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Polarizabilities of Halide Ions Co-Adsorbed on Silver Nanoparticles and Their Relationship to Increased Surface-Enhanced Raman Intensities of Rhodamine-6G and Pyridine MICHAEL COLE, PAUL JAGODZINSKI, Northern Arizona University — Glaspell et. al. (2004), found a linear relationship between the intensities of surface-enhanced Raman (SER) signals of selected vibrational modes of rhodamine-6G (R6G) and the polarizabilities of co-adsorbed halide ions. Furthermore, they noticed that the slopes of intensity versus time plots for R6G also exhibit a linear relationship with the halide polarizabilities. We will present similar results from the SER signals from selected vibrational modes of pyridine and the polarizabilities of co-adsorbed halide ions. In addition, we will present a plausible relationship between the adsorbates and the electric field of the induced dipole of the halide ions.

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