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(54) Title of the Invention: Superhydrophobic surfaces using non-fluorinated compositions with plant-based materials

Abstract Title: Superhydrophobic surfaces using non-fluorinated compositions with plant-based materials

(57) A superhydrophobic surface includes a substrate treated with a composition including a hydrophobic matrix component free of fluorine; filler particles, wherein the filler particles are plant-based elements of a size ranging from 100 nm to 100 µm; and water, wherein the hydrophobic component is in an aqueous dispersion, and wherein the surface exhibits a water contact angle of 150° or greater. Also, a disposable absorbent article includes a substrate having a surface, the surface including a composition including a hydrophobic matrix component free of fluorine; filler particles, wherein the filler particles are plant-based elements of a size ranging from 100 nm to 100 µm, wherein the plant-based elements include micro- and nano-fibrillated cellulose; and water, wherein the hydrophobic component is in an aqueous dispersion, and wherein the surface exhibits a water contact angle of 150° or greater.

