



- (51) **International Patent Classification:**
C09K 19/02 (2006.01)
- (21) **International Application Number:**
PCT/US2022/042586
- (22) **International Filing Date:**
05 September 2022 (05.09.2022)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
63/240,666 03 September 2021 (03.09.2021) US
63/278,039 10 November 2021 (10.11.2021) US
- (71) **Applicant: THE REGENTS OF THE UNIVERSITY OF COLORADO, A BODY CORPORATE** [US/US]; 1800 Grant Street, 8th Floor, Denver, CO 80203 (US).
- (72) **Inventors: MACLENNAN, Joseph, E.;** 3950 Britting Avenue, Boulder, CO 80305 (US). **CLARK, Noel, A.;** 3106 Kittrell Court, Boulder, CO 80305 (US). **GLASER, Matthew, A.;** 3130 25th Street, Boulder, CO 80304 (US). **CHEN, Xi;** 2992 Shadow Creek Drive, Apartment 202, Boulder, CO 80303 (US). **SMITH, Gregory;** 135 Peregrine Circle, Broomfield, CO 80020 (US).
- (74) **Agent: PILLOTE, Cynthia, L.;** Snell & Wilmer L.L.P., 400 East Van Buren Street, One Arizona Center, Phoenix, AZ 85004-2202 (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, 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,

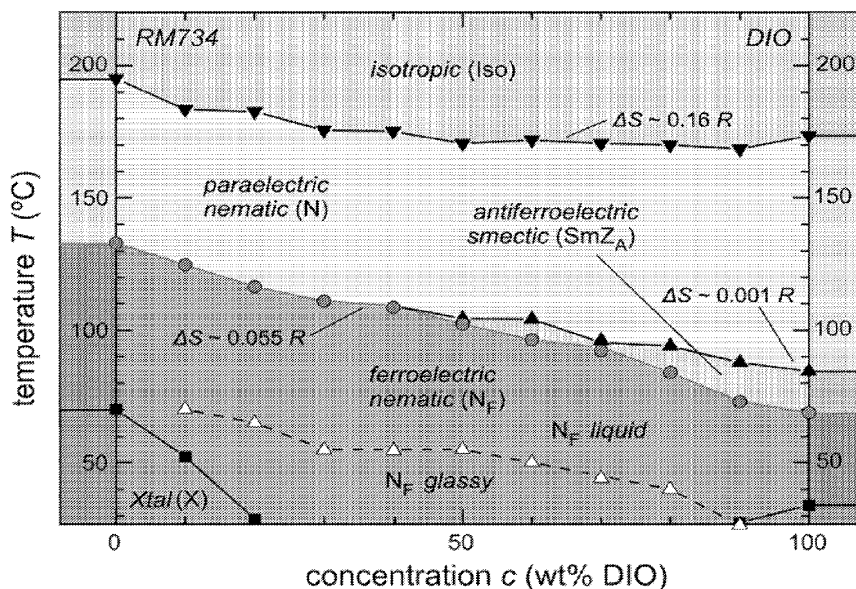
(54) **Title:** MIXTURE INCLUDING FERROELECTRIC NEMATIC PHASE AND METHODS OF FORMING AND USING SAME

FIG. 3

(57) **Abstract:** Material comprising a ferroelectric nematic phase, the material are disclosed. The material can include a mixture comprising first molecules and second molecules. At least one of a fluid of the first molecules and a fluid of the second molecules exhibits a ferroelectric nematic phase. The first molecules and second molecules are miscible. The first molecules can induce a polar orientational order of said second molecules.

[Continued on next page]

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).

Published:

- *without international search report and to be republished upon receipt of that report (Rule 48.2(g))*