


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

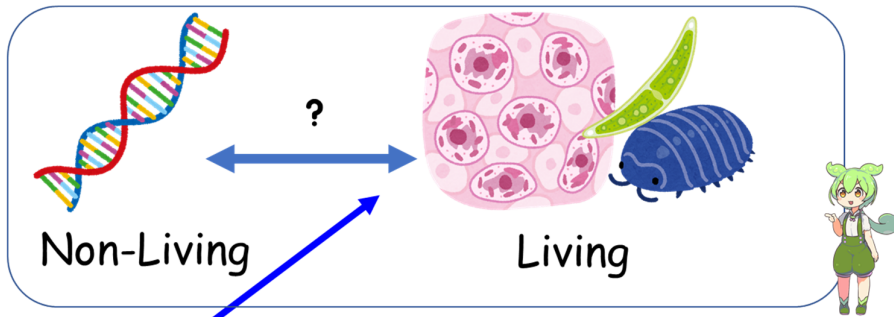
A Study of the Border Line between livings and non-living materials with the STED Technique. (Dynamics of the interaction between inanimate and animate beings using the STED technique)

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		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.



This probe, we have developed

- We have developed a novel imaging detector base on the radiography with X-rays
- X-ray energy is smaller than that energy for conventional radiography
- To obtain fine image, we use STED technique.



STED:
Stimulated Emission Depletion Microscopy

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.

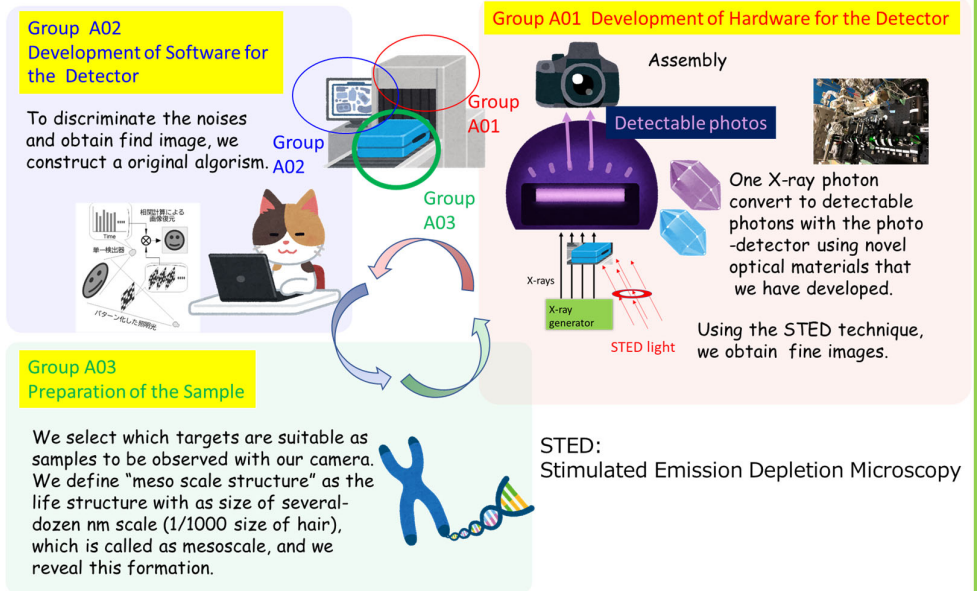


Figure 2. Schematic view of how to make a approach to develop the prove.

● Members

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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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(tentative)