

## **Development of a laser plasma x-ray microscope for Living hydrated biological specimens**

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Investigating the structure and the function of life object performing advanced life activity becomes important. In order to investigate the life object, it is necessary to observe living specimens with high spatial resolution and high temporal resolution. Since laser plasma x-ray source has high brightness and short pulse duration, x-ray microscope with the laser plasma x-ray source makes possible to observe living specimens. Such as chromosomes, macrophages[1], bacterium[2][3], and so on have been observed by contact x-ray microscopy. The x-ray images obtained by indirect measurements such as the contact x-ray microscopy have difficulty to avoid artificial effect such as irregular due to developing process. Development of an x-ray microscope with laser plasma x-ray source is necessary to avoid such defects. We have been developing an x-ray microscope with laser plasma x-ray source to observe wet live specimens. The detail of the x-ray microscope will be presented.

### **REFERENCES**

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