【Grant-in-Aid for Transformative Research Areas（B）】

A Study of the Border Line between livings and non-living materials with the STED Technique. (Dynamics of the interaction between inanimate and animate beings using the STED technique)

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Project Information	Project Number : 24B205　Project Period (FY) : 2024-2026 Keywords : STED, Tender X-ray, Optical Materials

Purpose and Background of the Research

●Outline of the Research

Our final goal in the future is to reveal the interaction between no-living materials and living, and we have developed this probe to observe this interaction with STED technique.

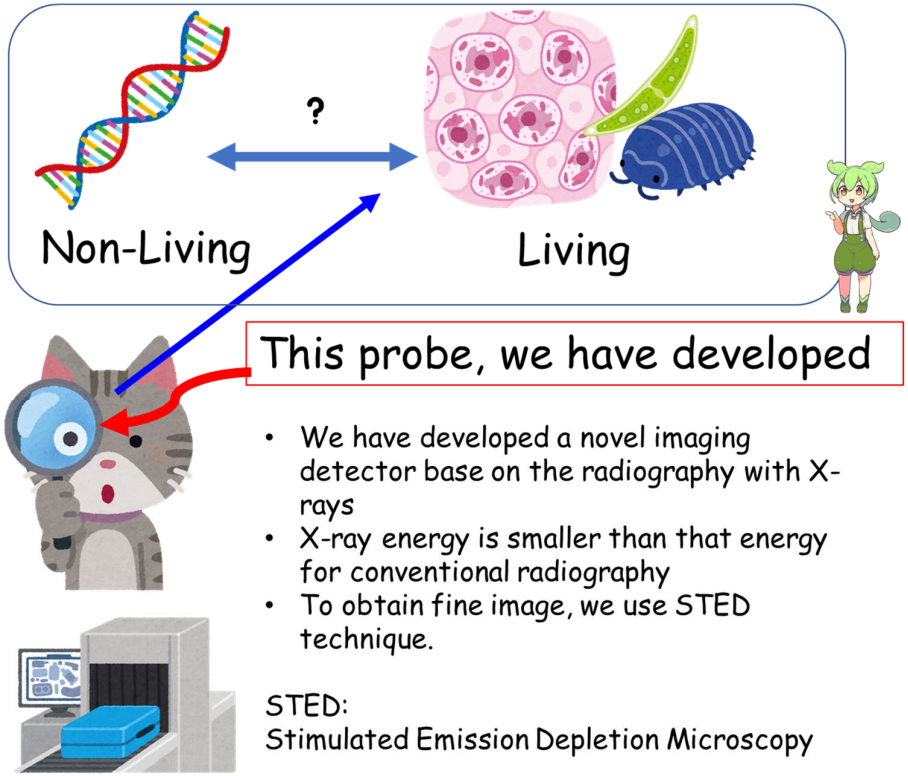

Figure 1. Schematic view of our studies.

Expected Research Achievements

●Aims and methods

The purpose of this research is to develop the probe with following methods as shown in Fig. 2.

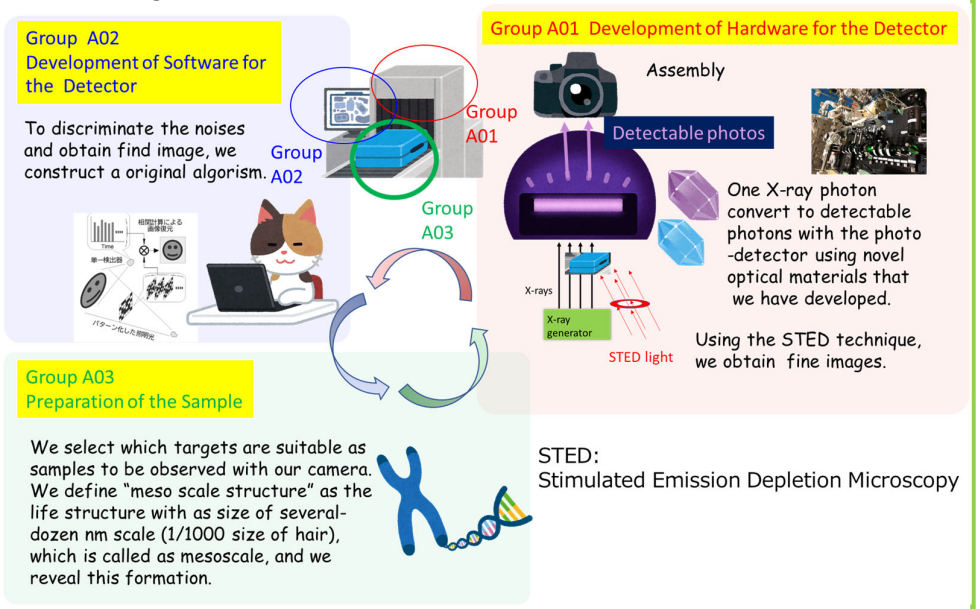

Figure 2. Schematic view of how to make a approach to develop the prove.

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●Final Goal and Expectation

Conventional STED camera succeeded in imaging with high spatial resolution, which overcame diffraction-limit, around visible region, and using this technique, we expect to obtain movies for the dynamics of the activities between no-living materials and living (the meso-scale structure) such as the life of virus. Such research is also expected to generate "quasi quantum physics".

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