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21. A method according to claim 8 wherein the laser beam has an energy density of 100 to 500 mJ/cm<sup>2</sup>.
22. A method according to claim 9 wherein the laser beam has an energy density of 100 to 500 mJ/cm<sup>2</sup>.
23. A method according to claim 10 wherein the laser beam has an energy density of 100 to 500 mJ/cm<sup>2</sup>.
24. A method according to claim 11 wherein the laser beam has an energy density of 100 to 500 mJ/cm<sup>2</sup>.
25. A method according to claim 12 wherein the laser beam has an energy density of 100 to 500 mJ/cm<sup>2</sup>.
26. A method according to claim 13 wherein the laser pulse has an energy density of 100 to 500 mJ/cm<sup>2</sup>.
27. A method according to claim 14 wherein the linear laser beam has an energy density of 100 to 500 mJ/cm<sup>2</sup>.
28. A method according to claim 15 wherein the linear laser beam has an energy density of 100 to 500 mJ/cm<sup>2</sup>.
29. A method according to claim 16 wherein the laser beam has an energy density of 100 to 500 mJ/cm<sup>2</sup>.
30. A method according to claim 17 wherein the linear laser beam has an energy density of 100 to 500 mJ/cm<sup>2</sup>.
31. A method according to claim 18 wherein the laser beam has an energy density of 100 to 500 mJ/cm<sup>2</sup>.
32. A method according to claim 18 wherein the water molecule is distributed on the surface of the semiconductor film in a gaseous state, a liquid state or a state where gas and liquid are coexistent.
33. A method according to claim 10 wherein the termination of the surface of the semiconductor film by hydrogen is carried out by cleaning the surface of the semiconductor film by an aqueous solution of a mixture of HF and H<sub>2</sub>O<sub>2</sub>.
34. A method according to claim 11 wherein the termination of the surface of the semiconductor film by hydrogen is carried out by cleaning the surface of the semiconductor film by an aqueous solution of a mixture of HF and H<sub>2</sub>O<sub>2</sub>.
35. A method according to claim 12 wherein the termination of the surface of the semiconductor film by hydrogen is carried out by cleaning the surface of the semiconductor film by an aqueous solution of a mixture of HF and H<sub>2</sub>O<sub>2</sub>.
36. A method according to claim 13 wherein the termination of the surface of the semiconductor film by hydrogen is carried out by cleaning the surface of the semiconductor film by an aqueous solution of a mixture of HF and H<sub>2</sub>O<sub>2</sub>.
37. A method according to claim 14 wherein the termination of the surface of the semiconductor film by hydrogen is carried out by cleaning the surface of the semiconductor film by an aqueous solution of a mixture of HF and H<sub>2</sub>O<sub>2</sub>.
38. A method according to claim 15 wherein the termination of the surface of the semiconductor film by hydrogen is carried out by cleaning the surface of the semiconductor film by an aqueous solution of a mixture of HF and H<sub>2</sub>O<sub>2</sub>.
39. A method according to claim 16 wherein the termination of the surface of the semiconductor film by hydrogen is carried out by cleaning the surface of the semiconductor film by an aqueous solution of a mixture of HF and H<sub>2</sub>O<sub>2</sub>.
40. A method according to claim 17 wherein the termination of the surface of the semiconductor film by hydrogen is carried out by cleaning the surface of the semiconductor film by an aqueous solution of a mixture of HF and H<sub>2</sub>O<sub>2</sub>.
41. A method according to claim 18 wherein the termination of the surface of the semiconductor film by hydrogen is carried out by cleaning the surface of the semiconductor film by an aqueous solution of a mixture of HF and H<sub>2</sub>O<sub>2</sub>.
42. A method of performing laser annealing comprising: crystallizing a non-single crystal semiconductor film by irradiating an excimer laser beam to the non-single crystal semiconductor film,

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- wherein the laser beam is irradiated to the non-single crystal semiconductor film in an atmosphere including at least oxygen and under a state where a surface of the non-single crystal semiconductor film is intentionally terminated by hydrogen.
43. A method of performing laser annealing comprising: promoting crystalline performance of a non-single crystal semiconductor film by irradiating an excimer laser beam to the non-single crystal semiconductor film, wherein the laser beam is irradiated to the non-single crystal semiconductor film in an atmosphere including at least oxygen and under a state where a surface of the non-single crystal semiconductor film is intentionally terminated by hydrogen.
44. A method of performing laser annealing comprising: forming a non-single crystalline semiconductor film over a substrate; introducing a catalytic element into or in contact with the non-single crystalline semiconductor film; crystallizing the on-single crystalline semiconductor film by heating after the introduction of the catalytic element; and promoting crystalline performance of the crystallized semiconductor film by irradiating an excimer laser beam to the semiconductor film, wherein the laser beam is irradiated to the semiconductor film in an atmosphere including at least oxygen and under a state where a surface of the semiconductor film is intentionally terminated by hydrogen.
45. A method of performing laser annealing comprising: crystallizing a non-single crystal semiconductor film by irradiating an excimer laser pulse to the non-single crystal semiconductor film, wherein the excimer laser pulse is irradiated to the non-single crystal semiconductor film in an atmosphere including at least oxygen and under a state where a surface of the non-single crystal semiconductor film is intentionally terminated by hydrogen.
46. A method of performing laser annealing comprising: crystallizing a non-single crystal semiconductor film by irradiating a linear excimer laser beam to the non-single crystal semiconductor film, wherein the linear excimer laser beam is irradiated to the non-single crystal semiconductor film in an atmosphere including at least oxygen and under a state where a surface of the non-single crystal semiconductor film is intentionally terminated by hydrogen.
47. A method of performing laser annealing comprising: crystallizing a non-single crystal semiconductor film by irradiating a linear excimer laser beam to the non-single crystal semiconductor film while scanning the linear excimer laser beam relatively to the semiconductor film, wherein the linear excimer laser beam is irradiated to the non-single crystal semiconductor film in an atmosphere including at least oxygen and under a state where a surface of the non-single crystal semiconductor film is intentionally terminated by hydrogen.