



Investigation of Thin Films Using UV-X-Ray Reflectometry

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Message from the Guest Editor

Dear Colleagues,

UV-X-Ray reflectometry is a powerful tool for the structural characterization of thin films and layered systems. Often coupled with other techniques such as spectroscopic ellipsometry, profilometry, X-ray diffraction, atomic force microscopy (AFM) or X-ray photoelectron spectroscopy (XPS), this technique can be very useful for the determination of the thickness, density, and roughness parameters of layered systems. Two are the most important peculiarities: it is not destructive and can also be applied to insulating materials. Important applications are for instance organic and magnetic films. Polarized light reflectivity can be used to follow the growth and to characterize ultrathin organic layers at surfaces and to determine the molecular arrangement and electronic structure of strongly oriented organic ultrathin films. Additionally, X-ray magnetic reflectivity in resonant conditions is a very powerful probe of magnetic films, allowing to extract the interfacial magnetization profiles with nanometer resolution. In this Edition, we explore recent progress and new directions in the use of UV-X-Ray reflectometry for the study of thin films and buried interfaces.





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