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## **【504】 New Developments in Deflector Analyzer Technology for ARPES**

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Electron-optical deflectors in the lenses of hemispherical analyzers have been changing the data acquisition strategies of ARPES significantly. Among other benefits, keeping the experimental conditions constant (the sample light geometry stays fixed) and enhanced acquisition precision (no mechanical movement is involved) have increased the data quality and acquisition speed. However, several aspects of the electron-trajectory manipulation have been unaddressed so far, such as field inhomogeneities in the deflector sections and distortions induced by deflecting the angular image. We present a new type of deflector technology for APRES measurements, enhancing the deflector precision and simultaneously overcoming existing limitations of deflector analyzers, such as angular acceptance, reliability of mechanical parts and electron optical distortions. We have characterized the analyzer in lab-based environments using well established standard samples and compared the results to cutting edge literature from synchrotron experiments.

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