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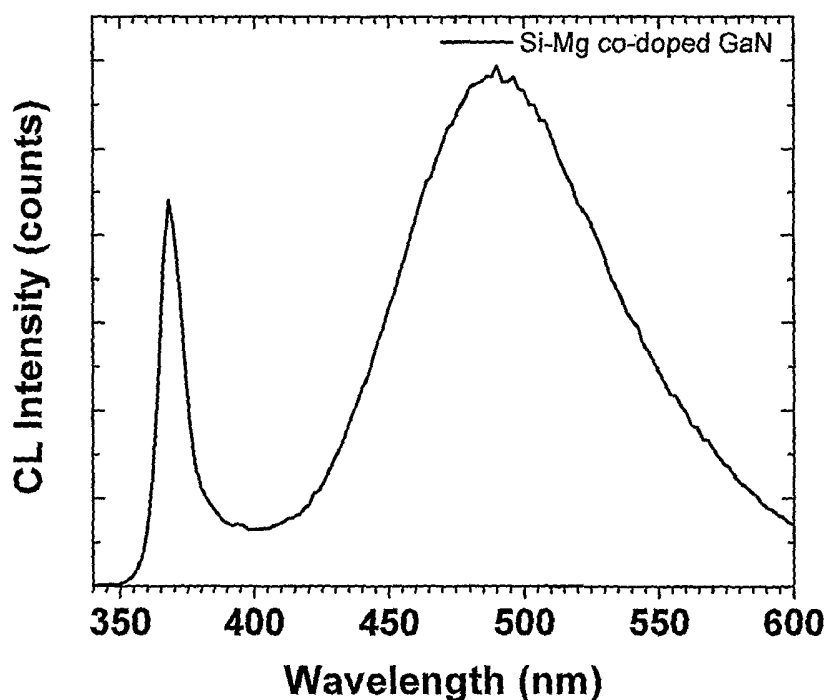
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(54) Title: METHOD TO SYNTHESIZE HIGHLY LUMINESCENT DOPED METAL NITRIDE POWDERS



(57) Abstract: A simple, inexpensive method of producing in bulk a doped metal nitride powder that exhibits a high luminescent efficiency, by first forming a metal-dopant alloy and then reacting the alloy with high purity ammonia under controlled conditions in a reactor. The resulting doped metal nitride powders will exhibit a luminescent efficiency that greatly exceeds that seen in pure undoped GaN powders, doped GaN thin films, and ZnS powders.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/14514

A. CLASSIFICATION OF SUBJECT MATTER IPC(7) : C09K 11/08 US CL : 252/301.4R; 423/409,412 According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) U.S. : 252/301.4R; 423/409,412 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched none Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) none		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5,134,102A (NADKARNI et al), 28 July 1992 (28-07-92), see col. 7, lines 30-35.	1-39
A	US 6,296,956 B1 (HUNTER), 02 October 2001 (02-10-01), see col.1, line 48 to col. 3, line 62.	1-39
A	US 6,656,615 B2 (DWILINSKI et al) 02 December 2003 (02-12-03), see col. 4, line 34 to col. 6, line 55.	1-39
A	US 6,531,072 B2 (SUDA et al), 11 March 2003 (11-03-03), see col. 1, lines 5-44.	1-39
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
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"O"	document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P"	document published prior to the international filing date but later than the priority date claimed	
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Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230		Authorized officer Wayne Langel <i>Wayne A. Langel</i> Telephone No. 703-872-9206

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Continuation of B. FIELDS SEARCHED Item 3:
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