

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
05 January 2023 (05.01.2023)



(10) International Publication Number
WO 2023/278423 A1

(51) International Patent Classification:

B01D 53/62 (2006.01) **C07C 211/01** (2006.01)
B01D 53/78 (2006.01) **C01D 1/04** (2006.01)
B01D 53/32 (2006.01) **C25B 1/18** (2006.01)
B01D 53/14 (2006.01)

(21) International Application Number:

PCT/US2022/035289

(22) International Filing Date:

28 June 2022 (28.06.2022)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/215,853 28 June 2021 (28.06.2021) US

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(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, 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).

Declarations under Rule 4.17:

— of inventorship (Rule 4.17(iv))

Published:

— with international search report (Art. 21(3))
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(54) Title: SEAWATER ELECTROLYSIS ENABLES SCALABLE ATMOSPHERIC CO₂ MINERALIZATION

(57) Abstract: Disclosed herein are methods of capturing CO₂ from a gas source using electrochemically-enhanced amine capture to form a concentrated CO₂ vapor, followed by sequestering CO₂ from the concentrated vapor in a sequestration step. The sequestration step includes contacting the concentrated vapor with an aqueous sequestration solution comprising ions capable of forming an insoluble carbonate salt, such that the aqueous sequestration solution comprises the CO₂, electrochemically basifying the sequestration solution, thereby precipitating a carbonate solid, separating the carbonate solids from the aqueous sequestration solution or the surface of the mesh.

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