

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
06 May 2021 (06.05.2021)



(10) International Publication Number
WO 2021/081625 A1

(51) International Patent Classification:
B01J 19/08 (2006.01) *C02F 1/48* (2006.01)
B05D 3/14 (2006.01)

(21) International Application Number:
PCT/CA2020/050909

(22) International Filing Date:
29 June 2020 (29.06.2020)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
16/669,793 31 October 2019 (31.10.2019) US

(72) Inventors; and

(71) Applicants: **PARISIEN, Brian Rudy** [CA/CA]; 107 Mo-
hill Crescent, Dunrobin, Ontario K0A 1T0 (CA). **FUNG,**
David Tat Fai [CA/CA]; 3784 Southridge Ave., West Van-
couver, British Columbia V7V 3J1 (CA). **VERED, Ron**
[CA/CA]; 881 Winnington Avenue, Ottawa, Ontario K2B
5C4 (CA). **WIGHT, James Stuart** [CA/CA]; Apt 9A, 300
Queen Elizabeth Drive, Ottawa, Ontario K1S 3M6 (CA).

(74) Agent: **TEITELBAUM, Neil**; Teitelbaum & Bouevitch,
834 Colonel By Dr, Ottawa, Ontario K1S 5C4 (CA).

(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, 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,

(54) Title: METHOD OF CHANGING A PROPERTY OF A POLAR LIQUID

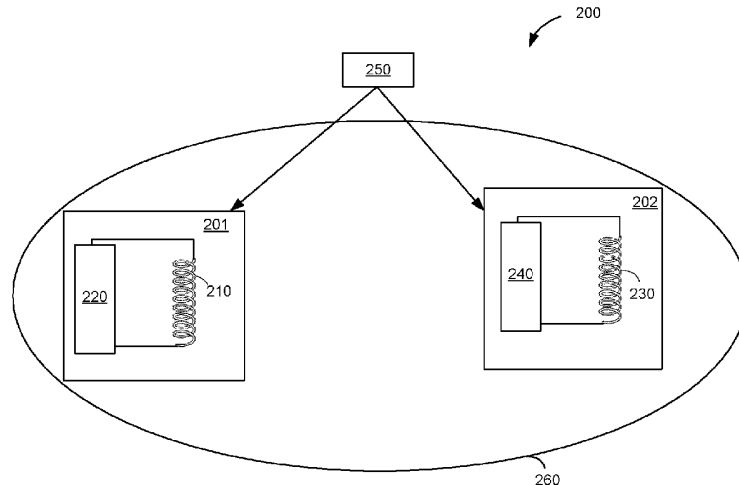


FIG. 6

(57) Abstract: For changing a property of a polar liquid, a transducer including a solenoidal coil is disposed at least partially within the liquid, which is prevented from penetrating the interior of the coil. An alternating electrical current applied to the coil produces a magnetic field about the coil. The current has a frequency and an amplitude such that the magnetic field has an effect on the liquid changing a property of the liquid at a distance of at least 5 meters from the transducer, wherein the property is gas exchange rate, surface tension, viscosity, freezing point, or partial vapor pressure. A system may include two transducers, wherein the electrical currents are offset in phase or frequency for controlling the effect.

[Continued on next page]

WO 2021/081625 A1

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))*
- *in black and white; the international application as filed
contained color or greyscale and is available for download
from PATENTSCOPE*