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Laser Trapping Chemistry, Laser

Laser nano chemistry of molecular/cluster systems consists of two topics of “Laser trapping chemistry” and “Laser bio/nano application”. These subjects are quite promising and attractive in various research fields, and the elucidation of their dynamics and mechanism gives powerful impacts over a lot of researchers. In order to explore these potential researches at an international level, international and domestic collaborations should be actively promoted.

(a) Control of nucleation and crystal growth of proteins by laser trapping

Development of novel crystallization methods for proteins controlled by laser trapping

Fluorescence microscopic study of laser trapping assembling of protein clusters

(b) Exploratory study on laser trapping chiral chemistry

Chiral crystallization induced by combination of laser trapping and metal nanostructures (with Hokkaido Univ. and Osaka Univ., Japan)

Chiral photo-dimerization reaction of inclusion compounds by laser trapping (with Osaka Univ., Japan)

Chiral resolution of racemic compounds by laser trapping

(c) Laser bio/nano application

Formation of amyloid fibrils of proteins by laser trapping (with NAIST, Japan)

Fabrication of medicinal colloids by laser ablation in liquid (nano-medicine) (with Kyoto Univ., Japan)

