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Abstract Submitted

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Development of a cost effective microscope heater stage¹ JOSHUA DUGRE, CHANDRA PRAYAGA, AARON WADE, University of West Florida — Utilizing 3D printing technology, a heater stage has been developed and implemented for microscopic systems. Due to the flexibility of 3D printing, the heater stage can be easily modified to fit any sample size with only slight modifications to the heating element being required. The sample in contact with the heating element can also easily be secured in a thermal insulator, such as aluminum foil. The thermal gradient of the heater stage has been recorded to be less than 1°C and has been compared to more expensive designs, and the cost effectiveness of the system has been determined. The system has been tested with a sample of the liquid crystal 8CB in order to determine the exact temperatures of the phase transitions of the crystal to verify that the system is applicable to a wide range of experimental physics.

¹UWF Quality Enhancement Plan Award

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