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| <b>(51) International Patent Classification <sup>6</sup>:</b><br><b>C08J 7/00, 7/04, 7/06, 7/12, 7/14, 7/16, 7/18, 3/28</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>A1</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>(11) International Publication Number:</b> <b>WO 97/02310</b><br><b>(43) International Publication Date:</b> <b>23 January 1997 (23.01.97)</b> |
| <b>(21) International Application Number:</b> PCT/AU96/00407<br><b>(22) International Filing Date:</b> 28 June 1996 (28.06.96)<br><br><b>(30) Priority Data:</b><br>PN 3886 30 June 1995 (30.06.95) AU<br>PN 6554 15 November 1995 (15.11.95) AU<br><br><b>(71) Applicant (for all designated States except US):</b> COMMON-WEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION [AU/AU]; Limestone Avenue, Campbell, ACT 2601 (AU).<br><br><b>(72) Inventors; and</b><br><b>(75) Inventors/Applicants (for US only):</b> WU, Dong, Yang [CN/AU]; 6 Arnott Court, Wheelers Hill, VIC 3150 (AU). LI, Sheng [CN/AU]; 6 Arnott Court, Wheelers Hill, VIC 3150 (AU). GUTOWSKI, Wojciech, Stanislaw [AU/AU]; 16 Santa Barbara Drive, Frankston, VIC 3199 (AU).<br><br><b>(74) Agent:</b> PHILLIPS ORMONDE & FITZPATRICK; 367 Collins Street, Melbourne, VIC 3000 (AU). | <b>(81) Designated States:</b> AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AR, BO patent (KE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).<br><br><b>Published</b><br><i>With international search report.</i> |                                                                                                                                                   |
| <b>(54) Title:</b> IMPROVED SURFACE TREATMENT OF POLYMERS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                   |
| <b>(57) Abstract</b><br><br>This invention relates to a method of modifying or tailoring the surface of polymers and/or polymer-based materials to control surface and interface chemistry and molecular structure. In particular a method of modifying at least a part of the surface of a polymer including: (i) oxidising at least part of the surface of the polymer; and (ii) treating the oxidised surface with at least one multifunctional amine-containing organic compound to bind said compound to the oxidised polymer surface.                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                   |