

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
14 March 2002 (14.03.2002)

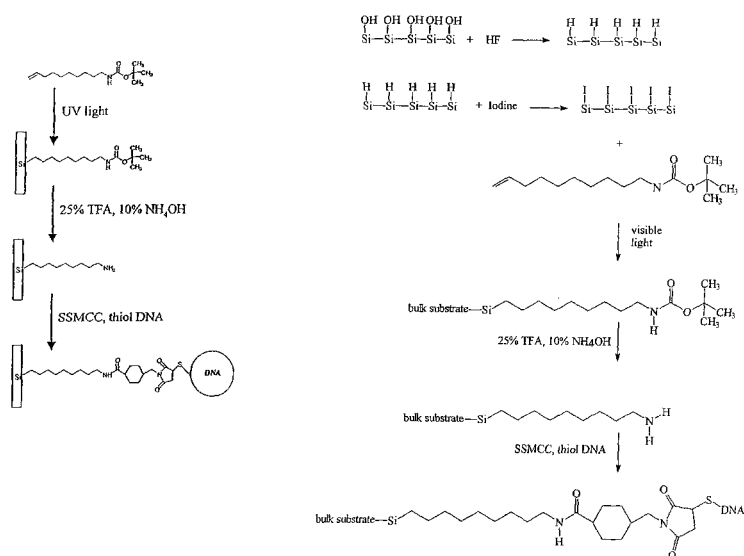
PCT

(10) International Publication Number
WO 02/020179 A3

- (51) International Patent Classification⁷: **B05D 1/18**, 3/06
- (21) International Application Number: PCT/US01/27431
- (22) International Filing Date:
5 September 2001 (05.09.2001)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
09/659,442 8 September 2000 (08.09.2000) US
09/770,885 26 January 2001 (26.01.2001) US
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- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, 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, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, 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, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report

[Continued on next page]

(54) Title: MODIFIED CARBON, SILICON AND GERMANIUM SURFACES



(57) Abstract: Chemically-modified surfaces on unoxidized, bromine- or iodine- terminated carbon, silicon, and germanium substrate are disclosed. Visible light mediates the reaction of protected ω -modified, α -unsaturated aminoalkenes (preferred) with bromine- iodine- or other functional group- terminated carbon, silicon, or germanium surfaces. Removal of the protecting group yields an aminoalkane-modified silicon surface. These amino groups can be coupled to terminal-modified oligonucleotides using a bifunctional cross-linker, thereby permitting the preparation of modified surfaces and arrays. Methods for controlling the surface density of molecules attached to the substrate are also disclosed.



(88) Date of publication of the international search report:
16 January 2003

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.