

## Nanoparticle-based lateral flow assays for diagnostic applications

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### Abstract

In the wake of the COVID-19 pandemic, the critical need for swiftly deployable, cost-effective and easily scalable diagnostic tools has never been more evident. Rapid diagnostic tests, also known as lateral flow assays, emerged as indispensable tools in the identification of SARS-CoV-2. These biosensors, characterized by their portability, user-friendliness, lack of reliance on batteries or equipment, and quick response that can be interpreted with the naked eye in less than 10 minutes, proved to be invaluable tools.

This talk is designed to unveil the intricacies of the lateral flow paper strip, shedding light on its components, elucidating the assay mechanism, and showcasing its diagnostic potential. Utilizing nanomaterials as transducers for generating a colorimetric signal, these paper-based biosensors stand as a testament to simplicity in operation, while harboring vast untapped potential for refinement and advancement.

Join us on this enlightening journey as we explore the hidden depths and promising horizons of lateral flow assays, a technology poised to revolutionize diagnostic applications!

### References

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### Figures

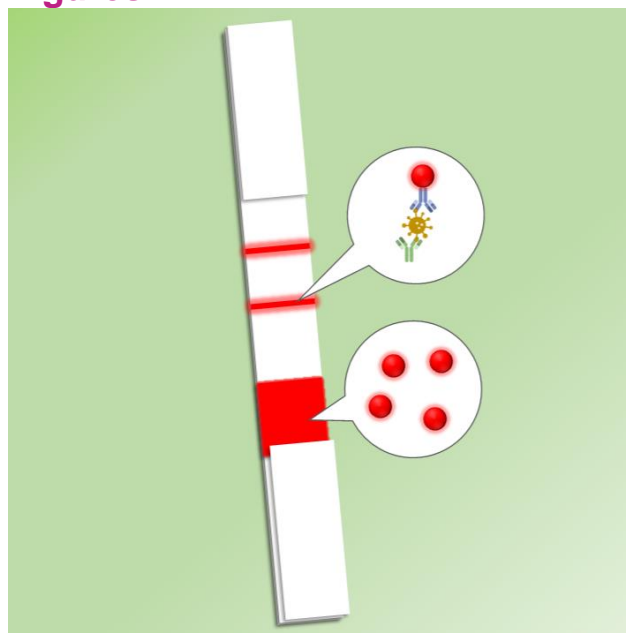


Figure 1. Scheme of a standard lateral flow strip containing nanoparticles as colorimetric labels.