CLAIMS

1. A method comprising:

directing an electron beam from an electron beam source for a first image frame grab of a site on a semiconductor wafer;

adjusting the electron beam to a first electron dose value below a damage threshold, wherein the semiconductor wafer includes a layer of an organic material;

subsequently directing the electron beam for a second image frame grab of the site; and

adjusting the electron beam to a second electron dose value greater than the first electron dose value, wherein the first electron dose value and the second electron dose value are each determined using a dose, an area receiving the electron dose, and an image frame grab duration.

2. The method of claim 1, wherein the second electron dose value is above the damage threshold.

3. The method of claim 1, further comprising imaging the site using the electron beam with the second electron dose value.

4. The method of claim 1, wherein the layer is a photoresist layer.

5. The method of claim 1, wherein the layer is an antireflective coating.

6. The method of claim 1, wherein the first electron dose value and the second electron dose value are measured in electron dose/nm^2/time.

7. A system comprising:

an electron beam source that generates an electron beam;

a chuck configured to hold a semiconductor wafer in a path of the electron beam, wherein the semiconductor wafer includes a layer of an organic material;

a detector that receives the electron beam from the semiconductor wafer; and

a processor in electronic communication with the electron beam source and the detector, wherein the processor is configured to:

adjust the electron beam to a first electron dose value below a damage threshold for a first image frame grab of a site on the semiconductor wafer; and

adjust the electron beam to a second electron dose value greater than the first electron dose value for a second image frame grab of the site subsequent to the first image frame grab of the site, wherein the first electron dose value and the second electron dose value are each determined using a dose, an area receiving the electron dose, and an image frame grab duration.

8. The system of claim 7, wherein the second electron dose value is above the damage threshold.

9. The system of claim 7, wherein the processor is further configured to image the site using the electron beam with the second electron dose value.

10. The system of claim 7, wherein the layer is a photoresist layer.

11. The system of claim 7, wherein the layer is an antireflective coating.

12. The system of claim 7, wherein the first electron dose value and the second electron dose value are measured in electron dose/nm^2/time.