

An Impedance-based Integrated Biosensor for Suspended DNA Characterization

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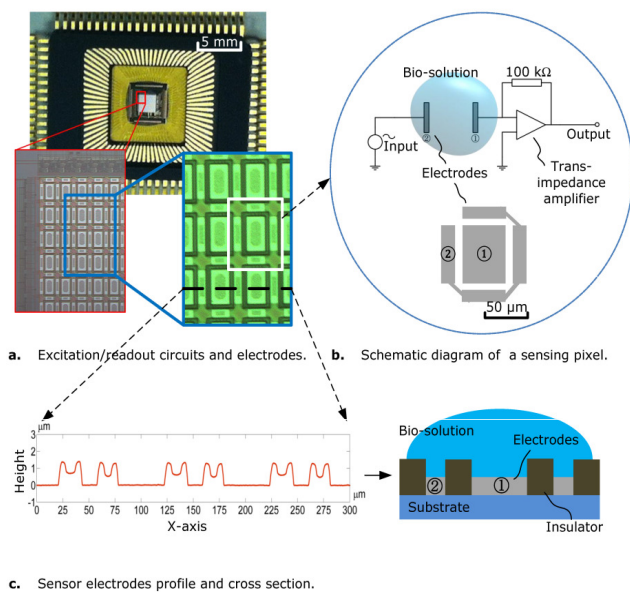
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Introduction

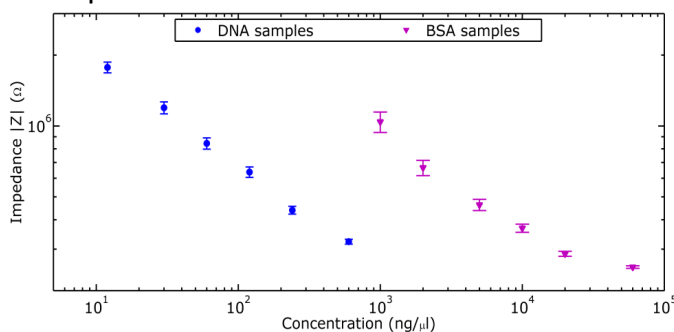
- With onchip electrodes, the integrated biosensor is able to perform label-free measurements for different biomolecule samples.
- PCR products could be validated with this integrated chip-based, sample-friendly system within a few minutes.

Results and Discussions

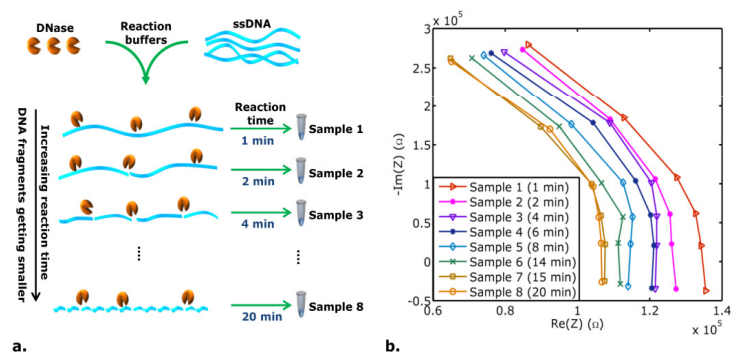
- The micro-array-based biosensor and pixel schematics.



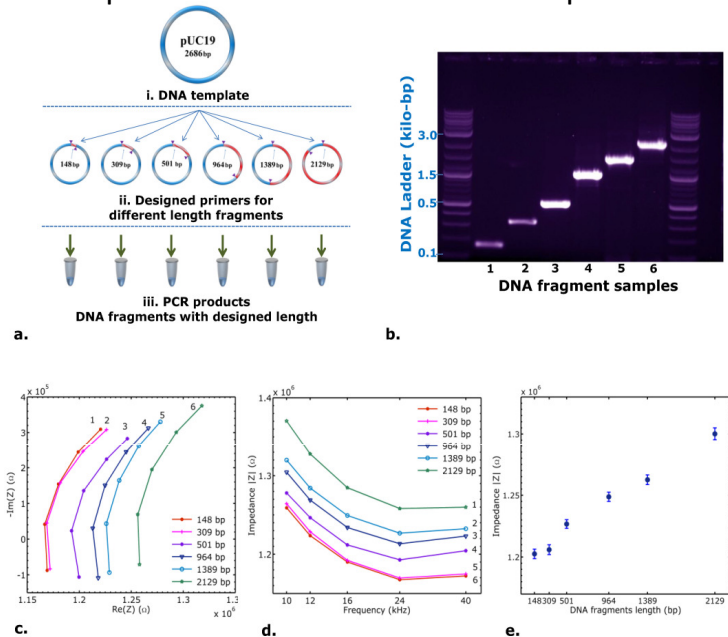
- Impedance measurements for DNA and BSA samples with different concentrations.



- Impedance measurements for DNA fragments.



- Impedance measurements for PCR products.



Conclusion

- This integrated biochip has demonstrated potential for use in biosample characterizations with pure electrochemical method.
- This work opens up the possibility of developing a low-cost, rapid platform for the characterization of DNA and other biological molecules.