

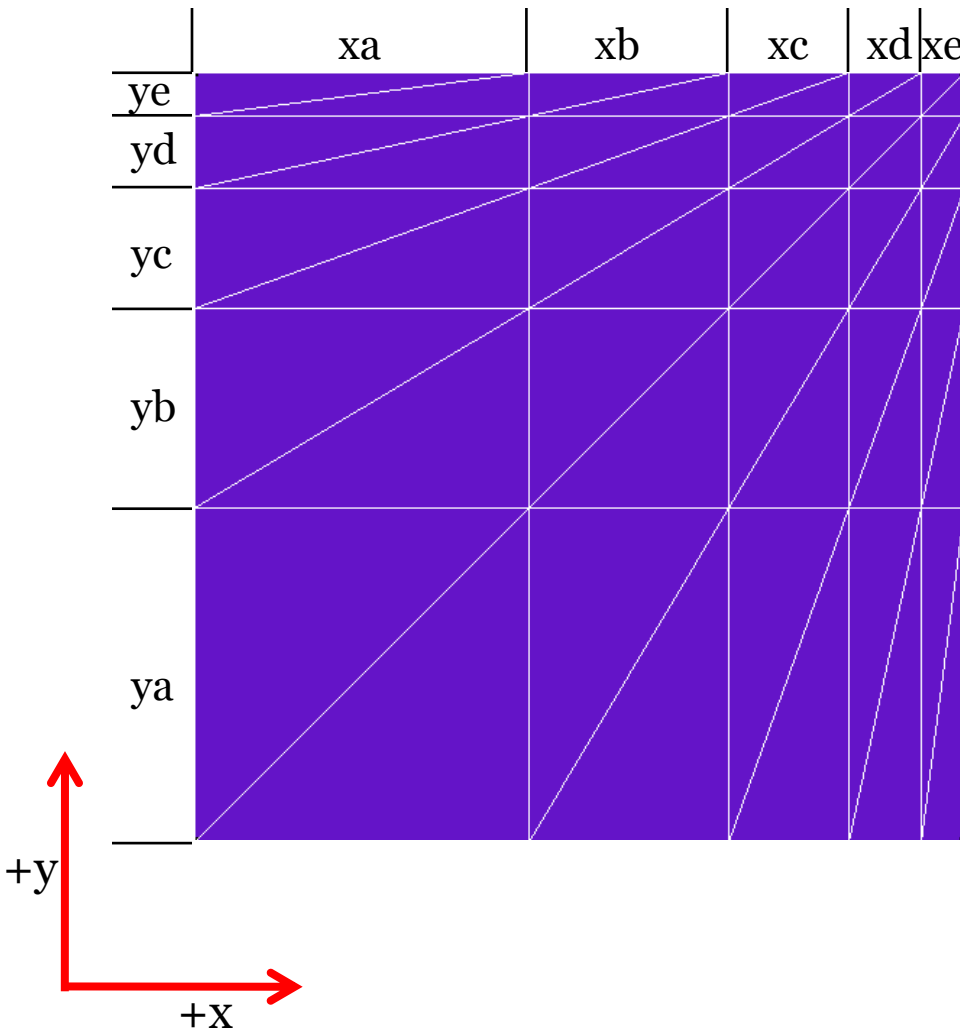
Lighting Up Semiconductor World...

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Crosslight Software Topic:
Ratio for mesh setting

Ratio for mesh setting

What's ratio?



For +x direction:

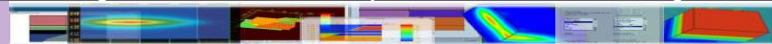
$$\text{Ratio} = x_b/x_a = x_c/x_b = x_d/x_c = x_e/x_d$$

