

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
18 September 2025 (18.09.2025)



(10) International Publication Number
WO 2025/193252 A1

- (51) **International Patent Classification:**
C07C 17/25 (2006.01) C07C 21/18 (2006.01)
- (21) **International Application Number:**
PCT/US2024/037169
- (22) **International Filing Date:**
09 July 2024 (09.07.2024)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
63/565,058 14 March 2024 (14.03.2024) US
- (71) **Applicant: THE CHEMOURS COMPANY FC, LLC**
[US/US]; 1007 Market Street, Wilmington, Delaware 19801 (US).
- (72) **Inventors: SUN, Xuehui;** 761 Meadowbank Road, Kennett Square, Pennsylvania 19348 (US). **JACKSON, Andrew;** 2 Thomas Lane North, Newark, Delaware 19711 (US).

(74) **Agent: SHAH-CREAMER, Bijal;** 1007 Market Street, Patent Legal Group, Wilmington, Delaware 19801 (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, 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, 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,

(54) **Title:** PROCESS TO MAKE FLUOROOLEFINS BY CATALYTIC HYDROFLUORINATION OF HYDROCHLOROCARBONS OR HYDROCHLOROOLEFINS

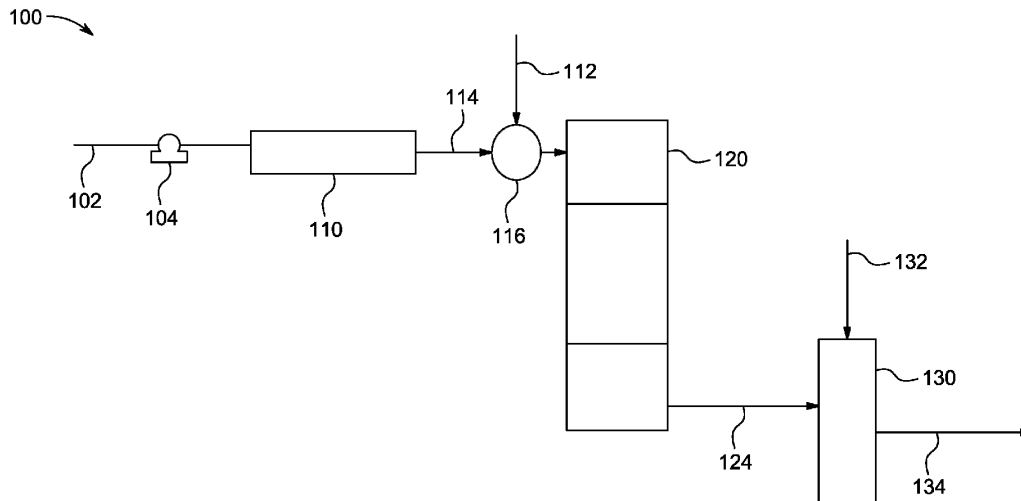


FIG. 1

(57) **Abstract:** Processes for making 2-chloro-3,3,3-trifluoropropene (HCFO-1233xf) by contacting 1,1,2,3-tetrachloro-1-propene (HCO-1230xa) and HF at suitable temperatures and suitable HCO-1230xa:HF mole ratios in the presence of a zinc doped alumina catalyst are provided. Also provided herein are processes for making 3,3,3-trifluoropropene (HFO-1243zf) by contacting 1,1,1,3-tetrachloropropane (HCC-250fb) and HF at suitable temperatures and suitable HCC-250fb:HF mole ratios in the presence of a zinc doped alumina catalyst.

[Continued on next page]

WO 2025/193252 A1

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))*