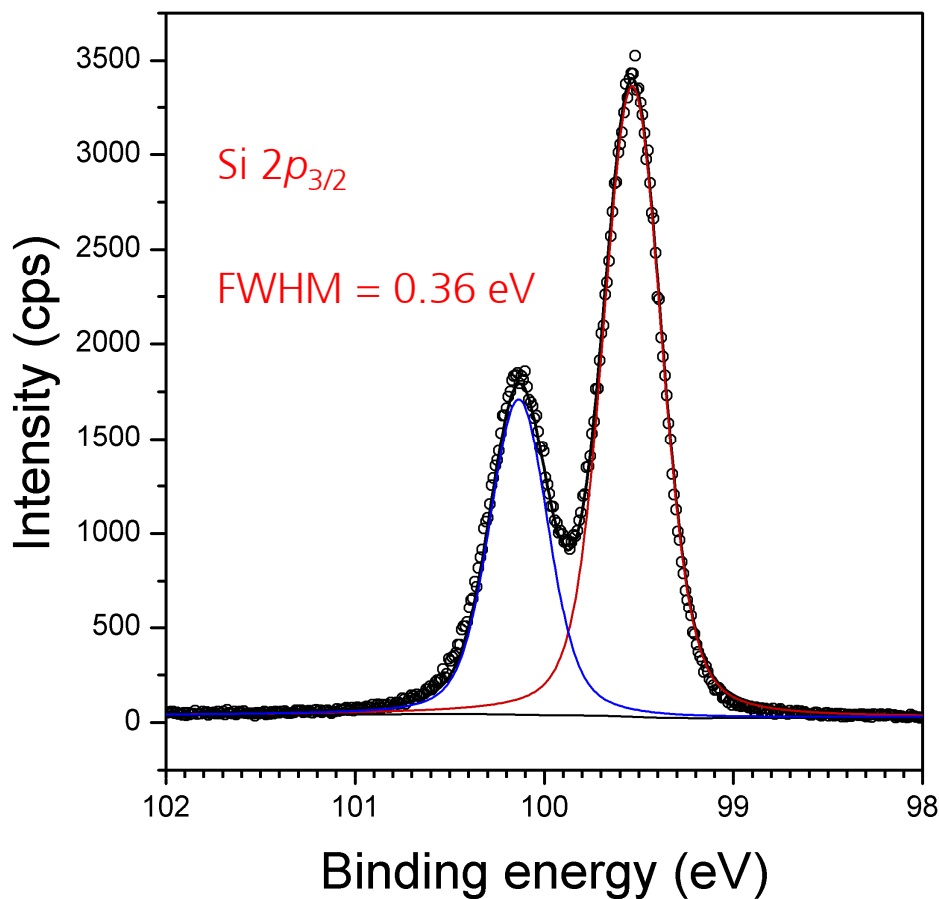


Monochromated XPS of Hydrogen-Terminated Silicon (111)

Application Notes

The high resolution capability of the PHOIBOS 150 MCD-9 analyzer and the FOCUS 500 monochromator was demonstrated by XPS measurements on H terminated Silicon (111). The spin orbit splitting of the Si $2p$ states (binding energies 99.53 eV and 100.13 eV) is clearly resolved, with a FWHM down to 0.36 eV for the Si $2p_{3/2}$ component. For peak fitting a Voigt line profile and a Shirley background were used.



Si(111), NH_4F -dipped, Focus500, Al K_α focussed mode, 10 kV, 100 W, grazing x-ray incidence, Phoibos 150 MCD-9, $E_{\text{pass}} = 5$ eV, Medium Area Mode. Voigt-fit with Shirley-background ($\omega_G = 0.305$ eV and $\omega_L = 0.108$ eV). Data courtesy of F. Speck and T. Seyller (University Erlangen-Nürnberg, Germany).

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