

Title (en)  
METHODS FOR THE ELECTROCHEMICAL DETECTION OF MULTIPLE TARGET COMPOUNDS

Title (de)  
VERFAHREN ZUM ELEKTROCHEMISCHEN NACHWEIS MEHRERER ZIELVERBINDUNGEN

Title (fr)  
PROCEDES POUR LA DETECTION ELECTROCHIMIQUE DE PLUSIEURS COMPOSES CIBLES

Publication  
**EP 1583842 A4 20070704 (EN)**

Application  
**EP 02807275 A 20020717**

Priority  
• US 0229445 W 20020717  
• US 32438801 P 20010924

Abstract (en)  
[origin: WO03089895A2] A method of detecting two different target molecules through a single electrode is carried out by (a) providing a conductive oxidation-reduction reaction detection electrode; (b) contacting a sample suspected of containing a first and second target molecule to the electrode under conditions in which the first and second target molecules are deposited on the electrode, wherein the first target molecule comprises a first label and the second target molecule comprises a second label; (c) contacting to the electrode a first transition metal complex that oxidizes the first preselected label in a first oxidation-reduction reaction and a second transition metal complex that oxidizes the first and second labels in a second oxidation-reduction reaction, with the first and second oxidation-reduction reactions producing different detectable signals; (d) detecting the presence of the first target molecule by detecting the first oxidation-reduction reaction; and (e) detecting the presence of the second target molecule by detecting the second oxidation-reduction reaction. Devices for carrying out the method are also described.

IPC 1-7  
**G01N 27/416**; **C12Q 1/68**

IPC 8 full level  
**G01N 33/53** (2006.01); **C12Q 1/00** (2006.01); **C12Q 1/68** (2006.01); **G01N 27/30** (2006.01); **G01N 27/416** (2006.01); **G01N 27/48** (2006.01); **G01N 33/543** (2006.01); **G01N 37/00** (2006.01)

CPC (source: EP)  
**C12Q 1/004** (2013.01); **C12Q 1/005** (2013.01); **C12Q 1/6825** (2013.01)

Citation (search report)  
• [Y] US 6127127 A 20001003 - ECKHARDT ALLEN E [US], et al  
• [Y] US 6132971 A 20001017 - THORP HOLDEN H [US], et al  
• [A] US 5871918 A 19990216 - THORP HOLDEN H [US], et al  
• [A] US 5968745 A 19991019 - THORP HOLDEN H [US], et al  
• [Y] SKOOG, LEARY: "Instrumentelle Analytik", 1996, SPRINGER, HEIDELBERG, ISBN: 3-540-60450-2, XP002433702  
• [Y] NAPIER MARY E ET AL: "Probing biomolecule recognition with electron transfer: Electrochemical sensors for DNA hybridization", BIOCONJUGATE CHEMISTRY, ACS, WASHINGTON, DC, US, vol. 8, no. 6, November 1997 (1997-11-01), pages 906 - 913, XP002305927, ISSN: 1043-1802  
• See references of WO 03089895A2

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC NL PT SE SK TR

DOCDB simple family (publication)  
**WO 03089895 A2 20031030**; **WO 03089895 A3 20050818**; AU 2002367807 A1 20031103; AU 2002367807 B2 20070628; CA 2461562 A1 20031030; EP 1583842 A2 20051012; EP 1583842 A4 20070704; JP 2005520175 A 20050707

DOCDB simple family (application)  
**US 0229445 W 20020717**; AU 2002367807 A 20020717; CA 2461562 A 20020717; EP 02807275 A 20020717; JP 2003586580 A 20020717