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Amine(NH₂-) surfaces formed by PECVD and their applications to DNA and protein chips

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Amine (NH₂-) surfaces were formed by deposition of plasma polymerized ethylenediamine(PPEDA) films on solid supports by plasma enhanced chemical vapor deposition (PECVD). Amine functional groups were provided from intact amine groups in PPEDA films. The density of amine functional groups was significantly dependent upon PECVD deposition conditions such as plasma power and deposition pressure. These amine surfaces were utilized to immobilize DNA's and proteins. Probe DNA's immobilized on our amine surfaces hybridized to target DNA's. Antibodies immobilized on our amine surfaces bounded to the corresponding antigens specifically.

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