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# Combination of periodic hybrid nanopillar arrays and gold nanorods for improving detection performance of surface-enhanced Raman spectroscopy

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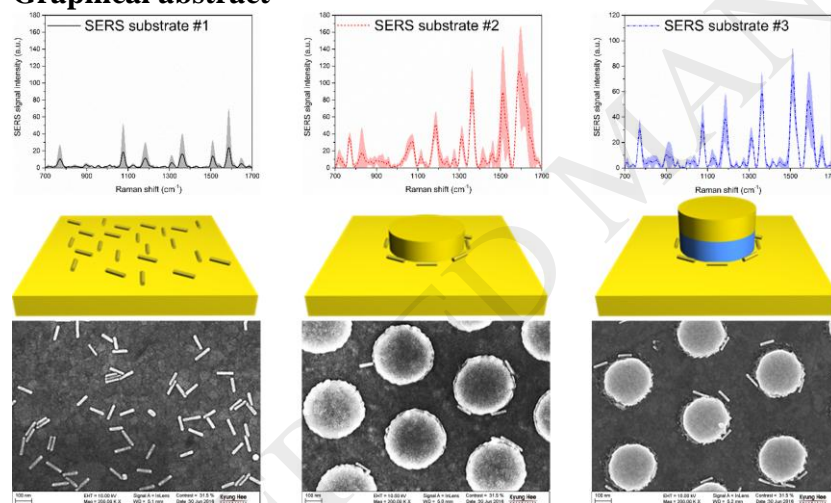
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## Graphical abstract



## Research Highlights

- The SERS substrate with hetero-aggregation of periodic hybrid nanopillars and gold nanorods is proposed for achieving a high quality of SERS signals.
- The dielectric layer of hybrid nanopillar leads to a decrease of line broadening of Raman peaks by making the electromagnetic field interactions between hybrid nanopillar and gold nanorods less destructive.

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