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Abstract:

We observed the second harmonic generation (SHG) intensity from the peptide molecules absorbed carbon nanotube surface grown on the $Si/SiO_2/Co$ substrate. We dropped different concentrations of peptide molecules such as 100nM, 1μM and 10μM on the three $Si/SiO_2/Co/CNT$ substrate individually. The SHG intensity was measured from the CNT/PEP interface by using 1.17 eV pulsed laser light. The results show that, the SHG intensity increased with increasing the peptide concentrations. In order to confirm about the SHG signal detected from the CNT/PEP interface, we dropped similar concentrations of peptide molecule on the three different Si/SiO_2 substrate having no CNT layer individually and we observed the same results as found for CNT/PEP interface. In this case, the SHG intensity also increased with increasing the concentrations of peptide molecules on the surface. So, the generation of second harmonic signal is due the peptide molecule for both cases.