CON OXIDOS METALICOS
PROCESS TO OBTAIN NANOPARTICLES OF CALCIUM PHOSPHATES DOPED WITH METAL OXIDES (MACHINE TRANSLATION)

Abstract: Source: CO16148499A [Source: Claim 1] 1) Un proceso para obtener nanoparticulas de fosfatos de calcio dopadas con oxidos metalicos que comprende las siguientes etapas: 10 a) preparar una solucion de al menos dos sales de nitratos metalicos y fosfatos en una relacion molar metales:fosfatos de 5:3; b) adicionar un agente **combustible** a la solucion obtenida en a); c) calentar la solucion obtenida en b) hasta la formacion de un gel y luego incrementar la temperatura hasta generar la **combustion** controlada y obtener cenizas; y d) someter a tratamiento termico las cenizas obtenidas en la etapa c) para formar oxidos metalicos y nanoparticulas de fosfatos de calcio dopada con oxidos metalicos. 15 [Source: Claim 1] 1) a process for obtaining **nanoparticles** of calcium phosphates **doped** with metal oxides 10 comprising the following steps: a) preparing a solution of at least two salts of metal nitrates and phosphates in a molar ratio of 5:3 metal:phosphates; b) adding an agent to the solution obtained in a); (c) heating the solution obtained in b) until formation of a gel, and then increasing the temperature to generate the controlled **combustion** and obtain ashes; and (d) subjected to heat treatment the ashes obtained in step c) to form metal oxides and **nanoparticles** of calcium phosphates **doped** with metal oxides. 15

Probable Assignee: UNIVERSIDAD NACIONAL DE COLOMBIA**Earliest Publication Date:** 20171215

2) Family number: 32257186 (US2007196259A)

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FLAME SYNTHESIS OF METAL SALT NANOPARTICLES, IN PARTICULAR CALCIUM AND PHOSPHATE COMPRISING NANOPARTICLES

Abstract: Source: US2007196259A Described is a method for the production of metal salts, wherein the cationic metal is preferably selected from Group I to IV metals and mixtures thereof and the anionic group is selected from phosphates, silicates, sulfates, carbonates, hydroxides, fluorides and mixtures thereof, and wherein said method comprises forming a mixture of at least one metal source that is a metal carboxylate with a mean carbon value per carboxylate group of at least 3 and at least one anion source into droplets and oxidizing said droplets in a high

Command line (expand) | Command line (normal)

Easy search

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1 results for (NANOPARTICLE+)/TI AND (COMBUSTION)/TI/AB/IW/CLMS AND (HYDROXYAPATITE)/CLM

Filter options

1st application year

- After 2015 (0)
- 2011-2015 (1)
- 2006-2010 (0)
- 2001-2005 (0)
- Before 2001 (0)

Assignee

- AKZO NOBEL COATINGS (1)
- BYK CHEMIE (1)
- ENERGENICS EUROPE (1)
- UNIVERSIDAD DEL PAIS VASCO (1)
- YKI YTKEMISKA INSTITUTET (1)

Litigations

Oppositions

IPC classification

US classification

Method for producing a nanocomposite dispersion comprising composite particles of inorganic **nanoparticles** and organic polymers

WO2014005753 2013-05-15 AKZO NOBEL COATINGS* BAK CHEMICAL BASQUE REGIONAL UNIVERSITY BIG CHEMIE GESELL SCHAFT MITT BESHRENTTEL HUFFUNG BYK CHEMIE* ENERGENAX EUROPE ENERGENICS EUROPE ENERGENICS EUROPE* ENERGY EUROPE INSTITUTE OF SURFACE CHEMISTRY UNIVERSITY DEL PAIS VASCO* UNIVERSITY DEL PAIS VASCO WAKKEYEI ITOKEMISUKA INSTITUTE YKI YTKEMISKA INSTITUTET*

Method for producing a nanocomposite dispersion comprising composite particles of inorganic **nanoparticles** and organic polymers

$R_n^S-Si-R_m^V X_{4-(n+m)}$

The present invention relates to a method for producing nanocomposite dispersions comprising composite particles of inorganic **nanoparticles** and organic polymers in a continuous phase, especially in a dispersion medium, as well as to the nanocomposite dispersions thus obtained and to the use thereof

Record 1 of 1

Displaying records 1 - 1 of 1

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PN - CN103820102 A 20140528

PNFP - CN103820102B B 20160413

PR - CN20141027105 20140118

AP - CN20141027105 20140118

DT - I

CT - || STSE (A)
CN102410994 A 20120411 [A] (UNIV SOUTHEAST)
[A] 1-8
* 全文 *
CN102020258 A 20110420 [A] (UNIV QINGDAO SCIENCE & TECH)
[A] 1-8
* 全文 *

CTNP - || STSE (A)
[A] - Zhigang Liu et. al., "Synthesis and characterization of Tb3+ and Gd3+ dual-doped nanocomposites", International Journal of Nanoparticles, (2013)10(26), vol. 40

History - Internal

Database	SS	Status	Results	Query
EPODOC	1		133789	DOPED
	2		7972	HYDROXYAPATITE
	3		25632	NANOPARTICLE
	4		100429123	/PD<20160607
	5		1	1 AND 2 AND 3 AND 4

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