Fabrication of novel inorganic polymer derived microchannels for microreactor applications

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Recently, microcantilever-based biosensors are widely used for highly sensitive label-free detection and possibility to miniaturization. We report nanomechanical microcantilever operated in oscillation mode with use of DNA sensing for label-free detection of HBV related DNA sequence. We detect the change in resonant frequency of microcantilever by hybridization between designed in HBV related probe DNA and target DNA which is complementary DNA of probe DNA. The result suggest that detect the change in hybridization and immobilization density caused different concentrations of immobilized probe DNA. Moreover, we propose the sensitivity enhancement of cantilever again changed in dimensions of cantilever.