~~What is claimed is:~~

1. An integrated circuit system comprising:

providing a first mask including a first feature;

exposing the first mask to a radiation source to form an image of the first feature on a photoresist material that is larger than a structure to be formed, the photoresist material being formed over a substrate that includes the integrated circuit system;

providing a second mask including a second feature;

aligning the second mask over the image of the first mask to form an overlap region; and

exposing the second mask to the radiation source to form an image of the second feature on the photoresist material that is larger than the structure to be formed.

2. The system as claimed in claim 1 wherein:

exposing the first mask to the radiation source and exposing the second mask to the radiation source includes exposing the first mask and the second mask to dipole illumination.

3. The system as claimed in claim 1 further comprising:

configuring the first feature and the second feature to include rectangular openings.

4. The system as claimed in claim 1 further comprising:

configuring the first mask and the second mask to include a sub-resolution assist feature.

5. The system as claimed in claim 1 wherein:

exposing the first mask to the radiation source causes a partial phase change in the photoresist material and exposing the second mask to the radiation source causes a total phase change to an area of the photoresist material defined by the overlap region.

6. An integrated circuit system comprising:

providing a first aperture plate including a first dipole opening and a second dipole opening oriented in a first direction;

providing a first mask including a first feature oriented in a second direction;

exposing the first mask to a radiation source to form an image of the first feature on a photoresist material that possesses a geometry that is different from a structure to be formed on a substrate that includes the integrated circuit system;

providing a second aperture plate including the first dipole opening and the second dipole opening oriented in a second direction;

providing a second mask including a second feature oriented in a first direction, the first direction being substantially perpendicular to the second direction;

aligning the second mask over the image of the first mask; and

exposing the second mask to the radiation source to form an overlap region in the photoresist material and to define the structure on the substrate.

7. The system as claimed in claim 6 further comprising:

configuring the second feature to possess a geometry that is different from the structure to be formed on the substrate.

8. The system as claimed in claim 6 further comprising:

configuring the first mask and the second mask to include a dense array pattern and a random pattern.

9. The system as claimed in claim 6 further comprising:

configuring the first mask and the second mask to include a sub-resolution assist feature.

10. The system as claimed in claim 6 wherein:

configuring the first mask and the second mask to include optical enhancement techniques.

11. An integrated circuit system comprising:

a substrate including the integrated circuit system and a structure that is smaller than and defined by a dipole image of a first feature and a dipole image of a second feature.

12. The system as claimed in claim 11 wherein:

the structure is defined by an overlap region of the first feature and the second feature.

13. The system as claimed in claim 11 wherein:

the first feature and the second feature include rectangular openings.

14. The system as claimed in claim 11 wherein:
the structure includes a square contact or a circular contact.

15. The system as claimed in claim 11 wherein:
the integrated circuit system includes semiconductor chips.

16. The system as claimed in claim 11 wherein:
the integrated circuit system includes integrated circuit packages.

17. The system as claimed in claim 11 wherein:
the structure is part of a dense array pattern.

18. The system as claimed in claim 11 wherein:
the substrate includes a plurality of the integrated circuit system.

19. The system as claimed in claim 11 wherein:
the structure is part of a random pattern.

20. The system as claimed in claim 19 wherein:
the structure is in a core region or a peripheral region of the integrated circuit system.

What is claimed is:

CLAIMS

1. An integrated circuit system comprising:

providing a first aperture plate including a first dipole opening and a second dipole opening oriented in a first direction;

providing a first mask including a first feature oriented in a second direction;

exposing the first mask to a radiation source to form an image of the first feature on a photoresist material that possesses a geometry that is different from a structure to be formed on a substrate that includes the integrated circuit system;

providing a second aperture plate including the first dipole opening and the second dipole opening oriented in a second direction;

providing a second mask including a second feature oriented in a first direction, the first direction being substantially perpendicular to the second direction;

aligning the second mask over the image of the first mask; and

exposing the second mask to the radiation source to form an overlap region in the photoresist material and to define the structure on the substrate.

2. The system as claimed in claim 1 further comprising:

configuring the second feature to possess a geometry that is different from the structure to be formed on the substrate.

3. The system as claimed in claim 1 further comprising:

configuring the first mask and the second mask to include a dense array pattern and a random pattern.

4. The system as claimed in claim 1 further comprising:

configuring the first mask and the second mask to include a sub-resolution assist feature.

5. The system as claimed in claim 1 wherein:

configuring the first mask and the second mask to include optical enhancement techniques.

6. An integrated circuit system comprising:

providing a first mask including a first feature;

exposing the first mask to a radiation source to form an image of the first feature on a photoresist material that is larger than a structure to be formed, the photoresist material being formed over a substrate that includes the integrated circuit system;

providing a second mask including a second feature;

aligning the second mask over the image of the first mask to form an overlap region and an unoverlapped region; and

exposing the second mask to the radiation source to form an image of the second feature on the photoresist material that is larger than the structure to be formed.

7. The system as claimed in claim 6 wherein:

exposing the first mask to the radiation source and exposing the second mask to the radiation source includes exposing the first mask and the second mask to dipole illumination.

8. The system as claimed in claim 6 further comprising:

configuring the first feature and the second feature to include rectangular openings.

9. The system as claimed in claim 6 further comprising:

configuring the first mask and the second mask to include a sub-resolution assist feature.

10. The system as claimed in claim 6 wherein:

exposing the first mask to the radiation source causes a partial phase change in the photoresist material and exposing the second mask to the radiation source causes a total phase change to an area of the photoresist material defined by the overlap region.