

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
26 December 2024 (26.12.2024)



(10) International Publication Number
WO 2024/259536 A1

(51) International Patent Classification:
B01F 21/10 (2022.01) *A62D 1/00* (2006.01)

(21) International Application Number:
PCT/CA2024/050839

(22) International Filing Date:
21 June 2024 (21.06.2024)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
63/522,781 23 June 2023 (23.06.2023) US

(71) Applicant: **FULL CIRCLE LITHIUM CORP.** [CA/CA];
18 King St. East, Suite 902, Toronto, Ontario M5C 1C4
(CA).

(72) Inventors: **BOURCIER, William L.**; 8586 Tesla Road,
Livermore, California 94550 (US). **CURRIN, Robert
Thomas**; 345 Industrial Park Road, Unit 206, Nahunta,
Georgia 31553 (US).

(74) Agent: **FASKEN MARTINEAU DUMOULIN LLP**; 333
Bay Street, Suite 2400, Toronto, Ontario M5H 2T6 (CA).

(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,

(54) Title: SYSTEM AND METHOD FOR SUPPRESSION OF LITHIUM BASED FIRES

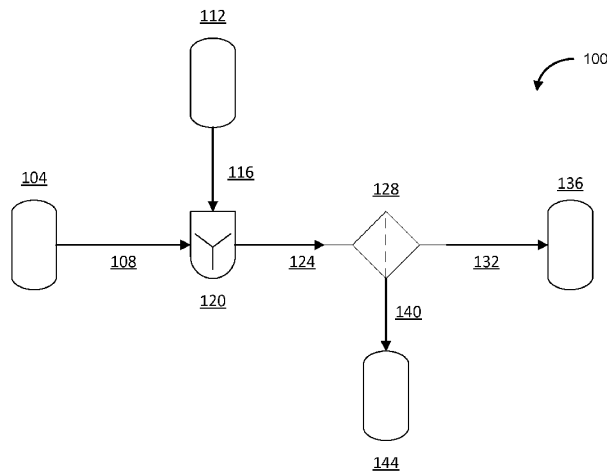


FIG. 1

(57) **Abstract:** The present disclosure describes a method and a system of producing a fire suppression medium. The method includes introducing a solvent and an alkali metal or a salt of the alkali metal into the mixer and dissolving the alkali metal or the salt of the alkali metal in the solvent to create an alkali metal solution. The method also includes filtering and analyzing a sample of the alkali metal solution. If the filtered alkali metal solution does not have a sufficient alkali metal content, the method includes introducing and dissolving additional alkali metal or the salt of the alkali metal into the alkali metal solution. If the filtered alkali metal solution has the sufficient alkali metal content, the method includes filtering the alkali metal solution to remove residual alkali metal or residual salt of the alkali metal to create and collect a saturated alkali metal solution.

[Continued on next page]

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, 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).

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