

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

(19) World Intellectual Property
Organization

International Bureau

(43) International Publication Date
27 May 2021 (27.05.2021)



(10) International Publication Number
WO 2021/101987 A1

(51) International Patent Classification:

B01D 61/14 (2006.01) **B01D 71/58** (2006.01)
B01D 67/00 (2006.01) **B01D 71/68** (2006.01)
B01D 69/02 (2006.01)

Published:

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

(21) International Application Number:

PCT/US2020/061046

(22) International Filing Date:

18 November 2020 (18.11.2020)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

62/938,424 21 November 2019 (21.11.2019) US

(71) Applicant: **EMD MILLIPORE CORPORATION**

[US/US]; 400 Summit Drive, Burlington, MA 01803 (US).

(72) Inventors; and

(71) Applicants: **GE, Jijun**; c/o EMD Millipore Corporation, 400 Summit Drive, Burlington, MA 01803 (US). **ZHOU, Xiaozhu**; c/o EMD Millipore Corporation, 400 Summit Drive, Burlington, MA 01803 (US). **TKACIK, Gabriel**; c/o EMD Millipore Corporation, 400 Summit Drive, Burlington, MA 01803 (US).

(74) Agent: **GOLDMAN, Michael, L.** et al.; Troutman Pepper Hamilton Sanders LLP, 70 Linden Oaks, Suite 210, Rochester, NY 14625 (US).

(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, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, IT, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, 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, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, 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, 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, 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: HYDROPHILIC MEMBRANES

(57) Abstract: The present application relates to an unsupported, permanently hydrophilic filtration membrane, and its method of formation. The membrane comprises a polymeric matrix material and a cross-linked polyoxazoline hydrophilic additive blended throughout said matrix material.

WO 2021/101987 A1