## Table of Contents

 . 1

## SERS substrate

Surface Enhanced Raman Scattering (SERS) is an advanced experimental technique for measurement of Raman scattering signals. Raman scattering itself is a process with very small yield and to measure Raman signals on some individual molecules or thin film materials is very challenging. By placing the investigated material on a special substrate we can increase the signal intensity by several orders of magnitude. The effect is based on local field enhancement which is a plasmonic effect that happens if the sample surface is formed by suitable material and has a suitable geometry.

There are many suggested surface structures to be used as SERS substrates.





ideal

partly relaxed



fully relaxed



fully relaxed with gap



Sample parameter file: SERS. A 300x300x300 computational domain with SERS rods



2.39 V

2.00

1.50

1.00

0.50

0.00

-0.50

From: http://gsvit.net/wiki/ - GSvit documentation Permanent link: http://gsvit.net/wiki/doku.php/app:sers?rev=1517481991 Last update: 2018/02/01 11:46