

## Biomemory Device Composed of Myoglobin Fabricated on Self-assembled DTSSP Layer

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Thin film layer consisting of myoglobin on DTSSP fragment was developed for verifying memory function of biomolecule. Self-assembly process using DTSSP fragment was utilized to immobilize myoglobin on Au surface. After immobilization, the increased thickness of gold surface was confirmed via surface plasmon resonance and the change of morphology was investigated with scanning tunneling microscopy. Cyclic voltammograms of immobilized myoglobin showed two peaks due to the states of oxidation and reduction. The chronoamperometry was used in order to apply this characteristic to the memory function. This device present successfully memory functions such as write and erase. Acknowledgement: This research was supported by the Nano/Bio Science & Technology Program (M10536090001-05N3609-00110) of the Ministry of Education, Science and Technology (MEST), by the Korea Science and Engineering Foundation (KOSEF) grant funded by the Korea government (MEST) (2006-05374), and by the Ministry of Knowledge Economy (MKE) and Korea Industrial Technology Foundation (KOTEF) through the Human Resource Training Project for Strategic Technology.