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International Online
Conference

February 17-18, 2021

Customizable SERS substrates

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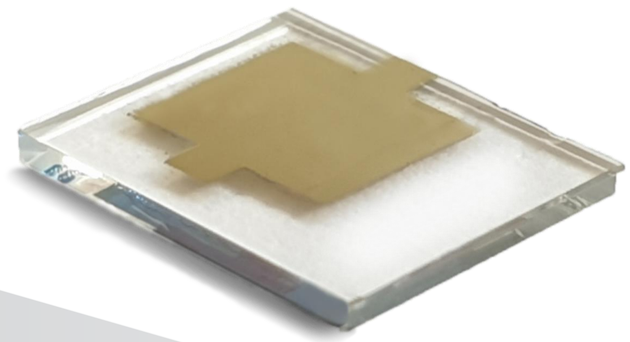
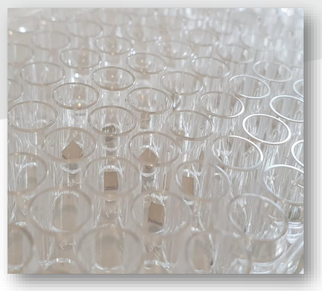


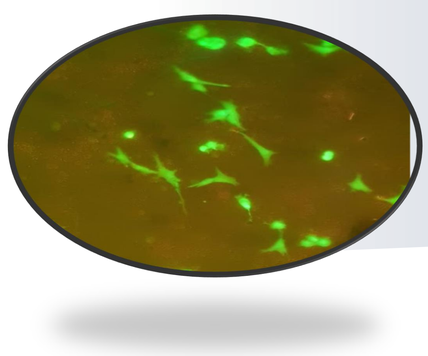
CUTTING EDGE SERS SUBSTRATES FOR FAST AND ACCURATE ANALYSIS

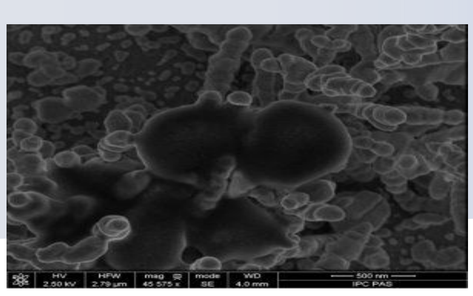
Surface-Enhanced Raman Spectroscopy (SERS) is gaining popularity in the field of life science as it allows us to obtain the fingerprint of a specific substance or even cell type. Thus, SERS is now intensively studied as a promising tool for diagnostic [1], [2] and pathogen identification. SERS-based biosensors and microfluidic systems may be fast and accurate platforms for detecting cancer, food contamination [3], and even viruses identification.

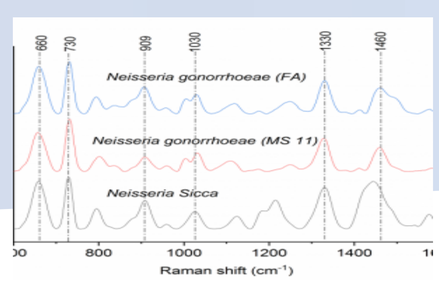


SUITABLE FOR LIFE SCIENCE RESEARCH

We recently developed sensitive and repeatable SERS silver and silver-gold substrates dedicated for potential use in biosensors and microfluidic systems in diagnostic and life science research. Our platforms are made by the electrodeposition of silver and gold nanoparticles on ITO glass. Our substrates have dimensions dedicated to 96-well plates and give great enhancement in SERS measurements after compound deposition in a small volume and a low concentration (ppm to ppb) of an analyzed solution.

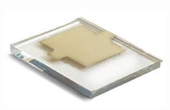






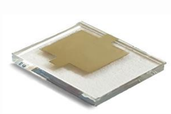
Human primary dermal fibroblasts growth on SERSitive SERS substrate stained with CFMDA cell tracker (left). Scanning electron microscope image of bacteria (Nisseria Gonorrhoeae) on SERSitive substrate; author Sylwia Berus, bio-SERS group (middle). Our SERS substrates are used for bacteria and cancer cells identification by bio-SERS group. Spectra of different strains of Nisseria sp. (right).

1 CHOOSE AN ACTIVE SURFACE

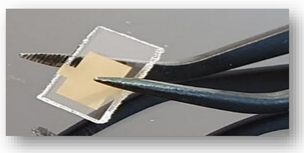


Silver

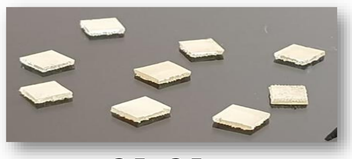
Silver-Gold



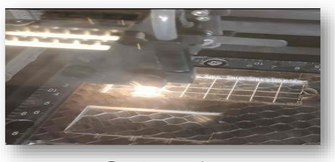
2 CHOOSE A SIZE



Premium substrate



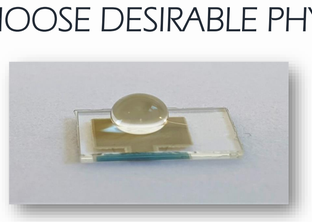
3.5 x 3.5 mm



Custom size

Choose a substrate size that is the best for your research. We propose on-shelf formats: standard premium substrate and small 3.5x3.5 mm substrate, designed to use with 96-well plate. Additionally, we can prepare custom size, e.g. dedicated for SERS based biosensors.

3 CHOOSE DESIRABLE PHYSICAL PROPERTIES

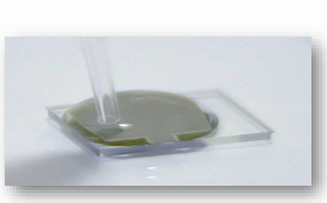


Hydrophobic

Dedicated for alcohol-based solutions

Hydrophilic

Dedicated for water-based solutions. The best for biological and medical research



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[2] Ł. Richter, P. Albrycht, M. Księżopolska-Gocalska, E. Poboży, R. Bachliński, V. Sashuk, J. Paczesny, R. Hołyst, Biosensors and Bioelectronics, 156, (2020), 112124
[3] E. Witkowska, D. Korsak, A. Kowalska, M. Księżopolska-Gocalska, J. Niedziółka-Jönsson, E. Rożniecka, W. Michałowicz, P. Albrycht, M. Podrażka, R. Hołyst, J. Waluk, A. Kamińska, Analytical and Bioanalytical Chemistry, 409, (2017), 1555-1567

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