



**SDI Review Form 1.6**

**PART 1:**

Journal Name:	<a href="#">Physical Review &amp; Research International</a>
Manuscript Number:	<b>MS: 2012 PRRI 2719</b>
Title of the Manuscript:	<b>Simulation of Nanostructures fabricated in chalcogenide glasses for use as surface-enhanced Raman scattering substrates</b>

**General guideline for Peer Review process is available in this link:**

**(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)**

- This form has total 9 parts. Kindly note that you should use all the parts of this review form.



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### PART 2: Review Comments

We would like to thank the anonymous referee for very useful comments.

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<b>Compulsory</b> REVISION comments	<ol style="list-style-type: none"> <li>Line 97, the calculation of the amount of adsorbed molecules is difficult to understand. A clarification is required.</li> <li>Lines 103-104, a factor of greater enhancement with gold than silver is really surprising. Comparison with the literature is absolutely necessary and it is important to provide justifications to explain this result. Please, check that there are no major errors of simulation which can lead to such result.</li> </ol>	<ol style="list-style-type: none"> <li>If we assume adsorbed molecules are distributed uniformly in a cubic volume of <math>L^3</math>, the amount of molecules which would be present in an arbitrary surface was proportional to <math>L^2</math>. For example, if we have 1000 molecules distributed uniformly in a cube then we should have 100 molecules at the top surface.</li> <li>An order of magnitude increase in the enhancement factor achieved in this work is really due to the specific structure chosen for the substrate. This means that if we used silver instead of gold, we would have roughly the same enhancement factor. We have also checked our code and our numerical results, seems to be</li> </ol>



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	<p>3. For the figures, it is difficult to understand them as "simulated" spectra are not introduced.</p> <p>4. The experimental conditions are very incomplete (type of Laser, wavelength, analysis (microscope?))... which make the comparison with experimental conditions difficult.</p>	<p>correct.</p> <p>3- Our aim in this simulation was to find the enhancement factor, but not the actual Rhodamine spectra. So we found the wave number position of each peak in the experimental spectra and then calculated enhancement factor for each peak using our code.</p> <p>4- An Nd: YAG laser operating at 1064 nm was used as the excitation source. The Raman scattering signal was collected and analyzed by a Fourier transform (FT) Raman spectrometer (Bruker Optics Raman II).</p>
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<p><b><u>Minor</u></b> REVISION comments</p>	<ol style="list-style-type: none"> <li>1. The introductory bibliography on SERS is weak (3 references) and do not mention particularly Fleischmann who is one of the first discoverer of SERS.</li> <li>2. A part of the text is done on the enhancement factor without reference. The text is fine, but it is not argued.</li> <li>3. The equations of the DDA are too broadly detailed, especially since it is already known. A simplification is needed to go to the essentials.</li> <li>4. Some typing errors are present and please check references as well</li> </ol>	<ol style="list-style-type: none"> <li>1- Fleischmann's work is added to the references.</li> <li>2- A reference is given in the text now.</li> <li>3- Since we have written our own code (using MATLAB) in this work, we thought some mathematical details would be necessary to clarify the simulating purposes, although they are already known.</li> <li>4- We have checked the references and have put them according to the journal style.</li> </ol>
<p><b><u>Optional/General</u></b> comments</p>		