

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
08 May 2025 (08.05.2025)



(10) International Publication Number
WO 2025/096370 A3

(51) International Patent Classification:

C07C 17/20 (2006.01) C07C 19/08 (2006.01)
C07C 17/23 (2006.01) C07C 21/18 (2006.01)
C07C 17/278 (2006.01) C07C 19/01 (2006.01)

(21) International Application Number:

PCT/US2024/053317

(22) International Filing Date:

29 October 2024 (29.10.2024)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/546,492	30 October 2023 (30.10.2023)	US
63/574,944	05 April 2024 (05.04.2024)	US
63/662,931	21 June 2024 (21.06.2024)	US
63/678,579	02 August 2024 (02.08.2024)	US

(71) Applicant: **THE CHEMOURS COMPANY FC, LLC**
[US/US]; 1007 Market Street, Wilmington, Delaware
19801 (US).

(72) Inventors: **PENG, Sheng**; 549 Cabot Drive, Hockessin,
Delaware 19707 (US). **HUGHES, Joshua**; 11 Ross Court,
Wilmington, Delaware 19810 (US). **BRADLEY, Michael**
A.; 105 Farmstead Court, Hockessin, Delaware 19707 (US).
SIMONI, Luke David; 2429 W 18th Street, Wilmington,
Delaware 19806 (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,
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))
- 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))

(88) Date of publication of the international search report:

24 July 2025 (24.07.2025)

(54) Title: COMPOSITIONS COMPRISING 1,3,3,3-TETRAFLUOROPROPENE, METHODS OF MAKING SAME, AND USES
THEREOF

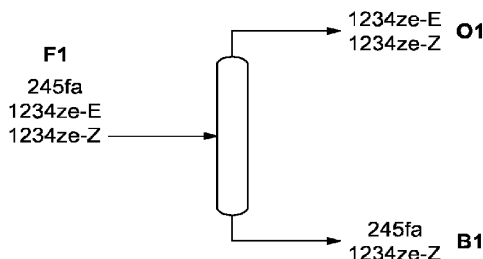


FIG. 1

(57) Abstract: Disclosed herein are fluoroolefin compositions, methods of producing the same, methods and systems using the same,
and systems containing the HFO-1234ze compositions. The inventive compositions are useful as refrigerants in air conditioning and
refrigeration systems, and also as blowing agents.

WO 2025/096370 A3