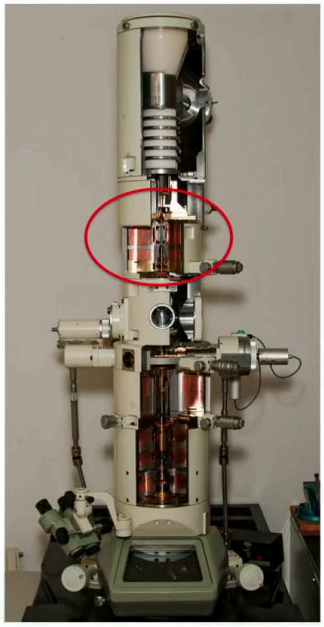
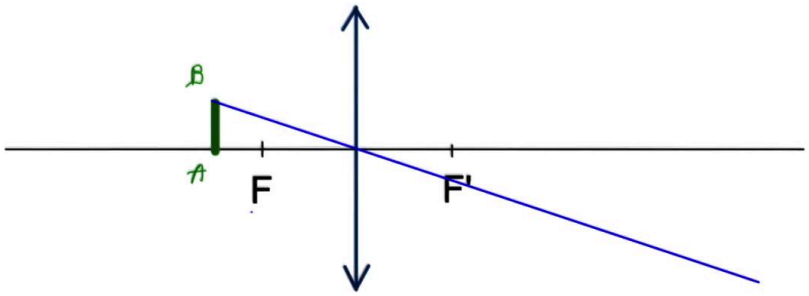
Reminder! Ray diagrams

