

Abstract Submitted  
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**Optical Emission Spectroscopy Measurement of Atmospheric Pressure Plasma Species** DZAFER CAMDZIC, ADAM LIGHT, SHALESE LOVELL, BRIAN HENNING, ANNI ZETTL, Colorado College — We refurbish a Jarrell-Ash Model 82-000 monochromator for the purpose of observing parameters in an atmospheric pressure plasma jet. Adapting the device to our requirements presented a series of obstacles which were overcome by applying elements of plasma spectroscopy literature and simple electronics. We plan to use emission spectroscopy to identify species and plasma specifications, such as electron temperature and line ratios, to help optimize effectiveness of PFAS chemical breakdown. The motorized Czerny-Turner monochromator was fitted with a digitized data acquisition system, while the plasma was created using argon gas and three different commercially-available plasma lighter circuits. Our setup represents a straightforward, low-budget method with which to perform optical emission spectroscopy for diagnosing atmospheric pressure plasma.

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