

## **Title of the abstract (Helvetica, bold, 14 pt)**

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X-ray photoelectron spectroscopy PES is a powerful tool for extracting chemical information of a specific site by measuring the binding energy of a core electron. We are implementing a hemispherical analyzer for time-resolved photoemission spectroscopy at the AMO-LAMP end station. The advantage of the hemispherical analyzer over the more traditionally used time-of-flight spectroscopy is a large collection efficiency and higher multi-hit rate capability. We will use a Scienta EW4000 hemispherical analyzer, offering a kinetic energy range between 5 eV and 10 keV with <40 meV resolution and up to 45 eV acquisition window. The analyzer is equipped with wide-angle entrance lens with an angular detection range of 60° which increases the transmission throughput and reduces the acquisition time. Such an analyzer can be used for different experiments ranging from UPS, to XPS, to HAXPES. In first experiments we are aiming to measure the energy flow within a molecule. We will make use of the short and intense LCLS x-ray pulses to perform time resolved PES (TRPES). We will use the two-color ultrafast x-ray pulses with controlled time delay delivered by LCLS to trigger and view electronic and vibrational dynamics evolving in real time at a specific site.