(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
15 January 2026 (15.01.2026)

WIPO | PCT

(10) International Publication Number
WO 2026/011219 A1

(51) International Patent Classification:
B01D 67/00 (2006.01) *B29C 39/00* (2006.01)
B09B 3/24 (2022.01) *B29K 27/06* (2006.01)
B09B 101/75 (2022.01) *C08J 9/26* (2006.01)

(21) International Application Number:
PCT/AU2025/050739

(22) International Filing Date:
10 July 2025 (10.07.2025)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2024902149 11 July 2024 (11.07.2024) AU

(71) Applicant: **CONNOP INNOVATIVE TECHNOLOGY GROUP PTY LTD** [AU/AU]; 25 McCombe Road, Davenport, Western Australia 6230 (AU).

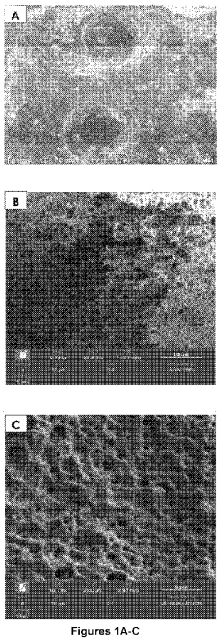
(72) Inventors: **FAKHRALMOBASHERI, Nima**; c/o Edith Curtin University, 270 Joondalup Drive, Joondalup, Western Australia 6027 (AU). **CHAHARMAHALI, Amir Razmjou**; c/o Edith Curtin University, 270 Joondalup Drive, Joondalup, Western Australia 6027 (AU).

(74) Agent: **WRAYS PTY LTD**; Level 7, 863 Hay Street, Perth, Western Australia 6230 (AU).

(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, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MU, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UY, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, SD, SL, ST, 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, ME, 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).

(54) Title: METHOD FOR PREPARING POROUS MEMBRANES FROM WASTE POLY(VINYL CHLORIDE) PLASTICS



Figures 1A-C

(57) Abstract: The disclosure provides a method of preparing porous membranes from waste PVC plastics comprising unknown fixed quantities of plasticizer. The method includes the steps of providing a first solution comprising waste PVC particles and said plasticizer in a first aprotic solvent and a second solution comprising a porogen in a second aprotic solvent. The first and second solutions are mixed to provide a dope solution comprising solubilised waste PVC particles, said plasticizer and the porogen in the first and second aprotic solvents. The resulting dope solution is cast in a layer on a surface of a substrate to form a membrane precursor. The membrane precursor is then immersed in a non-solvent for a period of time sufficient for the membrane precursor to undergo phase inversion and produce the porous membrane.

WO 2026/011219 A1

[Continued on next page]

Published:

— *with international search report (Art. 21(3))*

— *in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE*