ARPES part III
examples

Adam Kamiński

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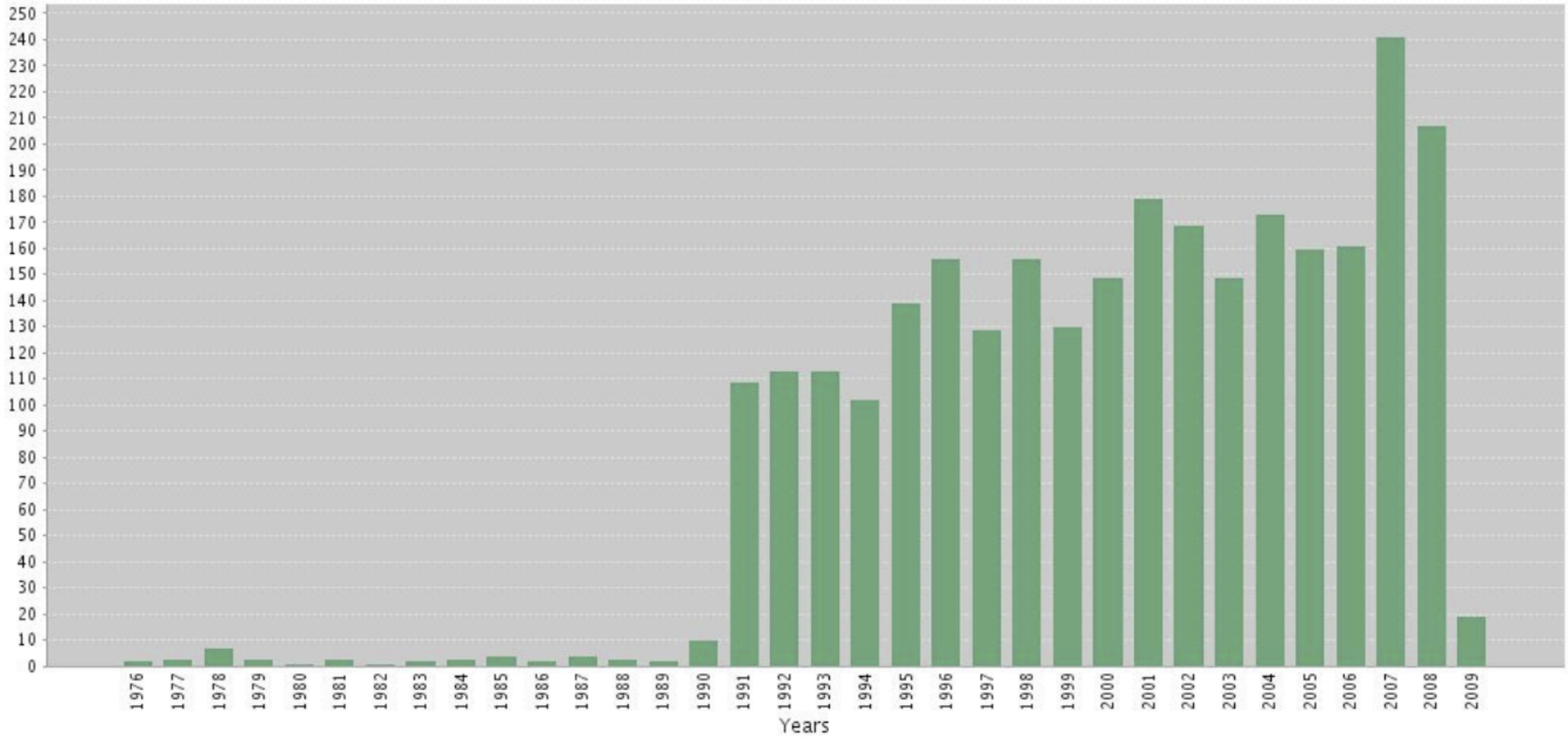
Published Items in Each Year



