

S. TAKEUCHI LAB.

[Biohybrid Systems]

Department of Mechanical and Biofunctional Systems

Dept. of Mechano-Informatics

MEMS / Bionanotechnology / Tissue engineering

Dept. of Life Sciences

Department of Advanced Interdisciplinary Studies

<http://hybrid.iis.u-tokyo.ac.jp>

Continuous Glucose Monitoring



Continuous Glucose Monitoring (CGM) is a device that monitors blood glucose levels in diabetic patients and is expected to help reduce the serious complications and improve the quality of life by preventing hyperglycaemia and hypoglycaemia.

Recently, CGM using enzymatic reactions have been commercially available, but long-term monitoring is difficult due to enzyme inactivation. Our research group is working on the development of a CGM system using a glucose-responsive fluorescent hydrogel, that changes the fluorescence intensity reversibly according to the glucose concentration, to enable highly accurate long-term monitoring.

