

STUDY OF INTERFACIAL PROBES EMPLOYING THIN FILM X-RAY DIFFRACTION AND REFLECTIVITY

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The interfacial characteristics of layered films of industrial interest have been interrogated with measurements of grazing-incidence X-ray diffraction and X-ray reflectivity. Data modeling has allowed for extraction of thickness, density, and interfacial widths of the films. In some cases it was found useful to construct scattering length density profiles. A comparison will be presented of data collected on different instrumentation and with laboratory versus synchrotron radiation sources, with an emphasis on how these differences translate to variations of practical significance in the observed physical properties.