

Biological Application of Synchrotron Radiation

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In several decades, many biological research instruments have developed. Especially light and electron microscopy have played vital roles in biological research as important tools for analyzing cellular structure, function, and physiology. Although this tools offers superb resolution of structural details, it suffers from fixation and sectioning artifacts. In addition, these provide static two-dimensional image that are difficult to reconstruct three-dimensional structure. In this view, X-ray offers advantages to observe natural three-dimensional structure for their penetrating capacity. And X-ray can provide higher resolution than visible light. So in this experiment, we introduce the potential capacity of synchrotron radiation in observing biological structure.

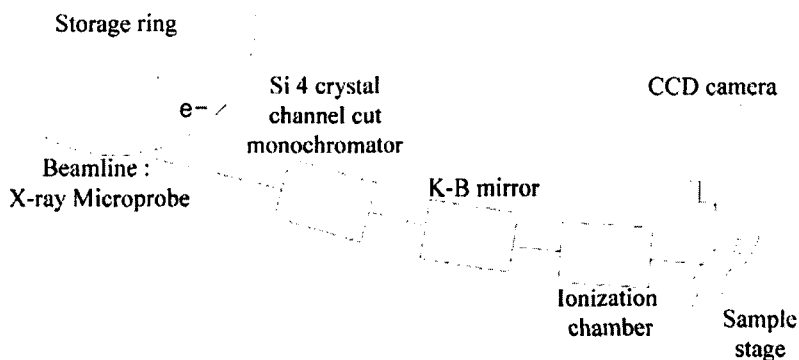


Fig. 1. The overall flowchart of X-ray Microscopy light

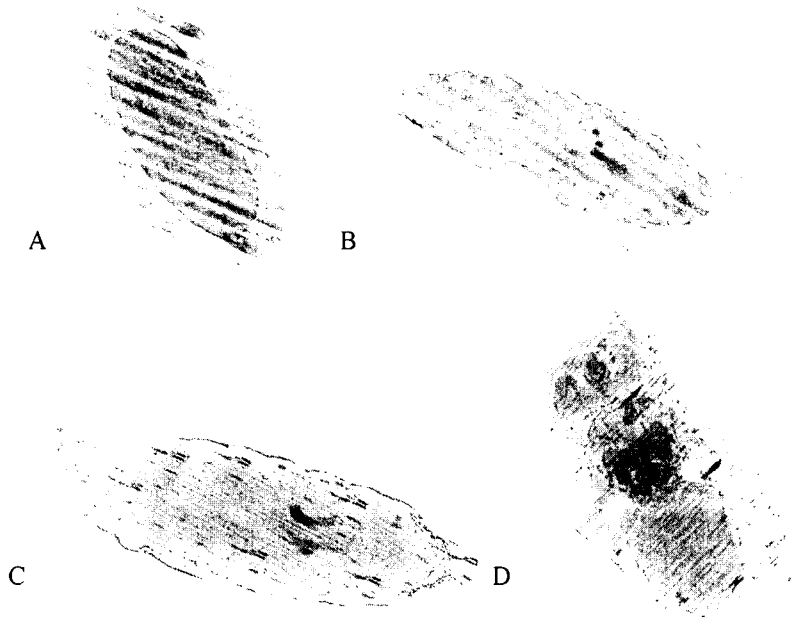


Fig. 2. x-ray Microscopic Image of a *Drosophila*. A. Egg, B. Larva, C. Pupa, D. Adult

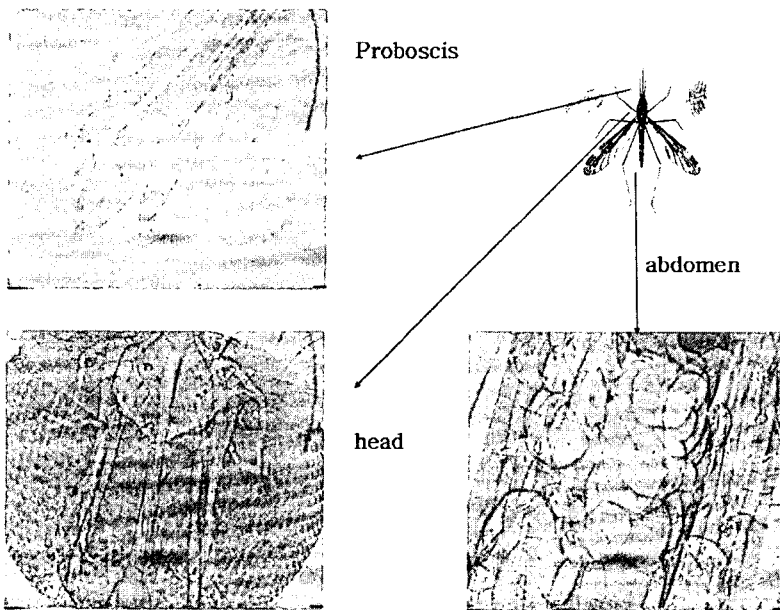


Fig. 3. X-ray Microscopic Image of a Female.