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(54) Title: COMPOSITE MEMBRANE AND METHOD FOR MAKING THE SAME

(57) Abstract: A composite membrane and method for making the same, comprising a porous support and a polyamide surface. The subject membrane provides improved flux and/or rejection rates. The subject membrane is further capable of operating at lower operating pressures. The subject method includes reacting a polyfunctional amine with a polyfunctional acyl halide to form a polyamide. The method includes the step of contacting a complexing agent with the polyfunctional acyl halide prior substantial reaction between the polyfunctional acyl halide and a polyfunctional amine. The subject process is easily adapted to commercial scale manufacturing processes and is particularly suited for making nanofiltration and reverse osmosis composite membranes.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 01/11265

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 B01D69/12 B01D67/00 B01D71/56 C08G69/42

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 7 B01D C08G

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 practical, search terms used)

WPI Data, PAJ, EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>DATABASE WPI                      Week 199846                      Derwent Publications Ltd., London, GB;                      AN 1998-535768                      XP002182588                      &amp; JP 10 235173 A ((TORA) TORAY IND INC),                      8 September 1998 (1998-09-08)                      abstract</p>	1, 10, 12
A	<p>DE 19 50 594 A (RHONE-POULENC SA)                      9 April 1970 (1970-04-09)                      claims</p>	1, 10, 12
A	<p>US 4 233 434 A (M.A.KRAUS ET AL)                      11 November 1980 (1980-11-11)                      column 4, line 53-58; claims</p>	1, 10, 12
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Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

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- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
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- \*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

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- \*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	Date of mailing of the international search report
13 November 2001	22/11/2001
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer  Cordero Alvarez, M

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 01/11265

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 2 648 696 A (R.R.WHETSTONE) 11 August 1953 (1953-08-11) cited in the application examples ---	1, 10, 12
A	US 4 824 574 A (J.E.CADOTTE ET AL) 25 April 1989 (1989-04-25) cited in the application examples 1-7; table I ---	1
A	US 4 950 404 A (M.M.CHAU ) 21 August 1990 (1990-08-21) cited in the application claims 1,5,7,8 -----	1

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Information on patent family members

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