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XPSSurfA - An Online Open Access XPS Database

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X-ray photoelectron spectroscopy (XPS) is a widely used surface analysis technique employed in fundamental research, applied research, service laboratories and industry. Good quality analytical outcomes depend critically on spectral references. Many examples of XPS reference databases exist, including print editions, sets of spectral peak positions drawn from the literature, and digital archives and libraries. We have developed a new digital XPS database comprising survey and region spectra for a range of materials types, collected under a common set of analytical conditions. Detailed metadata are provided for each material and each spectrum, presented using a schema that incorporates the ISO 16243 and 14976 standards, guidelines developed by IUVSTA technical groups, and extensions developed in this work. Spectra are shared under a Creative Commons International (4.0) attribution, non-commercial licence (CC BY-NC) in Kratos (.dset), VAMAS (.vms) and XML (.xml) formats. We will demonstrate the database and its usage, and discuss current case studies incorporating XPSSurfA data.

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