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(54) Title: LIGAND CONJUGATED THERMOTHERAPY SUSCEPTORS AND METHODS FOR PREPARING SAME

(57) Abstract: Magnetic nanoparticles exhibiting enhanced heating ability in thermotherapeutic applications are described, as are several strategies to conjugate such nanoparticles. Methods for using conjugated nanoparticles are also provided.

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US 08/86855

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - G01N 33/553 (2009.01)

USPC - 436/526

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)

IPC(8): G01N 33/553 (2009.01)

USPC: 436/526

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
USPC: 106/287.35; 427/126.3; 606/27; 436/518  
J of Magnetism and Magnetic Materials, Vol 311

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
WEST (PGPB,USPT,EPAB,JPAB): magnetic, nanoparticle, nanoferrite, nitrobenzamide, terminal, reactive, diepoxydide, epoxyether, 5-azido-2-nitrobenzamide, 3-(2-pyridylidithio)propionamide; esp@cenet: Ivkov, magnetic, nanoparticles, cancer;  
Google Scholar: bionized, nanoferrite, nanomag-d-spio, 3-maleimidyl, propionamide

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Gruttner, et al. Synthesis and Antibody Conjugation of Magnetic Nanoparticles with Improved Specific Power Absorption Rates for Alternating Magnetic Field Cancer Therapy. April 2007. J of Magnetism and Magnetic Materials, Vol 311, pages 181 (abstract), 182 (left column, first and second full paragraphs), 182 (right column, first full paragraph) pg 184 (right column, first and second full paragraphs), pg 185 (left column, second full paragraph); ISSN 0304-8853.	23, 24 1-22, 25-50
Y	US 2005/0271745 A1 (Gruttner, et al.) 08 December 2005 (8.12.2005), abstract; para [0016]-[0019], [0036], [0038], [0042], [0054], [0060]-[0063], [0071], [0074], [0079], [0091], [0092], [0099], [0105], [0111], [0116], [0117], [0129], [0130]	1-22, 25-50
Y	US 6,667,360 B1 (Ng, et al.) 23 December 2003 (23.12.2003), abstract; col 3, In 20-22	8, 33
Y	US 2003/0028071 A1 (Handy, et al.) 06 February 2003 (06.02.2003), abstract; para [0034], [0083], [0090]	11-16, 35-40, 46
Y	US 2002/0182603 A1 (Chapman, et al.) 05 December 2002 (05.12.2002), abstract; para [0027], [0038]	14, 38
Y	US 5,328,840 A (Collier) 12 July 1994 (12.07.1994), col 9, In 17-21; col 16, In 1-2; col 18, In 22-30	15, 39
Y	US 2007/0128150 A1 (Norman) 07 June 2007 (07.06.2007), para [0011], [0153], [0155]	16, 40

Further documents are listed in the continuation of Box C.

* Special categories of cited documents:	
"A"	document defining the general state of the art which is not considered to be of particular relevance
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"P"	document published prior to the international filing date but later than the priority date claimed
"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&"	document member of the same patent family

Date of the actual completion of the international search

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