

What is claimed is:

1. An extreme ultraviolet (EUV) mask blank comprising:
 - a substrate;
 - 5 a multilayer stack which reflects EUV radiation, the multilayer stack comprising a plurality of reflective layer pairs;
 - a capping layer on the multilayer stack which reflects UV radiation; and
 - an absorber on the capping layer, the absorber comprising a first layer selected from the group consisting of Mo, Nb, V, alloys of Mo, Nb and V, oxides of Mo, oxides of Nb, oxides of V, nitrides of Mo, nitrides of Nb and nitrides of V
 - 10 and a second layer selected from the group consisting of TaSb, CSb, SbN, TaNi, TaCu and TaRu.
2. The EUV mask blank of claim 1, wherein the second layer comprises TaSb.
- 15 3. The EUV mask blank of claim 2, wherein the TaSb comprises a range of from about 21.9 wt.% to about 78.2 wt.% tantalum and a range of from about 21.8 wt.% to about 78.1 wt.% antimony.
- 20 4. The EUV mask blank of claim 1, wherein the second layer comprises CSb.
5. The EUV mask blank of claim 4, wherein the CSb comprises a range of from about 0.3 wt.% to about 3.6 wt.% carbon and a range of from about 96.4 wt.% to about 99.7 wt.% antimony, or a range of from about 5.0 wt.% to about 10.8 wt.% carbon and a range of from about 89.2 wt.% to about 95.0 wt.% antimony.
- 25 6. The EUV mask blank of claim 1, wherein the second layer comprises SbN.
7. The EUV mask blank of claim 6, wherein the SbN comprises a range of from about 78.8 wt.% to about 99.8 wt.% antimony and a range of from about 0.2 wt.% to about 21.2 wt.% nitrogen.
- 30 8. The EUV mask blank of claim 1, wherein the second layer comprises TaNi.

9. The EUV mask blank of claim 8, wherein the TaNi comprises a range of from about 56.9 wt.% to about 94.6 wt.% tantalum and a range of from about 5.4 wt.% to about 43.1 wt.% nickel.
- 5 10. The EUV mask blank of claim 1, wherein the second layer comprises TaCu.
11. The EUV mask blank of claim 10, wherein the TaCu comprises a range of from about 74.0 wt.% to about 94.2 wt. % tantalum and a range of from about 5.8 wt.% to about 26.0 wt.% copper, or a range of from about 13.0 wt.% to about 65.0 wt.% tantalum and a range of from about 35.0 wt.% to 87.0 wt.% copper.
- 10 12. The EUV mask blank of claim 1, wherein the second layer comprises TaRu.
- 15 13. The EUV mask blank of claim 12, wherein the TaRu comprises a range of from about 30.9 wt.% to about 80.7 wt.% tantalum and a range of from about 19.3 wt.% to about 69.1 wt.% ruthenium.
- 20 14. A method of manufacturing an extreme ultraviolet (EUV) mask blank comprising:
forming on a substrate a multilayer stack which reflects EUV radiation, the multilayer stack comprising a plurality of reflective layer pairs;
forming a capping layer on the multilayer stack; and
forming an absorber on the capping layer, the absorber comprising a
25 first layer selected from the group consisting of Mo, Nb, V, alloys of Mo, Nb and V, oxides of Mo, oxides of Nb, oxides of V, nitrides of Mo, nitrides of Nb and nitrides of V and a second layer selected from the group consisting of TaSb, CSb, SbN, TaNi, TaCu and TaRu.
- 30 15. The method of claim 14, wherein the second layer comprises TaSb comprising a range of from about 21.9 wt.% to about 78.2 wt.% tantalum and a range of from about 21.8 wt.% to about 78.1 wt.% antimony.

16. The method of claim 14, wherein the second layer comprises CSb comprising a range of from about 0.3 wt.% to about 3.5 wt.% carbon and a range of from about 96.5 wt.% to about 99.7 wt.% antimony, or a range of from about 5 wt.% to about 10.8 wt.% carbon and a range of from about 89.2 wt.% to about 95 wt.% antimony.
17. The method of claim 14, wherein the second layer comprises SbN comprising a range of from about 78.8 wt.% to about 99.8 wt.% antimony and a range of from about 0.2 wt.% to about 21.2 wt.% nitrogen.
18. The method of claim 14, wherein the second layer comprises TaNi comprising a range of from about 56.9 wt.% to about 94.6 wt.% tantalum and a range of from about 5.4 wt.% to about 43.1 wt.% nickel.
19. The method of claim 14, wherein the second layer comprises TaCu comprising a range of from about 74.0 wt.% to about 94.2 wt. % tantalum and .a range of from about 5.8 wt.% to about 26.0 wt.% copper, or a range of from about 13.0 wt.% to about 65.0 wt.% tantalum and a range of from about 35.0 wt.% to 87.0 wt.% copper.
20. The method of claim 14, wherein the second layer comprises TaRu comprising a range of from about 30.9 wt.% to about 80.7 wt.% tantalum and a range of from about 19.3 wt.% to about 69.1 wt.% ruthenium.