13. The apparatus of claim 1, further comprising a compressed air nozzle supplying compressed air towards the substrate, wherein the compressed air separates fibers of the substrate during deposition.

14. The apparatus of claim 1, further comprising:

a conveyor roller transporting the substrate, wherein the conveyor roller subjects the substrate to bending during deposition; and

a brush roller, wherein the brush roller separates fibers of the substrate during deposition.

15. The apparatus of claim 1, wherein the surface activator comprises one or more UV light sources, the one or more UV light sources generating ozone plasma in a vicinity of the substrate.

16. The apparatus of claim 1, further comprising a surface activation gas supply coupled to the first chamber, wherein the surface activation gas supply supplies surface activation gas utilized for activating the surface of the substrate.

17. The apparatus of claim 1, wherein the surface activator comprises a treatment head providing a dielectric positioned between a top electrode and bottom electrode and a power supply coupled to the top electrode and bottom electrode to create a corona discharge toward the substrate.

18. The apparatus of claim 1, further comprising a solution treatment system providing

a trough for a treatment solution, wherein the substrate is transported through the treatment solution; and

33. The method of claim 21, further comprising supplying compressed air to the substrate with a compressed air nozzle, wherein the compressed air separates fibers of the substrate during deposition.

34. The method of claim 21, further comprising transporting the substrate with a conveyor roller and a brush roller, wherein the conveyor roller subjects the substrate to bending during deposition, and the brush roller separates fibers of the substrate during deposition.

35. The method of claim 21, wherein the surface activator comprises one or more UV light sources, and the one or more UV light sources generating ozone plasma in a vicinity of the substrate.

36. The method of claim 21, further comprising supplying surface activation gas utilized for the activating step.

37. The method of claim 21, further comprising applying an alternating current across a dielectric positioned between two electrodes to provide corona discharge near the substrate to create a corona discharge toward the substrate.

38. The method of claim 21, further comprising:

transporting the substrate through a treatment solution; and

controlling a temperature of the treatment solution with coolant rods.

39. The method of claim 38, wherein the substrate is transported with a metal roller that is grounded.

40. The method of claim 38, further comprising blowing cold gas at an interface of the substrate and treatment solution.

41. The apparatus of claim 7, wherein the at least one optical excitation source include a UV source and IR source that simultaneously excite the coating chemicals.

42. The method of claim 27, wherein the at least one optical excitation source simultaneously excite the coating chemicals with a UV source and IR source during said exciting step.