

(43) International Publication Date
11 September 2009 (11.09.2009)(10) International Publication Number
WO 2009/110848 A1

(51) International Patent Classification:

C08G 77/38 (2006.01) **C07F 7/00** (2006.01)
C08F 230/08 (2006.01) **C08F 283/12** (2006.01)
C08K 3/34 (2006.01) **C08K 5/5435** (2006.01)

(21) International Application Number:

PCT/SG2008/000073

(22) International Filing Date:

4 March 2008 (04.03.2008)

(25) Filing Language:

English

(26) Publication Language:

English

(71) **Applicant** (for all designated States except US): **AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH** [SG/SG]; 1 Fusionopolis Way, #20-10 Connexis, Singapore 138632 (SG).

(72) Inventors; and

(75) **Inventors/Applicants** (for US only): **SELLINGER, Alan** [US/SG]; c/o Institute of Material and Research Engineering, 3 Research Link, Singapore 117602 (SG). **SOH, Mui Siang** [SG/SG]; c/o Institute of Material and Research Engineering, 3 Research Link, Singapore 117602 (SG). **YAP, U Jin Adrian** [SG/SG]; c/o Institute of Material and Research Engineering, 3 Research Link, Singapore 117602 (SG).

(74) **Agent:** **SCHIWECK, Wolfram**; Vierung, Jentschura & Partner LLP, P.O. Box 1088, Rochor Post Office, Rochor Road, Singapore 911833 (SG).

(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, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) **Designated States** (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

(54) Title: LOW SHRINKAGE MULTIFUNCTIONAL SSQ RESINS

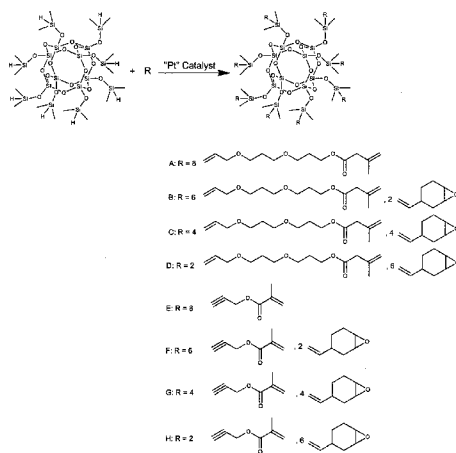


Figure 4

(57) **Abstract:** The present invention relates to low shrinkage multi functionalized silsesquioxane (SSQ) derivatives, to nanocomposite materials comprising these SSQ's and to the use of the nanocomposite material as a polymerizable resin in biologically compatible materials.