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## Application of MEMS cantilevers in the label-free single analyte detection to improve quality-factor

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Micro electro mechanical systems (MEMS) have provided the emergence of a new generation of sensor platforms. However, the operation of the acoustic sensor in the native environment of biomolecules as well as, in liquid causes prominent loss of sensing performance. The loss factors being viscous drag and rely on the availability of capture molecules to bind analytes of interest to the sensor surface. So in order to avoid the current problem, here we present a strategy to interface MEMS sensors and the microfluidic platforms by an aerosol spray. By using the dry mass-sensing technique, the results demonstrate that the standard resolution limits of cantilever sensing in dynamic mode can be overcome with the integration of spray microfluidics with MEMS.

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