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(71) Applicant (for all designated States except US): **INNOVATIVE SURFACE TECHNOLOGIES, INC.**
 [US/US]; 1000 Westgate Drive, No. 115, St. Paul, Minnesota 55114 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **WEN, Jie** [CN/US];
 8866 Belvedere Drive, Eden Prairie, Minnesota 55347

(US). **GUIRE, Patrick** [US/US]; 711 1/2 Drillane Road
 North, Hopkins, Minnesota 55305 (US).

(74) Agents: **BUSSE, Paul W.** et al.; Faegre & Benson LLP,
 90 South 7th Street, 2200 Wells Fargo Center, Minneapolis,
 Minnesota 55402 (US).

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(54) Title: NANOFIBERS CONTAINING LATENT REACTIVE GROUPS

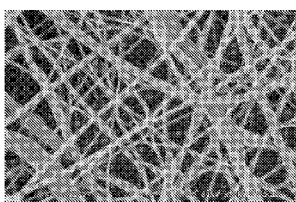


Fig. 1A

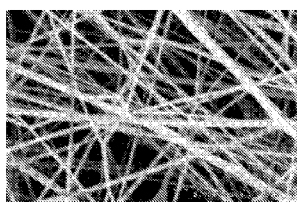


Fig. 1B

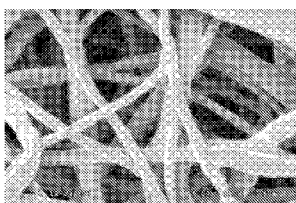


Fig. 1C

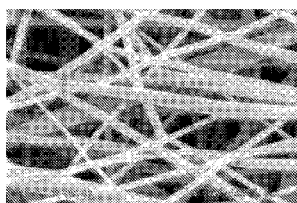


Fig. 1D

SEM images of photoreactive PCL nanofibers. A) 0%; B) 1%; C) 5%; D) 10%; scale bar 5 μ m;
 average diameter of a minimum of 20 fibers at different points $\pm$ SD.

(57) Abstract: A nanofiber is formed by combining one or more natural or synthetic polymeric materials and one or more than one cross-linking agents having at least two latent reactive activatable groups. The latent reactive activatable nanofiber may be used to modify the surface of a substrate by activating at least one of the latent reactive activatable groups to bond the nanofiber to the surface by the formation of a covalent bond between the surface of the substrate and the latent reactive activatable group. Some of the remaining latent reactive activatable group(s) are left accessible on the surface of the substrate, and may be used for further surface modification of the substrate. Biologically active materials may be immobilized on the nanofiber modified surface by reacting with the latent reactive groups that are accessible on the surface of the substrate.

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