CLAIMS

I/we claim,

1. A memory cell, comprising:

a conductive gate comprising ruthenium;

a charge-blocking region adjacent the conductive gate;

a charge-storage region adjacent the charge-blocking region;

a tunneling material adjacent the charge-storage region;

a channel material adjacent the tunneling material; and

wherein the conductive gate comprises:

a conductive core material comprising one or more metals other than the ruthenium;

a second conductive material adjacent the conductive core material and comprising at least one metal nitride; and;

a third conductive material adjacent the second conductive material and comprising the ruthenium.

2. The memory cell of claim 1 comprising a dielectric barrier material directly against the ruthenium of the conductive gate, and between the charge-blocking region and the conductive gate.

3. The memory cell of claim 1 wherein the channel material comprises one or more of silicon, germanium, III/V semiconductor material, and semiconductor oxide.

4. The memory cell of claim 1 wherein the channel material comprises silicon.

5. The memory cell of claim 1 wherein the conductive gate consists of the ruthenium.

6. The memory cell of claim 1 wherein the conductive gate comprises:

the conductive core material comprising one or more metals other than the ruthenium; and

the second conductive material adjacent a periphery of the conductive core material and comprising the ruthenium.

7. The memory cell of claim 6 wherein the conductive core material consists of said one or more metals other than the ruthenium.

8. The memory cell of claim 6 wherein the conductive core material includes one or both of tungsten and molybdenum.

9. The memory cell of claim 1 wherein a dielectric barrier material is adjacent the third conductive material.

10. The memory cell of claim 1 wherein the conductive gate comprises:

the conductive core material comprising the one or more metals other than the ruthenium;

the second conductive material adjacent the conductive core material and comprising one both of titanium and tungsten; and

the third conductive material adjacent the second conductive material and comprising the ruthenium.

11. The memory cell of claim 10 wherein:

the conductive core material consists of tungsten;

the second conductive material comprises one or both of titanium nitride and tungsten nitride; and

the third conductive material consists of the ruthenium.

12. An assembly, comprising:

a vertical stack of alternating insulative levels and wordline levels, the wordline levels comprising conductive wordline material which includes ruthenium;

semiconductor material extending through the stack as a channel structure;

charge-storage regions between the conductive wordline material and the channel structure;

charge-blocking regions between the charge-storage regions and the conductive wordline material; and

wherein the conductive wordline material comprises:

a conductive core material comprising one or more metals other than the ruthenium;

a second conductive material adjacent the conductive core material and comprising at least one metal nitride; and

a third conductive material adjacent the second conductive material and comprising the ruthenium.

13. The assembly of claim 12 wherein the conductive wordline material consists of the ruthenium.

14. The assembly of claim 12 wherein the semiconductor material comprises silicon.

15. The assembly of claim 12 wherein the conductive wordline material comprises:

the conductive core material which does not include the ruthenium; and

the second conductive material adjacent a periphery of the conductive core material and comprising the ruthenium.

16. The assembly of claim 15 wherein the conductive core material includes one or more metals.

17. The assembly of claim 15 wherein the conductive core material consists of tungsten.

18. The assembly of claim 15 wherein the conductive core material consists of molybdenum and tungsten.

19. The assembly of claim 12 wherein a dielectric barrier material is adjacent the third conductive material.

20. The assembly of claim 12 wherein:

the conductive core material consists of one or both of tungsten and molybdenum;

the second conductive material comprises one or both of titanium nitride and tungsten nitride; and

the third conductive material consists of the ruthenium.