

## Control of Antibody Immobilization Based on Flow Dynamic Self-assembly

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Proper choice of antibody immobilization method is one of the important points in the fabrication of bioactive thin film for immunosensor and protein array. Molecular thin film based on self-assembly (SA) technique is a versatile and *in vitro* biosurface which mimics the naturally recognition process due to reliable control of density and environment of an immobilized recognition centre. In this study, flow dynamic self-assembly (FDSEA) is used for antibody immobilization. Spray device designed in our laboratory sprays antibody fragments solution, resulting in the immobilization of antibody fragments onto the gold surface via their native thiol group (-SH). The fragment of monoclonal antibody (Mab) against human serum albumin (HSA) was prepared and the deposition on the surface was investigated using surface plasmon resonance spectroscopy (Multiskop™, Optrel GBR, German). Topographies of antibody fragments film was analyzed using atomic force microscopy (CP, PSI, USA). From the experimental result, the amount of antibody-antigen binding was changed by sprayed immobilization method.

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