

Today, fluorescence is a broadly used phenomenon. It is known, that in presence of metal nanostructures the fluorescence emission rate can be extensively enhanced. In this thesis we study the preparation of such nanostructures, specifically in the form of a thin film made of many silver islands, followed by measuring the expected enhancement. We try several methods for enhancement evaluation, two of which lead to usable results. Thesis contains description of nanostructures preparation, explanation of used methods and measured emission and excitation spectra of used fluorophores.