LUCASLAND
SENSE THE FUTURE

Silver Nanomesh SERS Sheet
Item Number: LL-SN-01

No sample collection required!
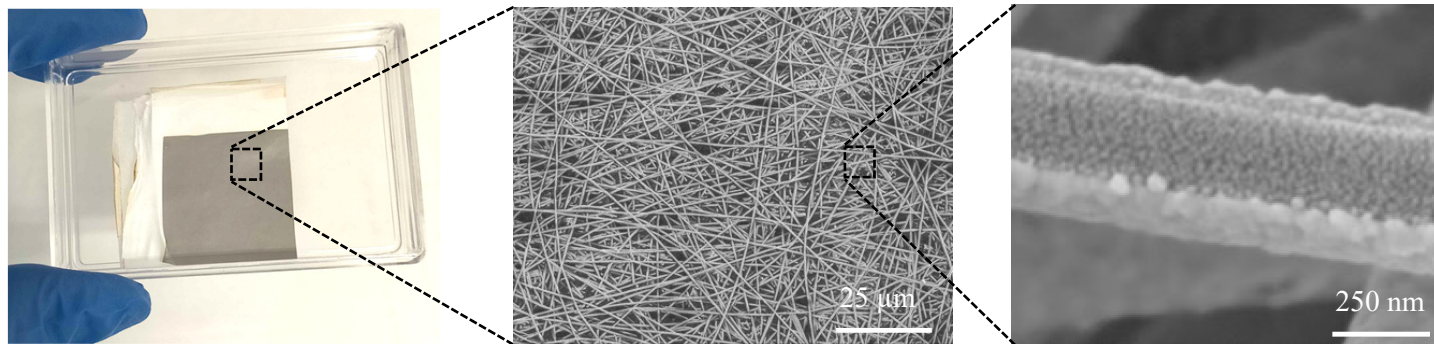**No sample preparation required!**

The ultrathin, flexible, stretchable, adhesive, durable, and ultrabroadband-capable silver nanomesh that can be cut by household scissors into any shape and placed on virtually any surface for surface-enhanced Raman spectroscopy (SERS)


Features

- ✓ Ultrathin, flexible, stretchable, adhesive, durable, ultrabroadband-capable
- ✓ Highly reproducible due to high density of hot spots in 3D
- ✓ Custom size by cutting with household scissors
- ✓ Attachable to any object and measurable with epi-excitation
- ✓ No sample collection or preparation required
- ✓ Double-sided

Applications

- ✓ Health monitoring
- ✓ Food safety testing
- ✓ Forensic analysis
- ✓ Environmental sensing
- ✓ Microplastic detection
- ✓ Infectious disease sensing
- ✓ Homeland security
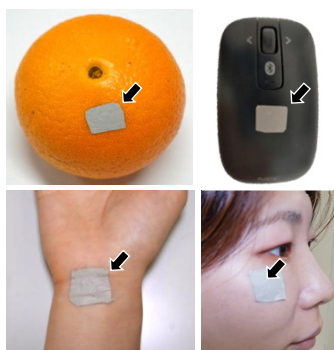
Description

Surface-enhanced Raman spectroscopy (SERS) is a non-destructive analytical method which provides rich information about the chemical composition and structure of a sample by measuring scattered light from the sample with frequency shifts caused by molecular vibrations in the sample. It provides several orders of magnitude higher sensitivity than Raman spectroscopy by localized surface plasmon resonance on noble metal nanostructures. Compared to conventional SERS substrates, LucasLand's silver nanomesh SERS sheet (LL-SN-01) provides previously unattainable capabilities: high flexibility, high stretchability, high adhesivity, high durability, high measurement reproducibility, ultrabroadband-capable, custom size by cutting with household scissors, and double-sided use.

Parameter	Specification
Material	Silver/PVA
Size	3 cm x 3 cm
Thickness	Less than 20 μm
Flexibility	Up to 1000 crumpling cycles
Stretchability	Up to 150%
Excitation Wavelength	488 nm, 532 nm, 633 nm, 785 nm
Excitation Power	Up to 20 mW

Rhodamine 6G on silver/PVA nanomesh

Rhodamine 6G on silver/PVA nanomesh

Excitation wavelength: 785 nm
Photon count: 300

Excitation wavelength: 633 nm
Photon count: 710

Excitation wavelength: 532 nm
Photon count: 95000

Excitation wavelength: 488 nm
Photon count: 37000

TBZ on an orange and with a placed silver/PVA nanomesh

1 mM TBZ
100 μM TBZ
10 μM TBZ
1 μM TBZ
100 nM TBZ
Silver/PVA nanomesh on orange