WHAT IS CLAIMED IS:

1. A method for plating a layer of a nickel alloy onto a substrate comprising a glass surface, as part of forming a magnetic recording media, comprising the following steps in order:

(a) providing the substrate comprising the glass surface;

(b) subjecting the glass surface of the substrate to mechanical roughening in order to create a roughened surface comprising a mean square roughness of between 0.1 nm and 1 nm;

(c) contacting the roughened surface of the substrate produced in step (b) with an oxidizing agent at a temperature of 50℃ to 100℃ for at least 15 minutes, thereby providing an oxidized surface having covalently bonded hydroxyl groups;

(d) contacting the oxidized surface produced in step (c) with a solution comprising a silane compound having one or more silanol groups, wherein the silane compound in the solution reacts with the covalently bonded hydroxyl group of the oxidized surface and is bonded to the glass surface by silanol bonds, thereby providing a silanized glass surface;

(e) contacting the silanized glass surface produced in step (d) with a solution comprising a mixture of palladium ions and tin ions ("Pd/Sn solution"), wherein palladium from the Pd/Sn solution is deposited on the silanized glass surface, thereby forming an activated surface;

(f) contacting the activated surface produced in step (e) with an accelerator solution comprising sodium nitrate and oxalic acid;

(g) contacting the substrate surface produced by step (f) with a nickel ion-containing solution having a pH from 8 to 10, and a temperature of between 20ºC and 30ºC for a period of time sufficient to form a seed layer of nickel on the substrate surface produced by step (f) in order to perform an electroless nickel strike step; and

(h) contacting the seed layer produced by step (g) with a nickel ion-containing solution having a pH from 4 to 6, and a temperature of between 40ºC and 80ºC, for a period of time sufficient to produce the layer of nickel alloy comprising a final thickness from about 2 micrometers to 5 micrometers.

2. The method of claim 1, wherein the substrate is formed from a glass material and the glass surface is the surface of the substrate.

3. The method of claim 2, wherein the glass material is a silicate glass, a soda lime glass, an alkali-free glass, an aluminosilicate glass, a borosilicate glass, or an aluminoborosilicate glass.

4. The method of claim 2, wherein the glass material is amorphous glass.

5. The method of claim 2, wherein the glass material is partially crystallized.

6. The method of claim 1, wherein the step of subjecting the glass surface of the substrate to mechanical roughening comprises applying an abrasive material to the surface.

7. The method of claim 6, wherein the abrasive material is a slurry of microparticles having diameters of between 4 μm and 10 μm.

8. The method of claim 1, wherein the step of subjecting the glass surface of the substrate to mechanical roughening further comprises contacting the substrate surface with a corrosive chemical.

9. The method of claim 1, further comprising before step (c) the step of removing contaminants from the glass surface of the substrate.

10. The method of claim 1, wherein the oxidizing agent is selected from the group consisting of solutions of H_2SO_4, H_2O_2, HNO_3, chromic acid, $KMnO_4$, and combinations of two or more of the foregoing.

11. The method of claim 1, wherein the silane compound is selected from the group consisting of aminosilane, 3-(2-aminoethylamino)propyltrimethoxysilane (EDAS), 3- 2-(2-aminoethylamino) ethylamino propyl trimethoxysilane (ETAS), and (3-aminopropyl)triethoxysilane (APTES).

12. The method of claim 1, wherein the solution comprising a silane compound has a pH of between 10 and 12.

13. The method of claim 1, wherein the palladium and tin in the Pd/Sn solution are provided as $PdCl_2$ and $SnCl_2$.

14. The method of claim 1, wherein the Sn concentration in the Pd/Sn solution is between 2.0 g/L and 8.0 g/L.

15. The method of claim 1, wherein the Pd/Sn solution is contacted with the silanized glass surface at a temperature of between 20ºC and 40ºC.

16. The method of claim 1, wherein the nickel ion-containing solution of step (h) comprises sodium hypophosphite.

17. The method of claim 1, further comprising depositing one or more additional materials onto the substrate to form a magnetic recording layer.