For +y direction:

$$\text{Ratio} = y_b/y_a = y_c/y_b = y_d/y_c = y_e/y_d$$

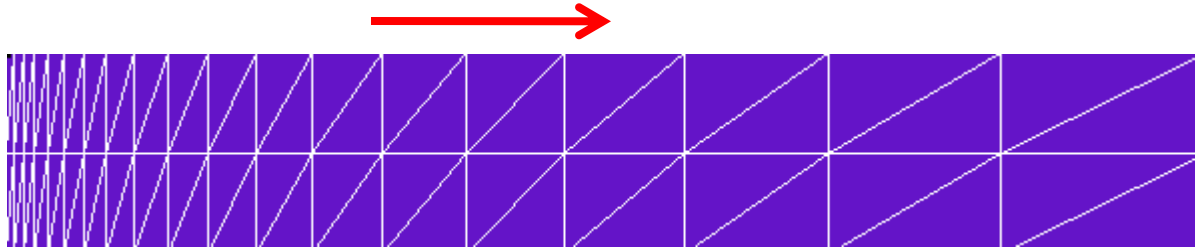
Hint:

+x and +y are directions along which mesh points are orderly located. Please pay attention that mesh points can be located along any vector direction

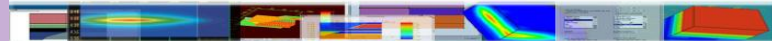


Ratio for mesh setting

Ratio > 1

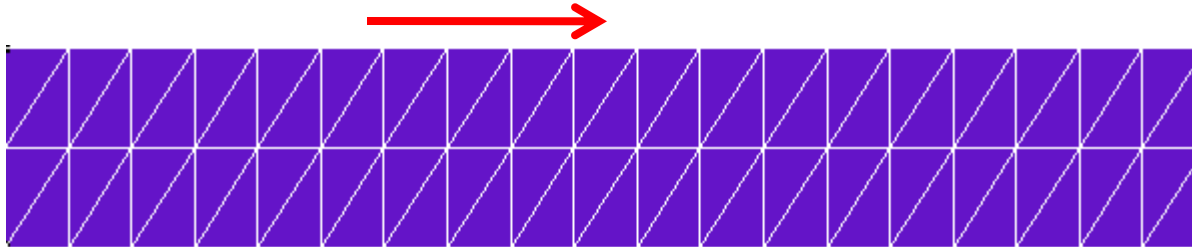


Mesh density decreases from left to right

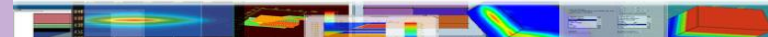