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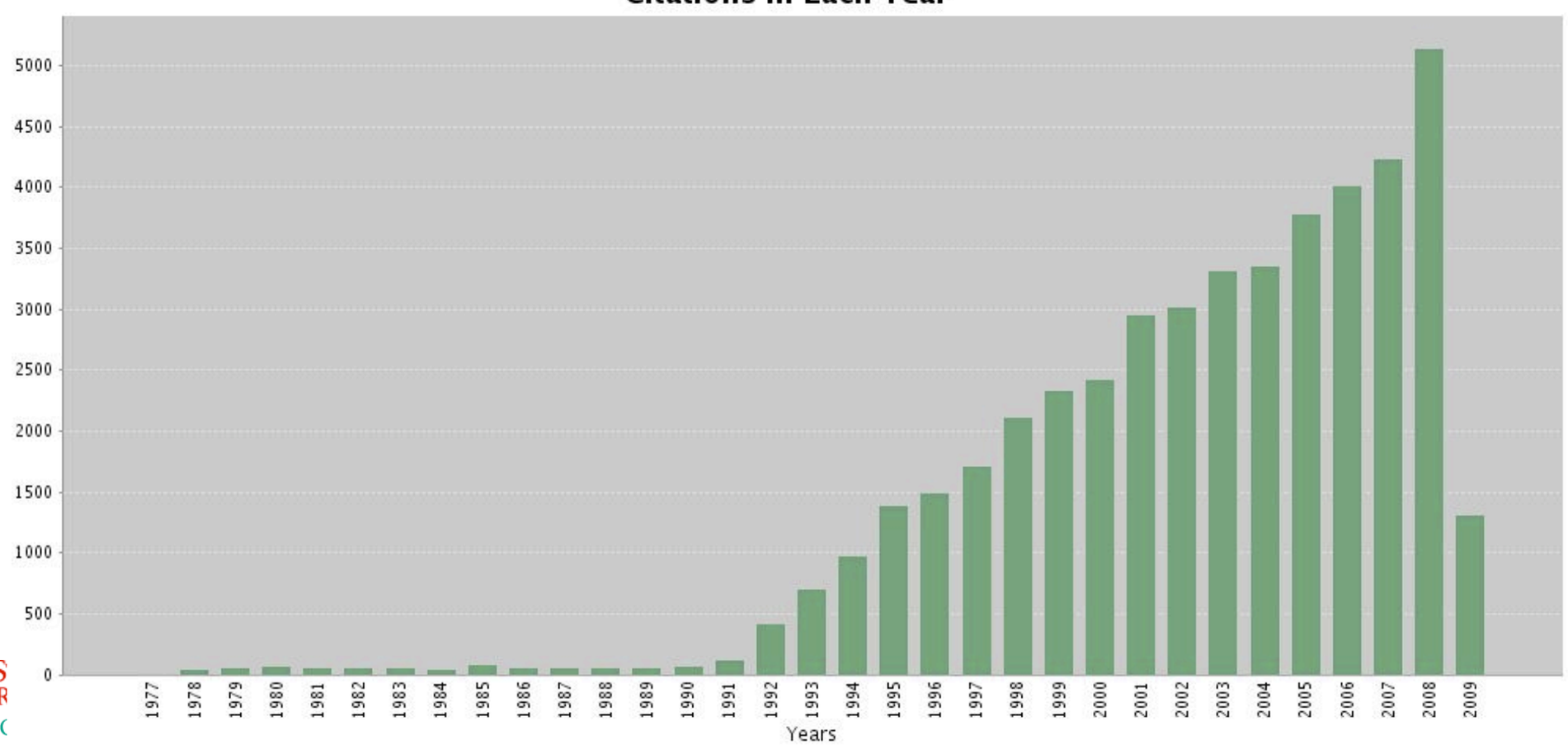
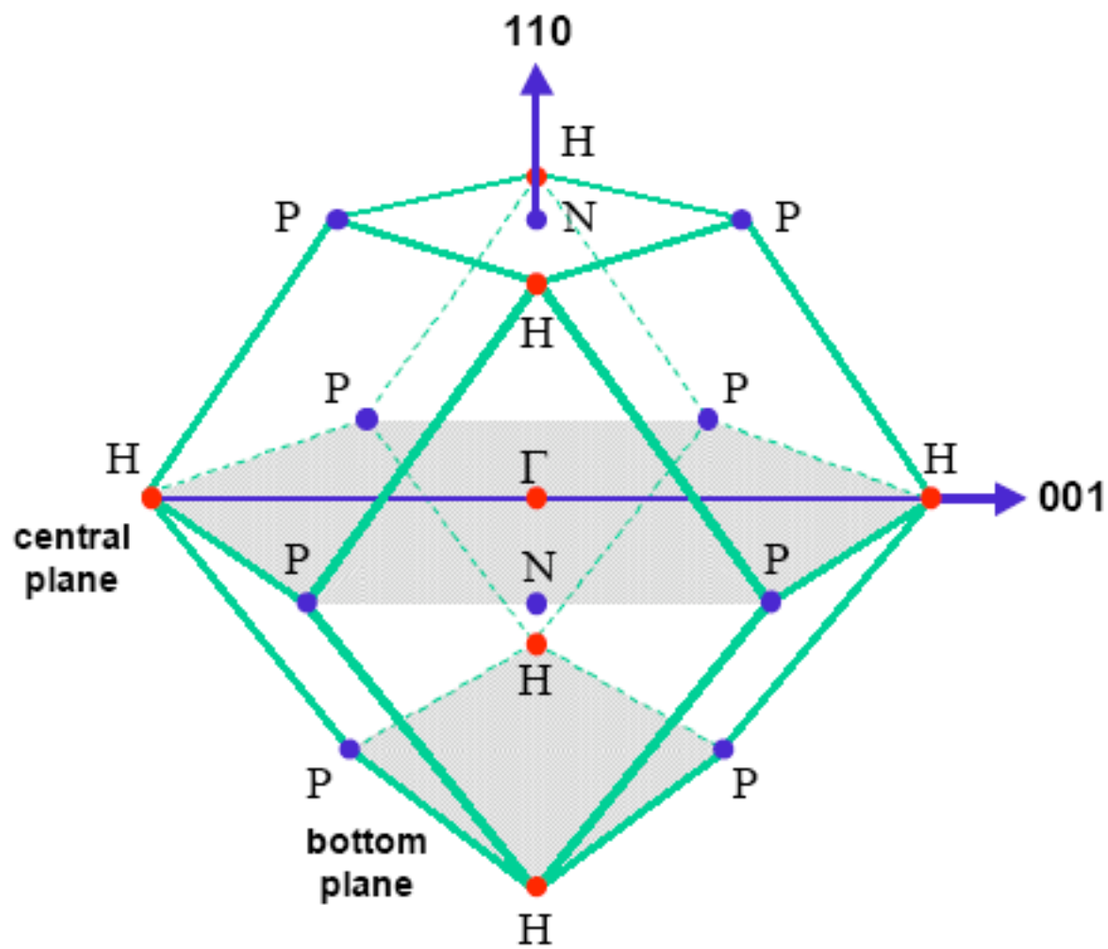


