**Claims**

1. A metrology target comprising:

a first target structure configured in accordance with a metrology recipe, wherein the first target structure is formed within at least one of a first area and a third area of a first layer of a sample, the first target structure comprising two or more first cells each containing two or more first cell pattern elements arranged periodically; and

a second target structure configured in accordance with the metrology recipe, wherein the second target structure is formed within at least one of a second area and a fourth area of a second layer of the sample, the second target structure comprising two or more second cells containing two or more second cell pattern elements arranged periodically, wherein the second target structure is formed from a photoresist material with sufficient thickness to induce asymmetry in at least some of the second cell pattern elements when fabricated in accordance with the metrology recipe, wherein at least one of a size or a number of the second cell pattern elements is selected in accordance with the metrology recipe to provide that an overlay value for the metrology target mitigates the asymmetry in the at least some of the second cell pattern elements when the overlay value is determined in accordance with the metrology recipe based on one or more images of the metrology target from an optical metrology tool by computing a difference between a center of gravity of the first layer and a center of gravity of the second layer based on averaged individual center of gravity values of each of the first cell pattern elements and the second cell pattern elements

2. The metrology target of Claim 1, wherein the first target structure is two-fold rotationally symmetric to the second target structure about a common center of rotational symmetry on the sample.

3. The metrology target of Claim 2, wherein the plurality of first cells comprises one or more first periodically patterned grids, and wherein the one or more first periodically patterned grids include the one or more first cell pattern elements.

4. The metrology target of Claim 2, wherein the plurality of second cells comprises one or more second periodically patterned grids, and wherein the one or more second periodically patterned grids include the one or more second cell pattern elements.

5. The metrology target of Claim 1, wherein the one or more first cell pattern elements are compatible with an optical metrology mode.

6. The metrology target of Claim 1, wherein the one or more second cell pattern elements are compatible with an optical metrology mode.

7. A system comprising:

a controller communicatively couplable to one or more metrology sub-systems, wherein the controller including one or more processors, wherein the one or more processors are configured to execute a set of program instructions maintained in memory when implementing a metrology recipe, wherein the set of program instructions is configured to cause the one or more processors to:

receive, from the one or more metrology sub-systems, one or more images indicative of illumination emanating from one or more metrology targets of a sample when implementing the metrology recipe, wherein the one or more metrology targets of the sample comprise:

a first target structure configured in accordance with the metrology recipe, wherein the first target structure is formed within at least one of a first area and a third area of a first layer of a sample, the first target structure comprising two or more first cells containing two or more first cell pattern elements arranged periodically; and

a second target structure configured in accordance with the metrology recipe, wherein the second target structure is formed within at least one of a second area and a fourth area of a second layer of the sample, the second target structure comprising two or more second cells containing two or more

second cell pattern elements arranged periodically, wherein the second target structure is formed from a photoresist material with sufficient thickness to induce asymmetry in at least some of the second cell pattern elements when fabricated;

determine a center of gravity for each of the two or more first cells based on averaging individual center of gravity positions of each of the associated first cell pattern elements from the one or more images;

determine a center of gravity of the first layer based on averaging the centers of gravity for the two or more first cells;

determine a center of gravity for each of the two or more second cells based on averaging individual center of gravity positions of each of the associated second cell pattern elements from the one or more images;

determine a center of gravity of the second layer based on averaging the centers of gravity for the two or more second cells;

determine an overlay value of the sample by computing a difference between the center of gravity of the first layer and the center of gravity of the second layer.

8. The system of Claim 7, wherein the first target structure is two-fold rotationally symmetric to the second target structure about a common center of rotational symmetry on the sample.

9. The system of Claim 8, wherein the plurality of first cells comprises one or more first periodically patterned grids, and wherein the one or more first periodically patterned grids include the one or more first cell pattern elements.

10. The system of Claim 8, wherein the plurality of second cells comprises a second plurality of periodically patterned grids, and wherein the second plurality of periodically patterned grids includes the one or more second cell pattern elements.

11. The system of Claim 7, wherein the one or more first cell pattern elements are compatible with an optical metrology mode.

12. The system of Claim 7, wherein the one or more second cell pattern elements are compatible with an optical metrology mode.