Ratio for mesh setting

Ratio = 1

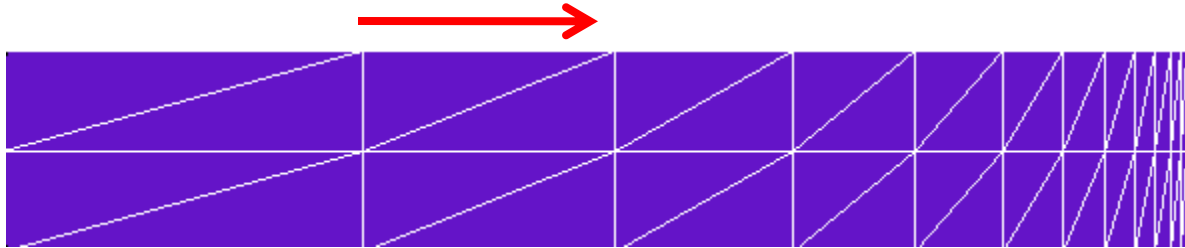


Mesh density is uniform



Ratio for mesh setting

$0 < \text{Ratio} < 1$

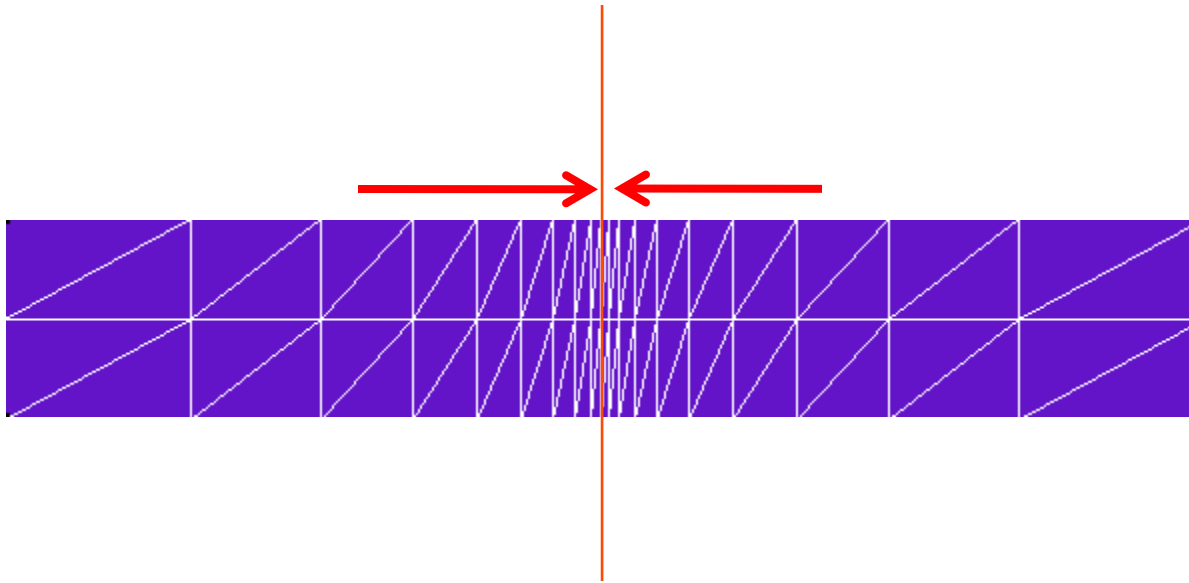


Mesh density increases from left to right

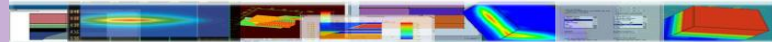


Ratio for mesh setting

-1 < Ratio < 0

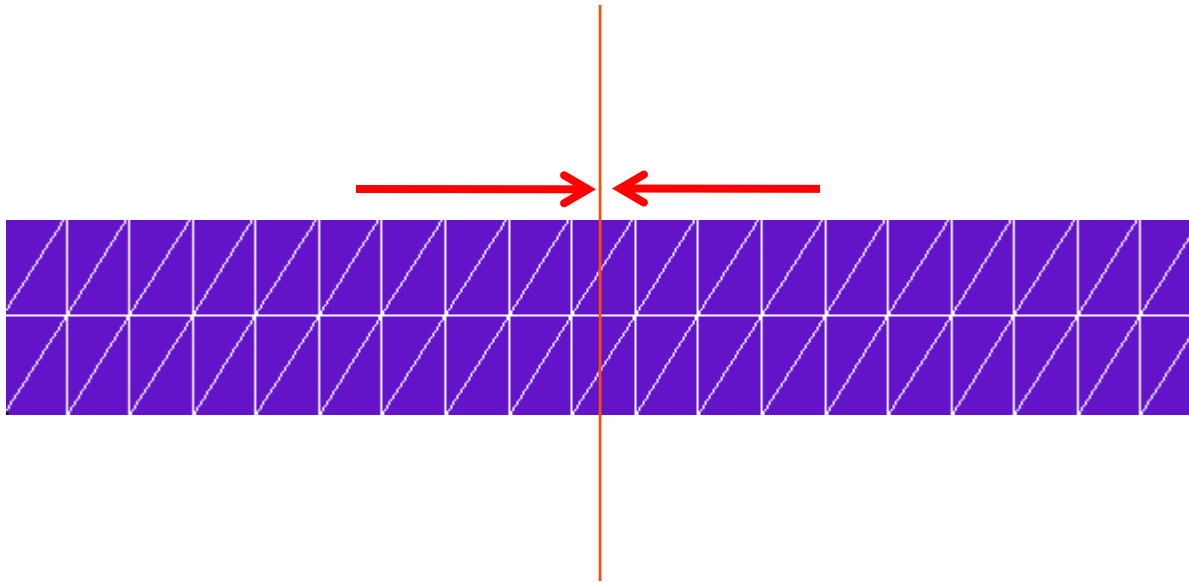


Mesh density decreases from center to both sides

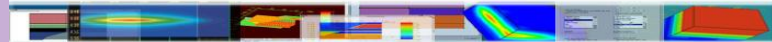


Ratio for mesh setting

Ratio = -1

