One step immobilization of peptide and proteins by using a modified parylene with formyl groups

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One-step immobilization method for peptides and proteins is developed by using a modified parylene film with formyl groups which is suitable for microplate-based immunoassay, protein chip and SPR biosensor application. For the immobilization of peptides and proteins, the formyl group can make a covalent bonding with primary amine groups of peptides and proteins without additional activation step[1].
In this work, the immobilization efficiency of parylene-H is estimated in comparison with parylene-A and physical adsorption by using biotinylated-cylic citrullinated peptide (biotinylated-CCP), human chorionic gonadotropin (hCG) and horseradish peroxidase (HRP) as model proteins. Additionally, the applicability of this immobilization method to proteinchip which detecting autoantibodies in rhematoid arthritis patient serum by Fluorescence assay and SPR biosensor.