13. A method of measuring overlay of a sample, comprising:

illuminating a sample including one or more metrology targets when implementing a metrology recipe, the one or more metrology targets comprising:

a first target structure configured in accordance with the metrology recipe, wherein the first target structure is formed within at least one of a first area and a third area of a first layer of a sample, the first target structure comprising two or more first cells containing two or more first cell pattern elements arranged periodically; and

a second target structure configured in accordance with the metrology recipe, wherein the second target structure is formed within at least one of a second area and a fourth area of a second layer of the sample, the second target structure comprising two or more second cells containing two or more second cell pattern elements arranged periodically, wherein the second target structure is formed from a photoresist material with sufficient thickness to induce asymmetry in at least some of the second cell pattern elements when fabricated;

generating one or more images based on illumination emanating from the one or more metrology targets of the sample in accordance with the metrology recipe;

determining a center of gravity for each of the two or more first cells based on averaging individual center of gravity positions of each of the associated first cell pattern elements from the one or more images;

determining a center of gravity of the first layer based on averaging the centers of gravity for the two or more first cells;

determining a center of gravity for each of the two or more second cells based on averaging individual center of gravity positions of each of the associated second cell pattern elements from the one or more images;

determining a center of gravity of the second layer based on averaging the centers of gravity for the two or more second cells; and

determining an overlay value of the sample by computing a difference between the center of gravity of the first layer and the center of gravity of the second layer.

14. The method of Claim 13, wherein the first target structure is two-fold rotationally symmetric to the second target structure about a common center of rotational symmetry on the sample.

15. The method Claim 14, wherein the plurality of first cells comprises one or more first periodically patterned grids, and wherein the one or more first periodically patterned grids include the one or more first cell pattern elements.

16. The method of Claim 14, wherein the plurality of second cells comprises one or more second periodically patterned grids, and wherein the one or more second periodically patterned grids include the one or more second cell pattern elements.

17. The method of Claim 13, wherein the one or more first cell pattern elements are compatible with an optical metrology mode.

18. The method of Claim 13, wherein the one or more second cell pattern elements are compatible with an optical metrology mode.

19. A method comprising:

forming a first target structure on a sample in accordance with a metrology recipe, wherein the first target structure is formed within at least one of a first area and a third area of a first layer of a sample, the first target structure comprising two or more first cells containing two [[one]]] or more first cell pattern elements arranged periodically;

forming a second target structure on the sample from a photoresist material in accordance with the metrology recipe, wherein the second target structure is formed within at least one of a second area and a fourth area of a second layer of the sample, the second target structure comprising two or more second cells containing two one or more second cell pattern elements arranged periodically, wherein the second target structure is formed from a photoresist material with sufficient thickness to induce asymmetry in at least some of the second cell pattern elements when fabricated; and

receiving one or more images of the first and second target structures from an optical metrology tool;

determining a center of gravity for each of the two or more first cells based on averaging individual center of gravity positions of each of the associated first cell pattern elements from the one or more images;

determining a center of gravity of the first layer based on averaging the centers of gravity for the two or more first cells;

determining a center of gravity for each of the two or more second cells based on averaging individual center of gravity positions of each of the associated second cell pattern elements from the one or more images;

determining a center of gravity of the second layer based on averaging the centers of gravity for the two or more second cells; and

determining an overlay value of the sample from the first target structure and the second target structure by computing a difference between the center of gravity of the first layer and the center of gravity of the second layer.

20. The method of Claim 19, wherein the first target structure is two-fold rotationally symmetric to the second target structure about a common center of rotational symmetry on the sample.

21. The method of Claim 20, wherein the plurality of first cells comprises one or more first periodically patterned grids, and wherein the one or more first periodically patterned grids include the one or more first cell pattern elements.

22. The method of Claim 20, wherein the plurality of second cells comprises one or more second periodically patterned grids, and wherein the one or more second periodically patterned grids include the one or more second cell pattern elements.

23. The method of Claim 19, wherein the one or more first cell pattern elements are compatible with an optical metrology mode.

24. The method of Claim 19, wherein the one or more second cell pattern elements are compatible with an optical metrology mode.