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Reserch Theme in This Project: Regulation of Morphology and Skeleton of Molecular Robots by Motor Proteins

Main Research Results, Publications:

○ An optical decice driven by motor proteins

We developed an optical device (display device) driven by motor proteins, inspired by a molecular system of a fish melanophore.

S. Aoyama, M. Shimoike, Y. Hiratsuka, "Self-organized optical device driven by motor proteins", PNAS, 2013, 110, 16408-16413

○ A contractile fiber self-organized by motor protein

We found that a stress-fiber-like contractile network of microtubule formed by mixing a genetically engineered kinesin and microtubule in a self-organazation manner. In micro-chamber having pillar structures, the contractile network formed a bridge between the two pillars and became a muscle-like fiber about 1 mm long.

Recent Activities (hobbies, etc.): Scratch