

5. The apparatus of claim 1, further comprising one or more filters coupled to the first chamber, wherein the one or more filter remove unwanted by products from the first chamber.

6. The apparatus of claim 1, wherein the coating chemicals is fluoroalkylsilane with a general formula $[\text{CF}_3(\text{CF}_2)_a(\text{CH}_2)_b]\text{SiX}_{4-c}$, where $a = 0, 1, 2, \dots$ to 20, $b = 0, 1, 2, \dots$ to 10, $c = 1, 2$ or 3, $X = \text{Cl}, \text{Br}$, or I ; fluoroalkylsilane with a general formula $[\text{CF}_3(\text{CF}_2)_a(\text{CH}_2)_b]\text{SiX}_{4-c}$, where $a = 0, 1, 2, \dots$ to 20, $b = 0, 1, 2, \dots$ to 10, $c = 1, 2$ or 3, $X = \text{Cl}, \text{Br}$, or I ; alkylsilane with a general formula $[\text{CH}_3(\text{CH}_2)_a]\text{SiX}_{4-b}$, where $a = 0, 1, 2, \dots$ to 20, $b = 1, 2$ or 3, $X = \text{Cl}, \text{Br}$, or I ; alkoxyfluoroalkylsilane with a general formula $[\text{CF}_3(\text{CF}_2)_a(\text{CH}_2)_b]\text{Si}[\text{alkoxy}]_{4-c}$, where $a = 0, 1, 2, \dots$ to 20, $b = 0, 1, 2, \dots$ to 10, $c = 1, 2$ or 3, where the alkoxy group can be methoxy, ethoxy, propoxy, isopropoxy, butoxy, isobutoxy, or a combination thereof; or alkoxyalkylsilane with a general formula $[\text{CH}_3(\text{CH}_2)_a]\text{Si}[\text{alkoxy}]_{4-c}$, where $a = 0, 1, 2, \dots$ to 20, $b = 0, 1, 2, \dots$ to 10, $c = 1, 2$ or 3, where the alkoxy group can be methoxy, ethoxy, propoxy, isopropoxy, butoxy, isobutoxy, or a combination thereof.

7. The apparatus of claim 1, wherein the chemical verifier comprises
a verification chamber receiving the coating chemicals;
at least one optical excitation source coupled to the verification chamber, wherein the at least one optical excitation source excites the coating chemicals in the verification chamber; and

23. The method of claim 21, wherein the coating step is performed in a first chamber and the activating step is performed in a second chamber separate from the first chamber.

24. The method of claim 21, further comprising the step of venting during the activating or coating step to control an environment during the activating or coating step.

25. The method of claim 21, further comprising removing unwanted by products during the activating or coating step with one or more filters.

26. The method of claim 21, wherein the coating chemicals is fluoroalkylsilane with a general formula $[\text{CF}_3(\text{CF}_2)_a(\text{CH}_2)_b]_c\text{SiX}_{4-c}$, where $a = 0, 1, 2, \dots$ to 20, $b = 0, 1, 2, \dots$ to 10, $c = 1, 2$ or 3, $X = \text{Cl}, \text{Br},$ or I ; fluoroalkylsilane with a general formula $[\text{CF}_3(\text{CF}_2)_a(\text{CH}_2)_b]_c\text{SiX}_{4-c}$, where $a = 0, 1, 2, \dots$ to 20, $b = 0, 1, 2, \dots$ to 10, $c = 1, 2$ or 3, $X = \text{Cl}, \text{Br},$ or I ; alkylsilane with a general formula $[\text{CH}_3(\text{CH}_2)_a]_b\text{SiX}_{4-b}$, where $a = 0, 1, 2, \dots$ to 20, $b = 1, 2$ or 3, $X = \text{Cl}, \text{Br},$ or I ; alkoxyfluoroalkylsilane with a general formula $[\text{CF}_3(\text{CF}_2)_a(\text{CH}_2)_b]_c\text{Si}[\text{alkoxy}]_{4-c}$, where $a = 0, 1, 2, \dots$ to 20, $b = 0, 1, 2, \dots$ to 10, $c = 1, 2$ or 3, where the alkoxy group can be methoxy, ethoxy, propoxy, isopropoxy, butoxy, isobutoxy, or a combination thereof; or alkoxyalkylsilane with a general formula $[\text{CH}_3(\text{CH}_2)_a]_b\text{Si}[\text{alkoxy}]_{4-c}$, where $a = 0, 1, 2, \dots$ to 20, $b = 0, 1, 2, \dots$ to 10, $c = 1, 2$ or 3, where the alkoxy group can be methoxy, ethoxy, propoxy, isopropoxy, butoxy, isobutoxy, or a combination thereof.

27. The method of claim 21, wherein the preparing step further comprises