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(21) International Application Number: PCT/IB99/00049 (22) International Filing Date: 18 January 1999 (18.01.99) (30) Priority Data: 09/010,161 21 January 1998 (21.01.98) US (63) Related by Continuation (CON) or Continuation-in-Part (CIP) to Earlier Application US 09/010,161 (CON) Filed on 21 January 1998 (21.01.98) (71) Applicant (for all designated States except US): BAYER CORPORATION [US/US]; 333 Coney Street, East Walpole, MA 02032 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): BERGER, Joseph [IL/CH]; Bahnhofstrasse 36, CH-4132 Muttenz (CH). COLLINS, Thomas, C. [US/US]; 2109 Fifth Street, Bay City, MI 48708 (US). SLOVACEK, Rudolf, E. [US/US]; 60 King Street, Norfolk, MA 02056 (US). (74) Agents: MORGENSTERN, Arthur, S.; Bayer Corporation, 63 North Street, Medfield, MA 02052 (US) et al.		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i>
(54) Title: OXYGEN SENSING MEMBRANES AND METHODS OF MAKING SAME		
(57) Abstract Optical sensor formulations comprising polymeric sensing formulations and methods of predictably making optical sensor formulations, for, e.g., measuring O₂ levels in patient blood samples. These formulations may be, e.g., deposited as a membrane on light-transmissive substrates. In an embodiment, O₂-sensing formulations may be made by a process including selecting a first homopolymer comprised of first monomeric units, the first homopolymer having a first PermO₂ value; selecting a second homopolymer comprised of second monomeric units, the second homopolymer having a second PermO₂ value that is different from the first PermO₂ value; and copolymerizing the first and second monomeric units to obtain a copolymer having an intermediate PermO₂ value, i.e., between the two PermO₂ values, the intermediate PermO₂ providing the desired PermO₂ for the desired oxygen sensing formulation. By adjusting the relative amounts of the first and second monomeric units, a series of polymers having a desired range of intermediate permeability values (and hence Stern-Volmer characteristic k_{SV} values) may be obtained.		