CLAIMS:

1. An inkjet printhead for ejecting drops of liquid on to a media substrate, the inkjet printhead comprising:

a chamber for holding liquid;

a nozzle in fluid communication with the chamber;

a heater positioned in the chamber for thermal contact with the liquid such that resistive heating of the heater generates a vapour bubble that ejects a drop of the liquid through the nozzle; wherein,

the heater is formed from a TiAlX alloy where Ti contributes more than 40% by weight, Al contributes more than 40% by weight and X contributes less than 5% by weight and comprises zero or more of Ag, Cr, Mo, Nb, Si, Ta and W.

2. An inkjet printhead according to claim 1 wherein X is W.

3. A MEMS vapor bubble generator according to claim 1 wherein X includes W which contributes between 1.7% and 4.5% by weight.

4. An inkjet printhead according to claim 1 wherein Ti contributes more than 48% by weight, Al contributes more than 48% by weight and X is 0% by weight.

5. An inkjet printhead according to claim 1 wherein the TiAl component of the heater has a gamma phase structure.

6. An inkjet printhead according to claim 1 wherein the heater has a microstructure with a grain size less than 100 nanometres.

7. An inkjet printhead according to claim 1 wherein during use, the TiAlX alloy forms an Al_2O_3 surface oxide which directly contacts the liquid.

8. An inkjet printhead according to claim 1 wherein the TiAlX alloy is deposited as a layer less than 2 microns thick.

9. An inkjet printhead according to claim 8 wherein the layer is less than 0.5 microns thick.

10. An inkjet printhead according to claim 1 wherein the heater further comprises a protective coating, the protective coating having a total thickness less than 0.5 microns.

11. An inkjet printhead according to claim 10 wherein the protective coating is a single layer of material.

12. An inkjet printhead according to claim 10 wherein the protective coating is at least partially formed from a silicon oxide, nitride or carbide.

CLAIMS:

1. An inkjet printhead for ejecting drops of liquid on to a media substrate, the inkjet printhead comprising:

a chamber for holding liquid;

a nozzle in fluid communication with the chamber;

a heater positioned in the chamber for thermal contact with the liquid such that resistive heating of the heater generates a vapour bubble that ejects a drop of the liquid through the nozzle; wherein,

the heater is formed from a TiAlX alloy where Ti contributes more than 40% by weight, Al contributes more than 40% by weight and X contributes less than 5% by weight and comprises zero or more of Ag, Cr, Mo, Nb, Si, Ta and W, wherein the heater has a microstructure with a grain size less than 100 nanometres.

2. An inkjet printhead according to claim 1 wherein X is W.

3. An inkjet printhead according to claim 1 wherein X includes W which contributes between 1.7% and 4.5% by weight.

4. An inkjet printhead according to any one of the preceding claims wherein Ti contributes more than 48% by weight, Al contributes more than 48% by weight and X is 0% by weight.

5. An inkjet printhead according to any one of the preceding claims wherein the TiAl component of the heater (10) has a gamma phase structure.

6. An inkjet printhead according to any one of the preceding claims wherein during use, the TiAlX alloy forms an Al_2O_3 surface oxide which directly contacts the liquid.

7. An inkjet printhead according to any one of the preceding claims wherein the TiAlX alloy is deposited as a layer less than 2 microns thick.

8. An inkjet printhead according to claim 7 wherein the layer is less than 0.5 rnicrons thick.

9. An inkjet printhead according to any one of the preceding claims wherein the heater further comprises a protective coating, the protective coating having a total thickness less than 0.5 microns.

10. An inkjet printhead according to claim 9 wherein the protective coating is a single layer of material.

11. An inkjet printhead according to claim 9 or claim 10 wherein the protective coating is at least partially formed from a silicon oxide, nitride or carbide.