CLAIMS

1. A 3N copper wire with trace additions for bonding in microelectronics comprising ~~one or more of a group of~~ at least one of Ag~~, Ni, Pd, Au, Pt,~~ and Cr as corrosion resistance addition material, wherein a concentration of said corrosion resistance addition material is between ~~about~~ 90wt.ppm to ~~about~~ 980wt.ppm.

2. The 3N copper wire as claimed in claim 1, wherein the corrosion resistance addition material comprises ~~about~~ 90wt.ppm to ~~about~~ 980wt.ppm of Ag.

~~3. The 3N copper wire as claimed in claim 1, wherein the corrosion resistance addition material comprises about 90wt.ppm to about 980wt.ppm of Ni.~~

~~4. The 3N copper wire as claimed in claim 1, wherein the corrosion resistance addition material comprises about 90wt.ppm to about 980wt.ppm of Pd.~~

~~5. The 3N copper wire as claimed in claim 1, wherein the corrosion resistance addition material comprises about 90wt.ppm to about 980wt.ppm of Au.~~

~~6. The 3N copper wire as claimed in claim 1, wherein the corrosion resistance addition material comprises about 90wt.ppm to about 980wt.ppm of Pt.~~

~~7~~3. The 3N copper wire as claimed in claim 1, wherein the corrosion resistance addition material comprises ~~about~~ 90wt.ppm to ~~about~~ 980wt.ppm of Cr.

~~8~~4. The 3N copper wire as claimed in claim 1, wherein the corrosion resistance addition material comprises ~~about~~ 10wt.ppm to ~~about~~ 50wt.ppm of Ag, ~~about~~ 10wt.ppm to ~~about~~ 50wt.ppm of Ni, and ~~about~~ 10wt.ppm to ~~about~~ 880wt.ppm of Pd.

~~9~~5. The 3N copper wire as claimed in claim 1, wherein the corrosion resistance addition material comprises ~~about~~ 10wt.ppm to ~~about~~ 300wt.ppm of Ag and ~~about~~ 10wt.ppm to ~~about~~ 100wt.ppm of Ni.

~~10~~6. The 3N copper wire as claimed in claim 1, wherein the corrosion resistance addition material comprises ~~about~~ 10wt.ppm to ~~about~~ 300wt.ppm of Ag, ~~about~~ 10wt.ppm to ~~about~~ 100wt.ppm of Ni, and ~~about~~ 10wt.ppm to ~~about~~ 580wt.ppm of Pd.

~~11~~7. The 3N copper wire as claimed in claim 1, wherein the corrosion resistance addition material comprises ~~about~~ 10wt.ppm to ~~about~~ 300wt.ppm of Ag and ~~about~~ 10wt.ppm to ~~about~~ 200wt.ppm of Ni.

~~12~~8. The 3N copper wire as claimed in claim 1, wherein the corrosion resistance addition material comprises ~~about~~ 10wt.ppm to ~~about~~ 300wt.ppm of Ag, ~~about~~ 10wt.ppm to ~~about~~ 200wt.ppm of Ni, and ~~about~~ 10wt.ppm to ~~about~~ 480wt.ppm of Pd.

~~13~~9. The 3N copper wire as claimed in claim 1, wherein the corrosion resistance addition material comprises ~~about~~ 10wt.ppm to ~~about~~ 50 wt.ppm of Ag, ~~about~~ 10wt.ppm to ~~about~~ 50 wt.ppm of Ni, and ~~about~~ 10wt.ppm to ~~about~~ 50wt.ppm of Pd.

~~14~~10. The 3N copper wire as claimed in claim 1, wherein the corrosion resistance addition material comprises ~~about~~ 10wt.ppm to ~~about~~ 50 wt.ppm of Ag, ~~about~~ 10wt.ppm to ~~about~~ 50 wt.ppm of Ni, and ~~about~~ 10wt.ppm to ~~about~~ 50wt.ppm of Cr.

~~15~~11. The 3N copper wire as claimed in claim 1, wherein the corrosion resistance addition material comprises ~~about~~ 10wt.ppm to ~~about~~ 50 wt.ppm of Ag, ~~about~~ 10wt.ppm to ~~about~~ 50 wt.ppm of Ni, ~~about~~ 10wt.ppm to ~~about~~ 50wt.ppm of Pd, and ~~about~~ 10wt.ppm to ~~about~~ 50wt.ppm of Cr.

