



- (51) International Patent Classification:
C09K 11/06 (2006.01) *C07F 15/00* (2006.01)
- (21) International Application Number:
PCT/EP2013/002323
- (22) International Filing Date:
2 August 2013 (02.08.2013)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
12179054.7 2 August 2012 (02.08.2012) EP
- (71) Applicant (for DE only): **ROCHE DIAGNOSTICS GMBH** [DE/DE]; Sandhofer Strasse 116, 68305 Mannheim (DE).
- (71) Applicant (for all designated States except DE, US): **F. HOFFMANN-LA ROCHE AG** [CH/CH]; Grenzacherstr. 124, CH-4070 Basel (CH).
- (71) Applicant: **WESTFÄLISCHE WILHELMS-UNIVERSITÄT MÜNSTER** [DE/DE]; Schlossplatz 2, 48149 Münster (DE).
- (71) Applicant (for US only): **ROCHE DIAGNOSTICS OPERATIONS, INC.** [US/US]; 9115 Hague Road, Indianapolis, IN 46250-0457 (US).
- (72) Inventors: **BERGMANN, Frank**; Faltergatter 5, 82393 Iffeldorf (DE). **CYSEWSKI, Robert**; Broniewskiego 2A, PL-89620 Chojnice (PL). **DE COLA, Luisa**; 5a Boulevard du President Edwards, F-67000 Strasbourg (FR). **DZI-ADEK, Sebastian**; Elilandstr. 2, 83671 Benediktbeuern (DE). **FERNANDEZ HERNANDEZ, Jesus Miguel**; Frauenstr. 28, 48143 Münster (DE). **JOSEL, Hans-Peter**; Ulmenstr. 28, 82362 Weilheim (DE). **SEIDEL, Christoph**; Ammerstr. 39, 82362 Weilheim (DE).
- (74) Agent: **TESCHEMACHER, Andrea**; Isenbruck Bösl Hörschler, Patentanwälte, Prinzregentenstr. 68, 81675 München (DE).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).
- Published:
- with international search report (Art. 21(3))
 - before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))
- (88) Date of publication of the international search report:
3 April 2014

(54) Title: NEW IRIIDIUM-BASED COMPLEXES FOR ECL

(57) Abstract: The present invention relates to novel iridium-based Ir(III) luminescent complexes, conjugates comprising these complexes as a label and their application, e.g. in the electrochemiluminescence based detection of an analyte.



INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2013/002323

A. CLASSIFICATION OF SUBJECT MATTER
INV. C09K11/06 C07F15/00
ADD.

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)
C09K C07F

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, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 2007 169474 A (SHOWA DENKO KK) 5 July 2007 (2007-07-05) compound D1 the whole document	1-14
A	US 2006/237714 A1 (PARK SOO J [KR] ET AL PARK SOO JIN [KR] ET AL) 26 October 2006 (2006-10-26) claim 11 the whole document	1-14
A	US 2006/263630 A1 (HO CHAN-YUAN [TW] ET AL) 23 November 2006 (2006-11-23) claim 1 the whole document	1-14
A	EP 1 418 217 A1 (SANYO ELECTRIC CO [JP]) 12 May 2004 (2004-05-12) paragraphs [0064], [0119]	1-14



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

"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

3 February 2014

Date of mailing of the international search report

10/02/2014

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040,
Fax: (+31-70) 340-3016

Authorized officer

Ziegler, Jan

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2013/002323

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
JP 2007169474 A	05-07-2007	JP 4896512 B2 JP 2007169474 A	14-03-2012 05-07-2007
US 2006237714 A1	26-10-2006	JP 4662854 B2 JP 2006298899 A KR 20060110634 A US 2006237714 A1	30-03-2011 02-11-2006 25-10-2006 26-10-2006
US 2006263630 A1	23-11-2006	NONE	
EP 1418217 A1	12-05-2004	EP 1418217 A1 JP 3650082 B2 JP 2003059667 A KR 20030041968 A US 2004239237 A1 WO 02099008 A1	12-05-2004 18-05-2005 28-02-2003 27-05-2003 02-12-2004 12-12-2002