

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
02 March 2023 (02.03.2023)



(10) International Publication Number
WO 2023/027978 A1

(51) International Patent Classification:
G01N 27/447 (2006.01) *G01N 27/26* (2006.01)

(21) International Application Number:
PCT/US2022/041012

(22) International Filing Date:
22 August 2022 (22.08.2022)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
63/236,020 23 August 2021 (23.08.2021) US

(71) Applicant: **EMD MILLIPORE CORPORATION**
[US/US]; 400 Summit Drive, Burlington, Massachusetts
01803 (US).

(72) Inventors: **WU, Kevin**; c/o EMD Millipore Corporation, 400 Summit Drive, Burlington, Massachusetts 01803 (US). **WOLFE, Kelly**; c/o EMD Millipore Corporation, 400 Summit Drive, Burlington, Massachusetts 01803 (US). **DEDEO, Anja**; c/o EMD Millipore Corporation, 400 Summit Drive, Burlington, Massachusetts 01803 (US). **AMARA, Ryan**; c/o EMD Millipore Corporation, 400 Summit Drive, Burlington, Massachusetts 01803 (US). **LIBBY, Gerard**; c/o EMD Millipore Corporation, 400 Summit Drive, Burlington, Massachusetts 01803 (US). **SYDLOWSKI, Paul**; c/o EMD Millipore Corporation, 400 Summit Drive, Burlington, Massachusetts 01803 (US). **KAVANAUGH, Katelyn**; c/o EMD Millipore Corporation, 400 Summit Drive, Burlington, Massachusetts 01803 (US). **BAILEY, Trisha**; c/o EMD Millipore Corporation, 400 Summit Drive, Burlington, Massachusetts 01803 (US). **ALLEN, Nathan**

(54) Title: SYSTEM AND METHOD FOR PHOTOPOLYMERIZING ELECTROPHORETIC GELS

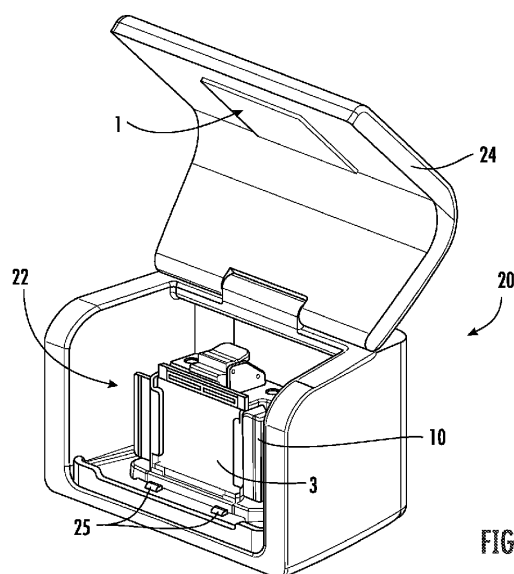


FIG. 4

(57) **Abstract:** An acrylamide gel formulation for use in electrophoresis, and a system and method for electrophoretic gel casting. In some embodiments, the system comprises a UV-Vis curing light source, and an acrylamide formulation that allows a resolving gel and a stacking gel to be photopolymerized in a single step. In some embodiments, the resolving solution formulation comprises acrylamide and bis-acrylamide, Bis-Tris buffering agent, and lithium phenyl-2, 4, 6-trimethylbenzoyl-phosphinate (LAP) as a water-soluble photoinitiator, which allows the solution to be photopolymerized using UV radiation within a certain wavelength. In some embodiments, a dilution buffer formulation comprises acrylamide and bis-acrylamide, Bis-Tris buffering agent, and lithium phenyl-2, 4, 6-trimethylbenzoyl-phosphinate (LAP). The dilution buffer may be added to the resolving solution in a selected amount in order to modify the concentration of the acrylamide to a desired concentration.

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T.; c/o EMD Millipore Corporation, 400 Summit Drive,
Burlington, Massachusetts 01803 (US).

(74) **Agent: LEMACK, Kevin S.** et al.; Nields, Lemack &
Frame, LLC, 176 E. Main Street, Suite 5, Westborough,
Massachusetts 01581 (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, 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, 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).

Published:

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