



FABRICATION OF SURFACE-BOUND NANOPARTICLES FOR SURFACE ENHANCED RAMAN SPECTROSCOPY
ID# 2023048

HIGHLIGHTS

- The solution-based approach for fabrication of SERS substrates.

OPPORTUNITY

The University of Alberta inventors have developed a flow-controlled, solution-based approach to synthesize highly ordered and stable ring arrays of Ag nanostructures with sheet-like and dendritic structured morphology. These nanostructures demonstrated good reproducibility of SERS measurements with a minimum relative standard deviation of ~ 3.2%. The inventor was able to increase the number of SERS substrates from 4 to 100 in a single run, making the approach scalable.

The invention has a wide range of applications for analytical techniques related to environmental pollutants, cytotoxicity of biological components, consumables, and advanced materials.

COMPETITIVE ADVANTAGE

- Low cost compared to commercial products
- Quantitative detection down to 10^{-7} – 10^{-9} M.
- Good reproducibility

Status

- Patent Pending

INVENTOR

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MORE INFORMATION

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