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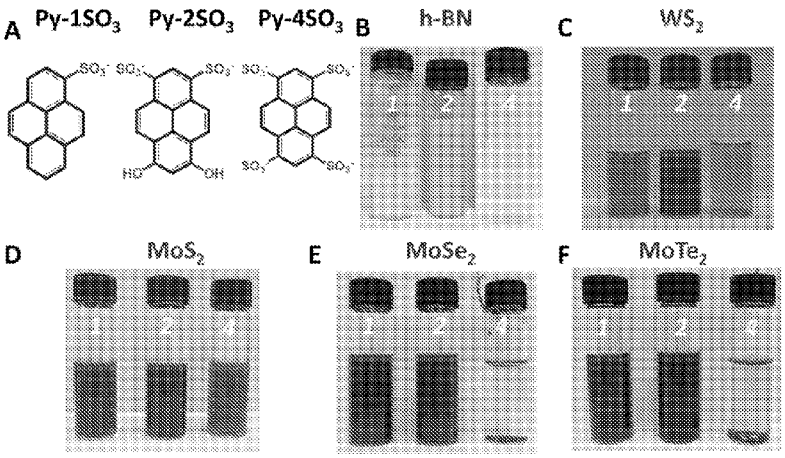

Figure 1

(57) Abstract: This invention relates to a method for exfoliating inorganic layered compounds to form two- dimensional (2D) inorganic compounds. The exfoliation is carried out in aqueous media in the presence of polycyclic aromatic compounds. The invention also relates to aqueous suspensions of two-dimensional compounds which arise from the exfoliation method. The invention further relates to methods of forming thin films of two-dimensional compounds from suspensions and to devices comprising thin films of two-dimensional (2D) inorganic compounds.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
INV. C01B21/064 C01G39/06 C01G41/00 C01B17/20 C01B19/00
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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
C01B C01G H01L C30B

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 practicable, search terms used)
EPO-Internal, CHEM ABS Data, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	H. YANG ET AL: "A simple method for graphene production based on exfoliation of graphite in water using 1-pyrenesulfonic acid sodium salt", CARBON, vol. 53, 1 March 2013 (2013-03-01), pages 357-365, XP055157876, ISSN: 0008-6223, DOI: 10.1016/j.carbon.2012.11.022 cited in the application	1-10, 14-19
Y	the whole document	13

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[X] Further documents are listed in the continuation of Box C.

[X] See patent family annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
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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.
X	ANDREA SCHLIERF ET AL: "Nanoscale insight into the exfoliation mechanism of graphene with organic dyes: effect of charge, dipole and molecular structure", NANOSCALE, vol. 5, no. 10, 1 January 2013 (2013-01-01), page 4205, XP055179978, ISSN: 2040-3364, DOI: 10.1039/c3nr00258f cited in the application	1-10, 14-19
Y	the whole document	13

X	DONGJU LEE, SUNG HO SONG, JAEWON HWANG, SU: "Enhanced Mechanical Properties of Epoxy Nanocomposites by Mixing Noncovalently Functionalized Boron Nitride Nanoflakes", SMALL, vol. 9, no. 15, August 2013 (2013-08), pages 2602-2610, XP002742674,	1,2, 6-12, 14-17
Y	page 2603, right-hand column, last paragraph - page 2604, left-hand column, paragraph 1; figures 1a,1b	13

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Y	paragraph [0038] - paragraph [0039]	13

Y	WO 2012/028724 A1 (PROVOST FELLOWS FOUNDATION SCHOLARS AND THE OTHER MEMBERS OF BOARD OF) 8 March 2012 (2012-03-08) page 1 - page 2	13

INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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WO 2012028724 A1	08-03-2012	EP 2611953 A1	10-07-2013
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		US 2013302593 A1	14-11-2013
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