Surface Enhanced Raman Scattering (SERS)

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Abstract
This paper looks at forming a surface enhanced Raman scattering (SERS) substrates that have a tunable sharpness. The tunable sharpness is obtain by different amounts of the gold coving made spin coating polymer nano tips. These nano tip where originally from inverted silicon pits which come non-close-packed colloidal crystals. The different layers of thickness give rise to different sharpness. This sharpness helps produce significantly enhanced local electro magnetic fields, which help the SERS enhancements.

Outline
Introduction to Raman Scattering
Introduction to Plasmons, and there use in SERS
Introduction to SERS
-importance of the enhancement factors
- poor reproducibility

Introduction to paper
 Basically Pure gold nanopryimds are expensive and hard to make with out breaking many of them, therefore the people in the paper use a polymer to make the nanoprymids, then coat them in gold at different size of layers, showing that a very small amount of gold (10-30nm)
The experiment
- details on how the nanopryamids are made
- Electromagnetic modeling of Raman enhancements.

Results
- This is a non lithographic technology to produce these
  --why that is important
- image of the template
- images of the final pyramids, their effectiveness have about 3 to explain
- the differences of with size of gold layers, and the resulting SERS enhancement factors.