

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2011/003721

## A. CLASSIFICATION OF SUBJECT MATTER

C07D239/26(2006.01) i, C09K11/06(2006.01) i, H01L51/50(2006.01) i

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)

C07D239/26, C09K11/06, H01L51/50

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho	1922-1996	Jitsuyo Shinan Toroku Koho	1996-2011
Kokai Jitsuyo Shinan Koho	1971-2011	Toroku Jitsuyo Shinan Koho	1994-2011

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

CA/REGISTRY (STN)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y A	JP 02-052360 A (Fujitsu Ltd.), 21 February 1990 (21.02.1990), No.10, compounds (Family: none)	1-3, 7-9 10-15 4-6
X Y A	JP 04-304465 A (Fuji Electric Co.), 27 October 1992 (27.10.1992), compounds represented by chemical formulae I-63, I-65, II-65, II-66 (Family: none)	1-3, 7-9 10-15 4-6
X Y A	JP 07-011246 A (Fuji Electric Co., Ltd.), 13 January 1995 (13.01.1995), compounds represented by formulae (I-2), (I-3) (Family: none)	1-3, 7-15 10-15 4-6

 Further documents are listed in the continuation of Box C. See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"I" 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

"&amp;" document member of the same patent family

Date of the actual completion of the international search  
22 July, 2011 (22.07.11)Date of mailing of the international search report  
02 August, 2011 (02.08.11)Name and mailing address of the ISA/  
Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.

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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 Y	BRANDL Stefan et al., An efficient new pyrimidine synthesis. A pathway to octupoles, Journal fuer Praktische Chemie/Chemiker-Zeitung, 1996, 338(5), pp.451-459, compounds represented by formulae (I-2), (I-3)	1-3,7-9 10-15
X Y A	HUANG Ping-Hsin et al., Synthesis and characterization of new fluorescent two-photon absorption chromophores, Journal of Materials Chemistry, 2006, 16(9), pp.850-857, compound 13	1-3,7-9 10-15 4-6
X Y	BUSHBY Richard J. et al., Ferromagnetic spin-coupling 4,4''-through metaterphenyl: models for high-spin polymers, Journal of Materials Chemistry, 2007, 17(10), pp.955-964, compound of diamine 6	1-3,7-9 10-15
X Y A	KR 10-2010-075079 A (Cheil Industries, Inc.), 02 July 2010 (02.07.2010), compounds represented by chemical formulae 35, 37 (Family: none)	1-3,7-15 10-15 4-6
P,X	WO 2010/110553 A2 (Dow Advanced Display Materials, Ltd.), 30 September 2010 (30.09.2010), compound 77 (Family: none)	1-3,7-15
P,X	WO 2010/131930 A2 (Cheil Industries Inc.), 18 November 2010 (18.11.2010), compounds represented by chemical formulae ad-1 to ad-4 (Family: none)	1-3,7-15
P,X	WO 2010/151083 A2 (Cheil Industries Inc.), 29 December 2010 (29.12.2010), compounds represented by chemical formula 24 & KR 10-2010-0138630 A	1-3,7-15
P,X	WO 2011/055912 A1 (Rohm and Haas Electronic Materials Korea Ltd.), 12 May 2011 (12.05.2011), compounds 1 to 3, 22 (Family: none)	1-3,7-15

Subject to be covered by the search:

Aromatic amine derivatives represented by formulae (1), (6)-(9) set forth in claims 1-9 involve extremely plural compounds. However, disclosed within the meaning of PCT Article 5 are merely slight portions of claimed compounds, and therefore, claims 1-9 are not fully supported within the meaning of PCT Article 6.

Consequently, this search has been carried out with respect to the portions disclosed in and supported by the description, that is, the compounds wherein a substituent directly bonded to N is a benzene ring or a ring condensed with a benzene ring.