67th RAP Seminar

The 67th Seminar on RIKEN Center for Advanced Photonics

Language: Japanese

Date: **January 17 (Fri) 16:00 - 17:00, 2020**

Location: **W319, 3F, Cooperation Center, Wako Campus, RIKEN**

(理研 和光キャンパス 研究交流棟 3階会議室 W319)

Title: **Novel Optical Tweezers based on Solid Nanostructures toward Manipulation of Nanomaterials**

ナノ物質の光マニピュレーション～固体ナノ構造に立脚する新型光ピンセット

Speaker: **Prof. Yasuyuki TSUBOI**

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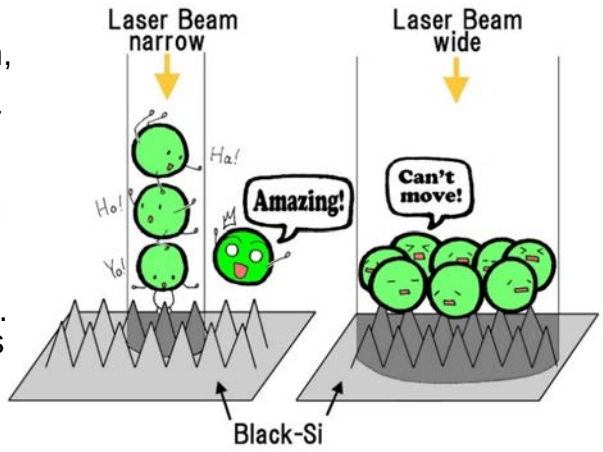
As the Nobel Prize in Physics have been given two times, optical manipulation science for small objects is an important research field. From view points of material sciences, optical manipulation of nanomaterials (such as DNA, proteins, quantum dots, molecular clusters, micelles, and so on) would be intriguing, since various chemical processes such as molecular association, phase transition, ordering, crystallization, chemical reactions would be induced at a focal point of light (laser beam). However, such manipulation for nanomaterials is much difficult due to small optical forces. For addressing the issue, recently we developed two types of novel optical tweezers based on solid nanostructures. One is plasmonic optical tweezers, and the other one is nano-structured semiconductor- assisted (NASSCA) optical tweezers. The performance, driving mechanism, characteristics of these Nano Tweezers will be presented.



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