CLAIMS

1. An electron microscopy sample support comprising:

a metal support member comprising a plurality of spaced support elements arranged to form a mesh; and

a metal foil comprising a porous region;

the support member being configured to give structural stability to the metal foil, and the porous region of the metal foil being configured to receive an electron microscopy sample, in which the support member, plurality of spaced support elements and metal foil are all formed from the same metal and in which the metal foil has a minimum thickness greater than an average size of evaporated metal crystal grains of the foil.

2. An electron microscopy sample support according to Claim 1, in which the metal foil has a thickness selected to be at least the smallest dimension of the electron microscopy sample.

3. An electron microscopy sample support according to Claim 1 or 2, in which the metal foil is gold and has a thickness of at least 5×10^{-8} m.

4. An electron microscopy sample support according to Claim 1, 2 or 3, in which the metal foil is arranged to be in ohmic contact with the support member.

5. An electron microscopy sample support according to any preceding claim, in which the metal comprises at least one of: a metal having a high conductivity; a metal having a high secondary electron generation yield; a metal having a high mechanical stability; a non reactive metal; a metal compatible with a biological electron microscopy sample.

6. An electron microscopy sample support according to any of Claims 1 and 2 and 4 and 5 when not dependent on Claim 3, in which the metal comprises at least one of: gold, platinum, palladium, rhodium or hafnium.

7. An electron microscopy sample support according to any preceding claim, in which the porous region of the metal foil comprises a layer of metal including a plurality of holes.

8. An electron microscopy sample support according to Claim 7, in which each of the holes are dimensioned to receive at least one the electron microscopy sample.

9. An electron microscopy sample support according to any preceding claim, in which the porous region of the metal foil is arranged to extend across a region of the plurality of spaced support elements.

10. An electron microscopy sample support according to any preceding claim, in which the support further comprises a graphene layer.

11. An electron microscopy sample support according to Claim 10, in which the graphene layer is configured to extend across pores in the porous region of the metal foil.

12. An electron microscopy sample support according to Claim 10 or 11, in which the graphene layer is configured to be in ohmic contact with the metal foil.

13. An electron microscopy sample support according to Claim 10, 11 or 12, in which the graphene layer is configured to support the electron microscopy sample.

14. An electron microscopy sample support according to any preceding claim, in which pores in the porous region are configured to receive a radiation sensitive material to be examined using electron microscopy.

15. A method of manufacturing an electron microscopy sample support, the method comprising: providing a metal support member comprising a plurality of spaced support elements arranged to form a mesh; and a metal foil comprising a porous region; in which the support member, plurality of spaced support elements and metal foil are all formed from the same metal, and in which the metal foil has a minimum thickness greater than an average size of evaporated metal crystal grains of the foil, configuring the support member to give structural stability to the metal foil, and configuring the porous region of the metal foil to receive an electron microscopy sample.

16. A method of imaging an electron microscopy sample comprising:

configuring the electron microscopy sample on a support according to any of Claims 1 to 14; arranging the support in an electron beam of an microscope; and collecting image data for analysis.

17. Imaging apparatus operable to provide an electron microscopy image of a sample, the apparatus comprising:

an electron microscopy sample mounted on a support according to any of Claims 1 to 14; an electron beam of a microscope arranged to be incident on the support; and a collection device operable to collect image data for analysis.