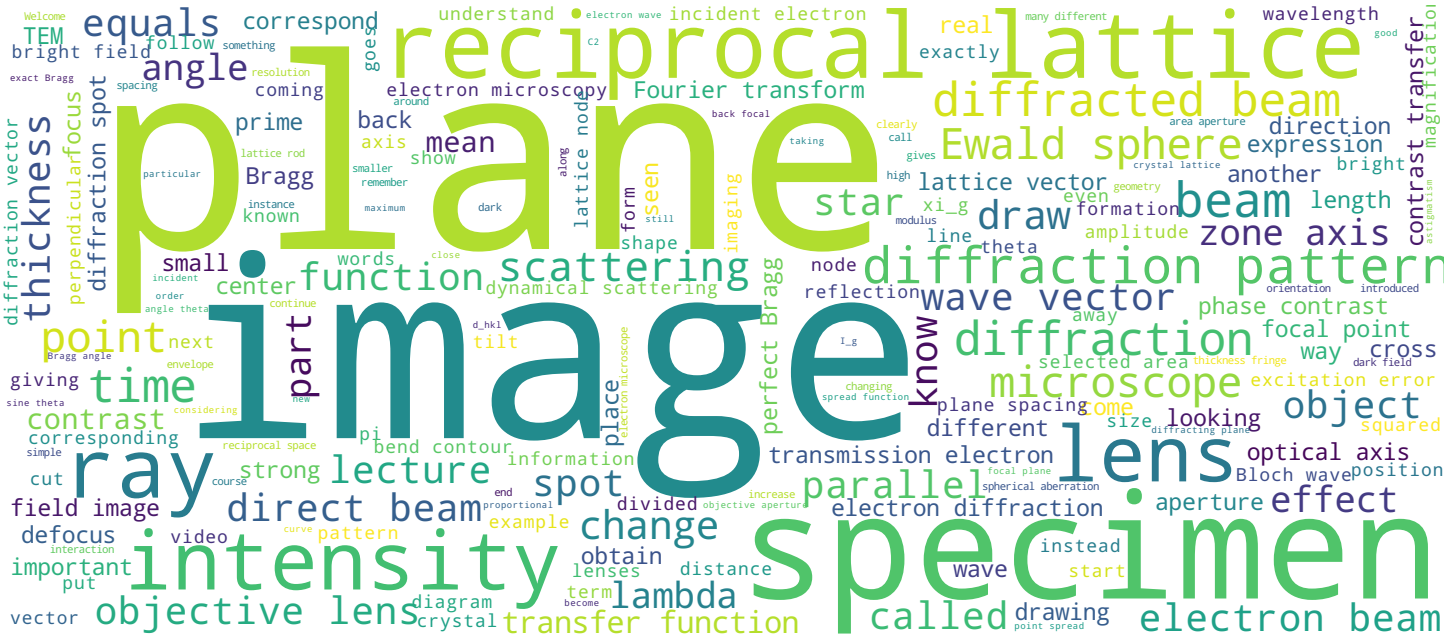


A typical TEM: Jeol 200cx

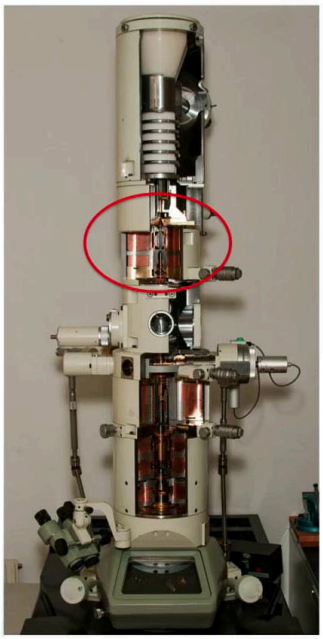
Do you remember how to draw the image produced by a thin convergent lens?



Transmission Electron Microscopy



Reminder! Ray diagrams



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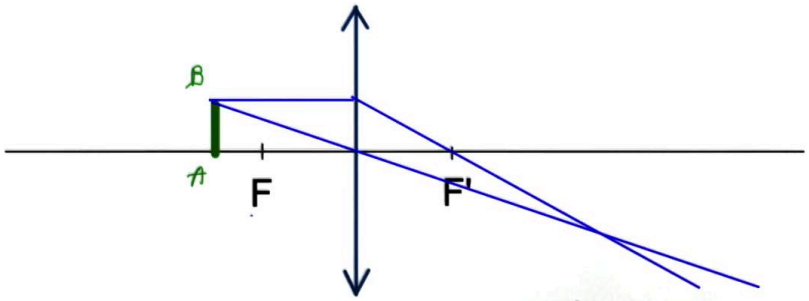
Do you remember how to draw the image produced by a thin convergent lens?



Transmission Electron Microscopy

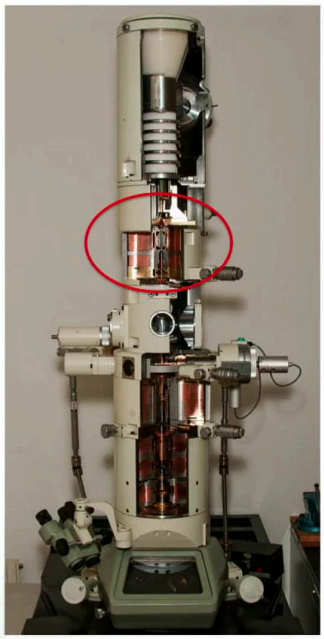
Do you remember how to draw the image produced by a thin convergent lens? Try to reproduce this figure on a piece of paper and draw the image of this object, so this green thing there would be your object, you have your lens, the focal points of the lens F and F prime, and I want to obtain the image of this object called A B by the lens. Okay, it is a very simple rule that you will have to use all the time and we will use it a lot when we interpret images and diffraction pattern in the microscope. There are two rules. The first one is, if I take a ray of light that is coming out of my object, if this ray passes through the central part of the lens, then it will be undeflected, so if it goes there it will be deflected, but not if it goes through the center of the lens. So I can draw a first ray this one that comes from the B point of the object and obviously my image will have to be somewhere on that line. But with only one line I don't have the place where to find B. I can do a second ray, by taking a ray that is now entering the lens parallel to the optical axis. If I do so, the ray will be deflected exactly through the focal point, I can then continue it, and at one point it will cross the first ray.

Notes

Summary

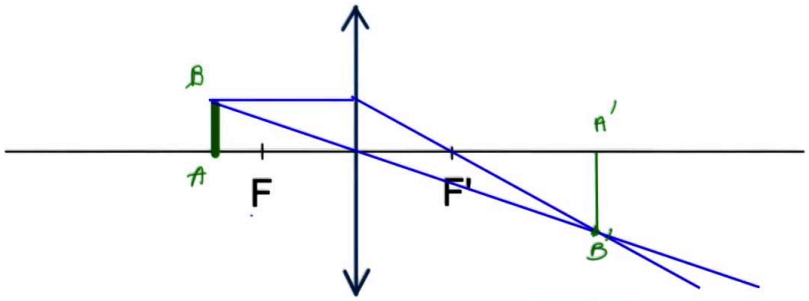
0m 00s

Reminder! Ray diagrams



A typical TEM: Jeol 200cx

Do you remember how to draw the image produced by a thin convergent lens?



Transmission Electron Microscopy

So now I do have a place where I know I have my B point. I know that the image of A will be on the same height but on the optical axis, so I know exactly how to draw my image. it is like this, there, I have A prime and B prime. Okay, for your assignment you will have to do a few more of these drawings and this is a language that you really need to be fluent in to follow the lecture.

Notes

Summary

2m 00s