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## Effect of Near Ultraviolet Irradiation on Changes in Island Metallic Films During Thermal Annealing\*

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*Received May 21, 2019*

*Revised June 14, 2019*

*Accepted June 20, 2018*

The effect of low-intensity near ultraviolet irradiation and subsequent thermal annealing on the surface morphology of gold and silver granular films was investigated. It was found that exposure to light does not lead to immediate changes in the extinction spectra and the microstructure of the films. However, after annealing at a temperature of about 200°C, the difference between irradiated and non-irradiated areas becomes clearly visible both visually and in the extinction spectra of the island films. For the irradiated gold film, changes in the annealing process occur much more slowly than for the non-irradiated one. For silver films, the changes after annealing vary significantly depending on whether the film is irradiated in a vacuum or in air. From the optical extinction spectra and SEM images, it can be concluded that the conditions for the annealing-induced surface diffusion of metal atoms in the irradiated area change significantly, and these changes depend on the irradiation conditions.

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\* Полный текст статьи опубликован в „Optics and Spectroscopy“  
V. 127 N 4 2019.