

## OPPORTUNITIES FUND GRANT AWARDED TO ASSIST WITH THE PURCHASE OF A DINO-LITE DIGITAL USB MICROSCOPE

By Eowyn Kerr-Di Carlo

*In November 2021, with the generous award of an IIC Opportunities Fund Grant, I was able to purchase a Dino-Lite AD4113T-I2V with UV and near IR capacity and adjustable magnification ranging from 20x-250x. After testing similar Dino-Lite microscopes and querying colleagues, I also purchased a small microscope stand with extendable arm to aid in stability and hands-free examination. The portable USB microscope was intended to support several different tasks including the direct study of artwork and imaging for my doctoral research at the Courtauld Institute of Art and to facilitate the teaching of historical artists materials and objects-based learning via remote lecturing with the West Virginia University (WVU) Technical Art History program.*

As I had hoped when applying for the IIC Grant, having the small digital microscope has transformed my ability to present complex material and to examine works of art collaboratively through synchronous online teaching. It is a simple device but is effective in its ability to move lectures from a static slideshow format to an interactive process.

Throughout the 2021/22 academic year, the Dino-Lite has become an indispensable tool for remote teaching. While I have used it occasionally for guest lecturing, where images captured during object examination were used within PowerPoint presentations to illustrate specific points, the microscope has been most effective for real-time discussion.

Currently, I am teaching a course titled Material Objects Investigation I for WVU from my home office in London. On average, I use the Dino-Lite regularly during every third class for teaching and lecturing. With the ability to toggle between visible light, UV and IR, and with a range of magnifications, I am able to easily transition between a detail of an object or a material (such as specific types of damages or loss in the surface of a painting, brushstrokes or paint application, paper surfaces, or various drawing media) and a more particular example at a higher magnification, such as pigment samples, fibre samples, or even cross-sections (Tip: the UV lighting at 395 nm and IR at 940 nm works well for a cursory examination and teaching purposes). This function enables my students to see exactly what I am looking at and creates a way in which we can study and discuss objects interactively in a virtual classroom setting.

In addition to the microscope, I set up an iPhone on an articulated arm for use as a simple document camera. This allows me to then have two cameras open in the conferencing software during synchronous teaching and also have my face visible while speaking. One camera shows a bird's

eye view of the table and the select object with my hands visible, while the other shows the microscope view. I can then move the microscope as needed, change the magnification, or capture images to be used at a later date. The Dino-Lite also supports simultaneous annotation as well as an internal measuring scale, which is invaluable when trying to communicate size or dimension. While not a complete replacement for teaching in front of actual objects, in this case the Dino-Lite microscope is essential.

I have now used the Dino-Lite for several on-site lectures and handling sessions in London, including a class using the Rare Books and Manuscripts Collection at Senate House Library. The visit to Senate House created an opportunity to study a small group of illuminated manuscripts to use as comparative material for my own research. As the microscope is portable, it meant that I could lecture while examining the manuscripts under magnification and simultaneously capture images of several small historiated initials that had underdrawing visible in IR as well as damages and loss to the paint layers. As I visit other collections, I plan to compile reference images of manuscript illumination to use for future teaching and research purposes. Furthermore, I will definitely be integrating the Dino-Lite into my teaching practice for the 2022/23 academic year for both classroom and remote lecturing. This fall semester I continue to teach Material Objects Investigation II remotely for WVU and successfully used the Dino-Lite microscope as a visual aid in the classroom for a pre-college module on art conservation at the Sotheby's Summer Institute in New York. The microscope has been indispensable, for me and my students, and I am grateful for the IIC grant that enabled its purchase.

My sincerest thanks to the awards committee and to the IIC staff who continue to support all aspects of conservation.



Eowyn using the Dino-Lite Digital USB Microscope. Image courtesy of Eowyn Kerr-Di Carlo.