Abstract Submitted
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Investigation into the Nano-Structured Surface of the Daguerreotype EMILY THOMPSON, University of Rochester — The purpose of this project was to advance conservation techniques used on the daguerreotype and gain a better understanding of its nanoparticle covered surface. We specifically looked at how light, heat, moisture, and biology affected the daguerreotype. In addition, we altered the steps of creating a daguerreotype (iodizing, exposing, developing, and gilding) to study the effects on the surface. We found that the gilding can create a double void and a porous region below the surface, and it is now believed to be the reason for exfoliation. We found that UV light affected all areas of the daguerreotype, while visible light only affected tarnished areas. Nanoparticles were synthesized using biological materials and used to create biology on a daguerreotype. In the future, we plan to continue investigating the gilding process and biology on daguerreotypes. This project was supported in part by NSF award PHY-1156339.

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