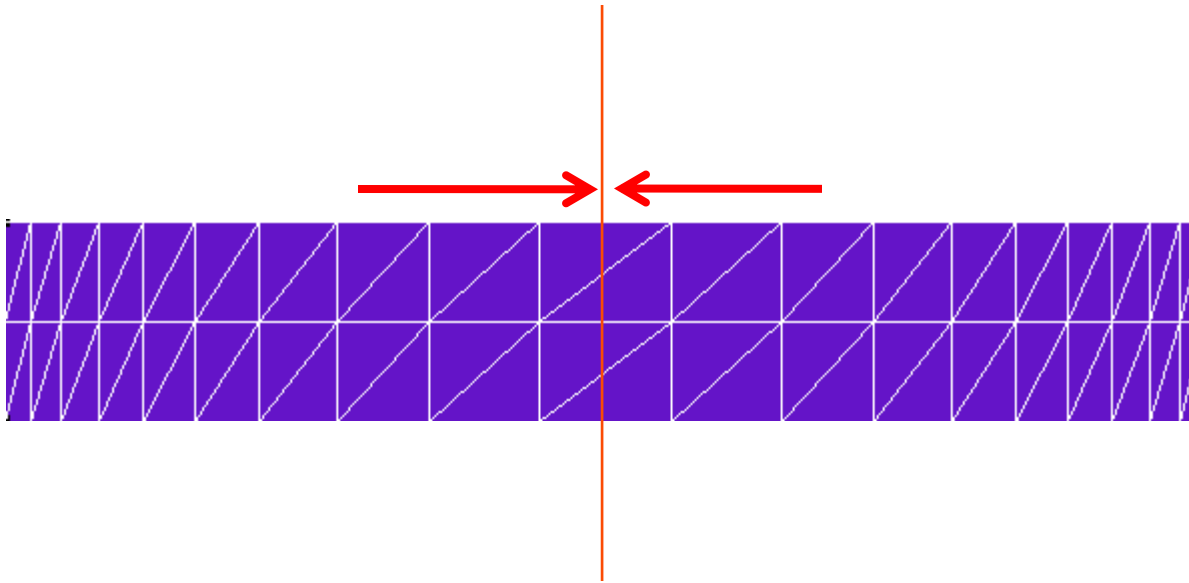


Mesh density is uniform

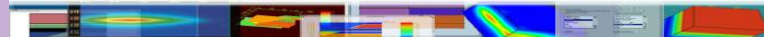


Ratio for mesh setting

Ratio < -1

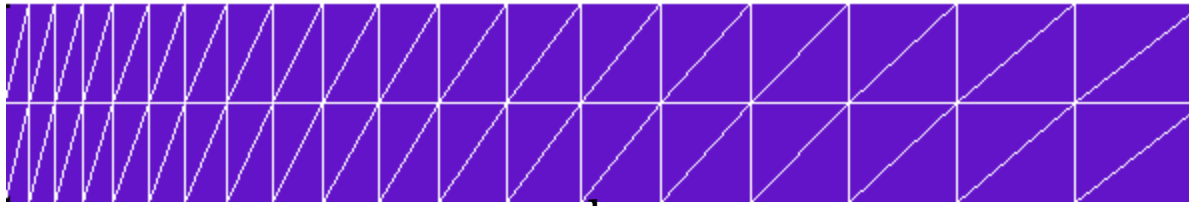


Mesh density increases from center to both sides

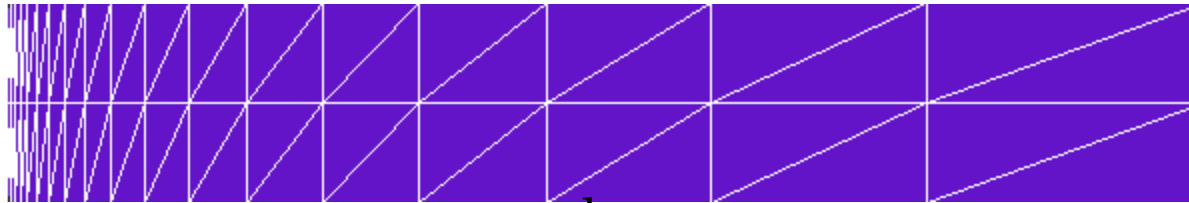


Ratio for mesh setting

Use ratio to control mesh

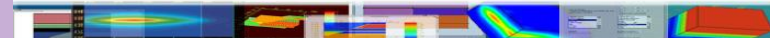


$r=1.1$ mesh num=20



$r=1.3$ mesh num=20

Absolute value of ratio controls how fast mesh density changes.

