

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
06 October 2022 (06.10.2022)



(10) International Publication Number
WO 2022/208428 A1

(51) International Patent Classification:

C22B 1/00 (2006.01) C22B 3/44 (2006.01)
C22B 3/04 (2006.01) C22B 15/00 (2006.01)
C22B 3/26 (2006.01)

(21) International Application Number:

PCT/IB2022/053009

(22) International Filing Date:

31 March 2022 (31.03.2022)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2027874 31 March 2021 (31.03.2021) NL

(71) Applicant: AFRICAN RAINBOW MINERALS LIMITED [ZA/ZA]; ARMHouse, 29 Impala Road, Chislehurst, 2196 Sandton (ZA).

(72) Inventor: PRETORIUS, Gerard; 97 Broadbury Circle, Cornwall Hill Estate, Irene, 0178 Pretoria (ZA).

(74) Agent: VISAGIE, Pieter, Johan; Adams & Adams, PO Box 1014, 0001 Pretoria (ZA).

(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, 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.

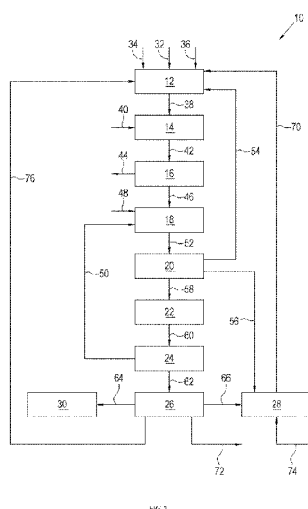
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, 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:

- as to the identity of the inventor (Rule 4.17(i))
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- of inventorship (Rule 4.17(iv))

(54) Title: RECOVERY OF METALS FROM METALLIC OR METAL-BEARING MATERIALS

(57) Abstract: A method of treating a metallic or metal-bearing material includes, in an oxidative or reductive digestion step, contacting the metallic or metal-bearing material with a reagent selected from ferric chloride (FeCl_3), hydrochloric acid (HCl), and a combination thereof, thus producing a ferrous chloride (FeCl_2) solution.



WO 2022/208428 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