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(54) Title: REACTIVE CHROMATOGRAPHY PROCESS FOR EQUILIBRIUM-LIMITED REACTIONS

(57) Abstract: The present disclosure provides for a process for an equilibrium limited reaction using reactive chromatography unit (RCU) in which a first organic donor reactant (FODR) and a second organic acceptor reactant (SOAR) react to form a product mixture of a first acceptor product (FAP) and a second donor co-product (SDCP). The equilibrium-limited reaction does not produce water. The RCU has separation media to separate the product mixture into a raffinate and an extract. The FODR is in a stoichiometric deficit relative to the SOAR for the equilibrium limited reaction, so that the SOAR acts as the eluent for both the raffinate and the extract, and so as not to produce an azeotrope of FODR and the SDCP in the extract.

INTERNATIONAL SEARCH REPORT

International application No  
PCT/US2014/036602

A. CLASSIFICATION OF SUBJECT MATTER  
INV. C07C67/03 C07C69/14 C07B41/10 B01D15/38  
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)  
C07C C07B B01D

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, BEILSTEIN Data, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	LODE F ET AL: "Continuous reactive chromatography", CHEMICAL ENGINEERING SCIENCE, OXFORD, GB, vol. 56, no. 2, 1 January 2001 (2001-01-01), pages 269-291, XP027210930, ISSN: 0009-2509 [retrieved on 2001-01-01] the whole document	1-18
X	----- US 5 405 992 A (FUNK GREGORY A [US] ET AL) 11 April 1995 (1995-04-11) the whole document	1-18
A	----- EP 0 849 254 A1 (BP CHEM INT LTD [GB]; BP CHEMICALS SNC [FR]) 24 June 1998 (1998-06-24) claims; examples	1-18
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Further documents are listed in the continuation of Box C.

See patent family annex.

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Date of the actual completion of the international search  11 November 2014	Date of mailing of the international search report  19/11/2014
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  Zervas, Brigitte

# INTERNATIONAL SEARCH REPORT

International application 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.
A	US 3 700 726 A (JOHNSON SAM H JR ET AL) 24 October 1972 (1972-10-24) claims; examples -----	1-18

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/US2014/036602
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Patent document cited in search report	Publication date	Publication date	Patent family member(s)	Publication date
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