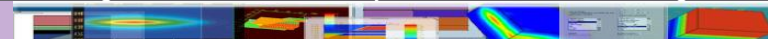


Ratio for mesh setting

Use ratio to control mesh

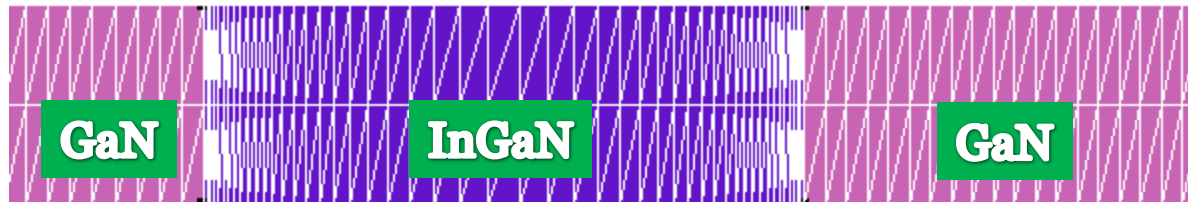


Use ratio to make large mesh density near heterojunction interface

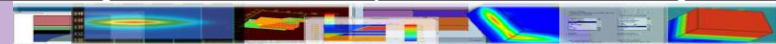


Ratio for mesh setting

Use ratio to control mesh

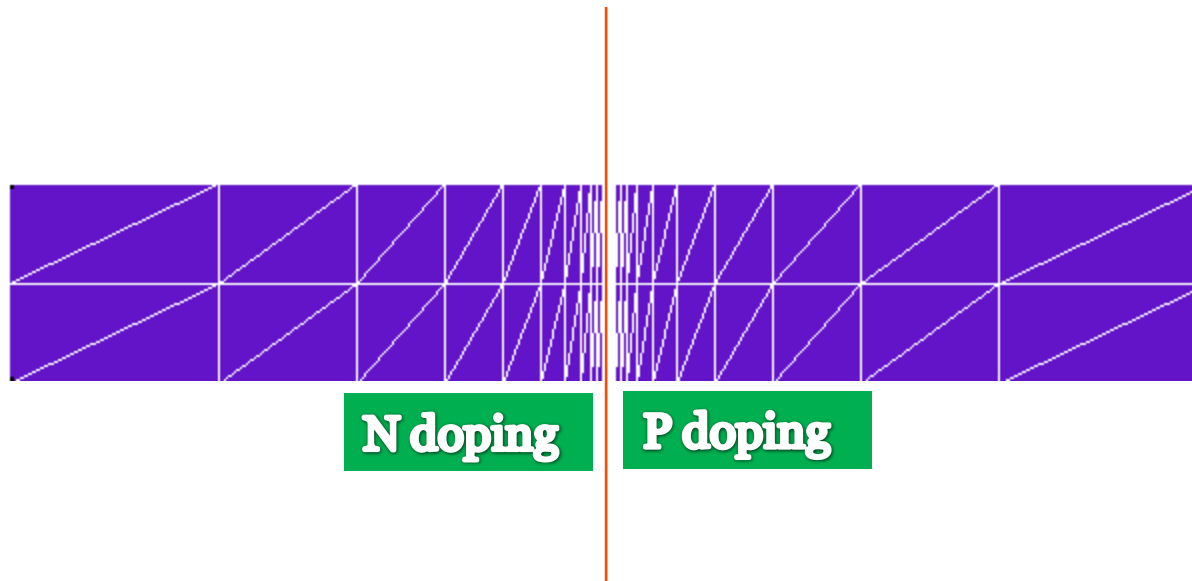


Use minus ratio to make large mesh density near both side

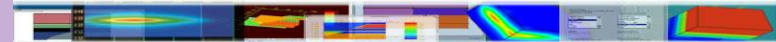


Ratio for mesh setting

Use ratio to control mesh

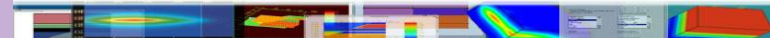


Use minus ratio to make large mesh density near p-n junction in same mater



Ratio for mesh setting

Hint:
The upper settings are based on X direction. Situations are same for Y direction



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