~~16~~12. The 3N copper wire as claimed in claim 1, wherein the corrosion resistance addition material comprises ~~about~~ 10wt.ppm to ~~about~~ 300 wt.ppm of Ag, ~~about~~ 10wt.ppm to ~~about~~ 100 wt.ppm of Ni, and ~~about~~ 10wt.ppm to ~~about~~ 530wt.ppm of Pd.

~~17~~13. The 3N copper wire as claimed in claim 1, wherein the corrosion resistance addition material comprises ~~about~~ 10wt.ppm to ~~about~~ 300 wt.ppm of Ag, ~~about~~ 10wt.ppm to ~~about~~ 100 wt.ppm of Ni, ~~about~~ 10wt.ppm to ~~about~~ 50wt.ppm of Pd,

~~about~~ 10wt.ppm to ~~about~~ 50 wt.ppm of Au, ~~about~~ 10wt.ppm to ~~about~~ 50wt.ppm of Pt, and ~~about~~ 10wt.ppm to ~~about~~ 50wt.ppm of Cr.

~~18~~14. The 3N copper wire as claimed in claim ~~13~~9, further comprising ~~about~~ 3wt.ppm to ~~about~~ 15wt.ppm of a deoxidizer addition material.

~~19~~15. The 3N copper wire as claimed in claim ~~18~~14, wherein the deoxidizer addition material comprises ~~about~~ 1wt.ppm to ~~about~~ 5wt.ppm of Ca and Ce, ~~about~~ 1wt.ppm to ~~about~~ 5wt.ppm of Mg and La, and ~~about~~ 1wt.ppm to ~~about~~ 5wt.ppm of Al.

~~20~~16. The 3N copper wire as claimed in claim ~~13~~9 or ~~15~~11, further comprising ~~about~~ 10wt.ppm to ~~about~~ 80wt.ppm of a deoxidizer addition material.

~~21~~17. The 3N copper wire as claimed in claim ~~20~~16, wherein the deoxidizer addition material comprises ~~about~~ 10wt.ppm to ~~about~~ 80wt.ppm of P.

~~22~~18. The 3N copper wire as claimed in claim ~~17~~13, further comprising ~~about~~ 13wt.ppm to ~~about~~ 95wt.ppm of a deoxidizer addition material.

~~23~~19. The 3N copper wire as claimed in claim ~~22~~18, wherein the deoxidizer addition material comprises ~~about~~ 1wt.ppm to ~~about~~ 5wt.ppm of Ca and Ce, ~~about~~ 1wt.ppm to ~~about~~ 5wt.ppm of Mg and La, ~~about~~ 1wt.ppm to ~~about~~ 5wt.ppm of Al, and ~~about~~ 10wt.ppm to ~~about~~ 80wt.ppm of P.

~~24~~20. The 3N copper wire as claimed in claim ~~13~~9, further comprising ~~about~~ 30wt.ppm to ~~about~~ 290wt.ppm of a grain refiner addition material.

~~25~~21. The 3N copper wire as claimed in claim ~~24~~20, wherein the grain refiner addition material comprises ~~about~~ 10wt.ppm to ~~about~~ 200wt.ppm of Fe, ~~about~~ 10wt.ppm to ~~about~~ 50wt.ppm of B, ~~about~~ 5wt.ppm to ~~about~~ 20wt.ppm of Zr, and ~~about~~ 5wt.ppm to ~~about~~ 20wt.ppm of Ti.

~~26~~22. The 3N copper wire as claimed in claim ~~16~~12, further comprising ~~about~~ 10wt.ppm to ~~about~~ 100wt.ppm of a grain refiner addition material.

~~27~~23. The 3N copper wire as claimed in claim ~~26~~22, wherein the grain refiner addition material comprises ~~about~~ 10wt.ppm to ~~about~~ 100wt.ppm of B.

~~28~~24. The 3N copper wire as claimed in claim ~~23~~19, further comprising ~~about~~ 30wt.ppm to ~~about~~ 260wt.ppm of a grain refiner addition material.

~~29~~25. The 3N copper wire as claimed in claim ~~28~~24, wherein the deoxidizer addition material comprises ~~about~~ 10wt.ppm to ~~about~~ 200wt.ppm of Fe, ~~about~~ 10wt.ppm to ~~about~~ 20wt.ppm of B, ~~about~~ 5wt.ppm to ~~about~~ 20wt.ppm of Zr, and ~~about~~ 5wt.ppm to ~~about~~ 20wt.ppm of Ti.

~~30~~26. The 3N copper wire as claimed in any one of the preceding claims, further comprising ~~about~~ 1 to ~~about~~ 3wt.ppm of S.