Example: Fe



J. Schäfer et al,
cond-mat/0501585

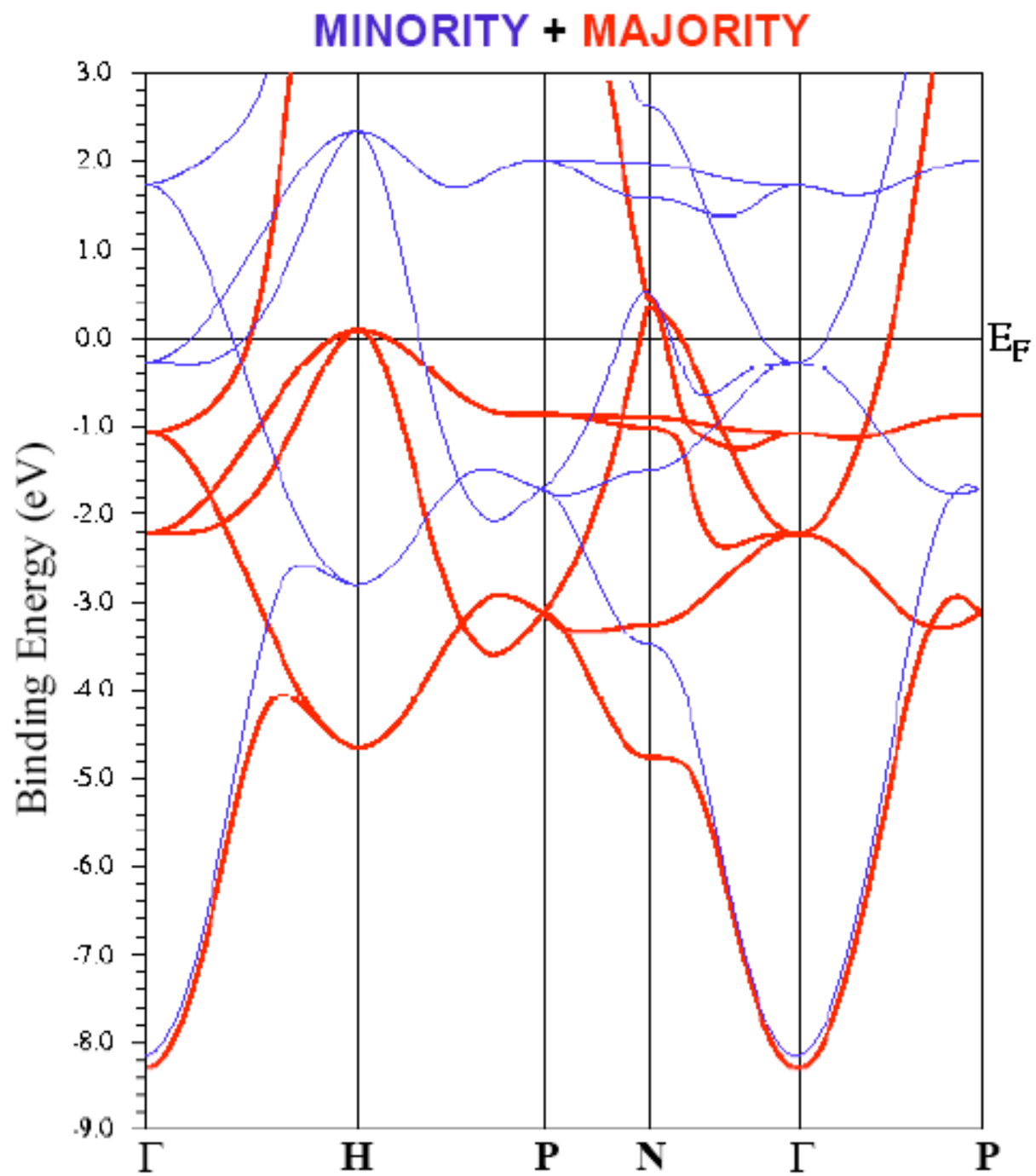
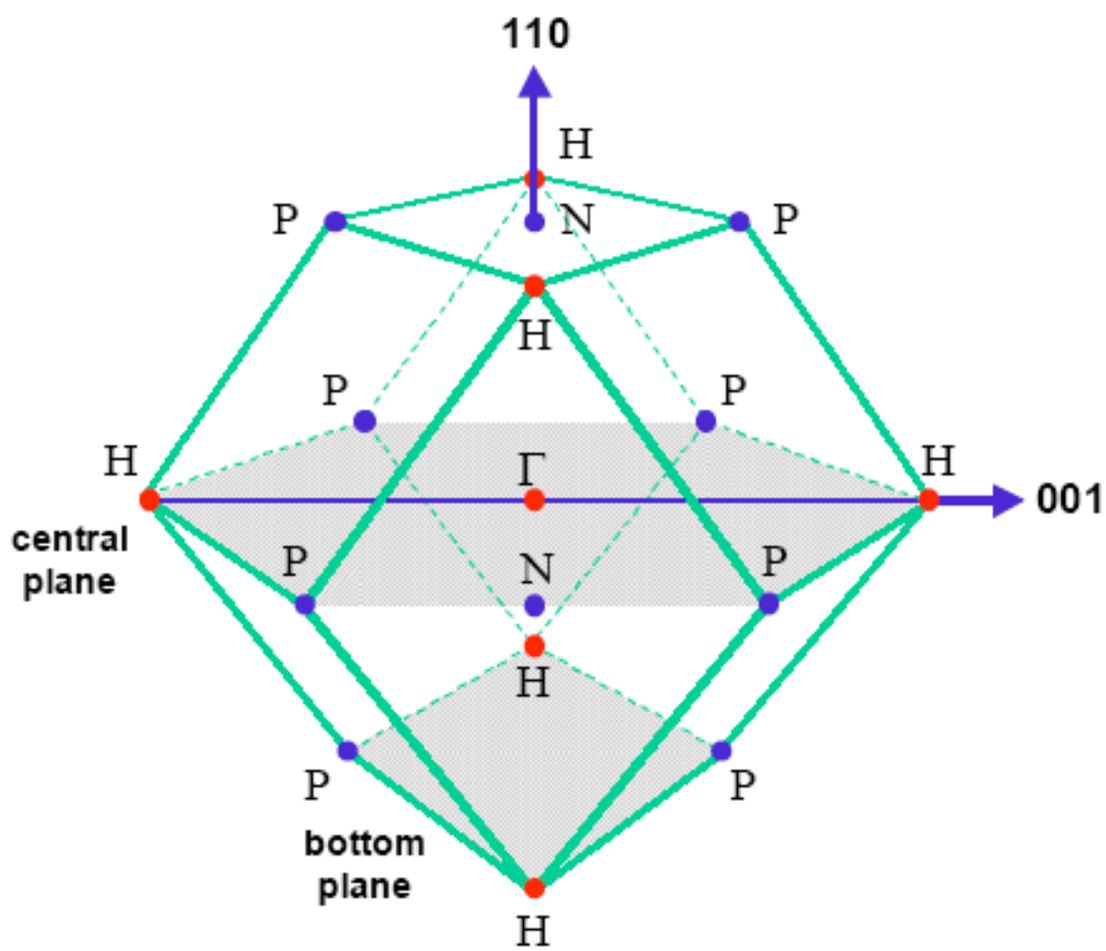


FIG. 7. DFT-GGA band structure for minority and majority spin electrons (thin and thick line, respectively). The exchange splitting is energy- and k-dependent.



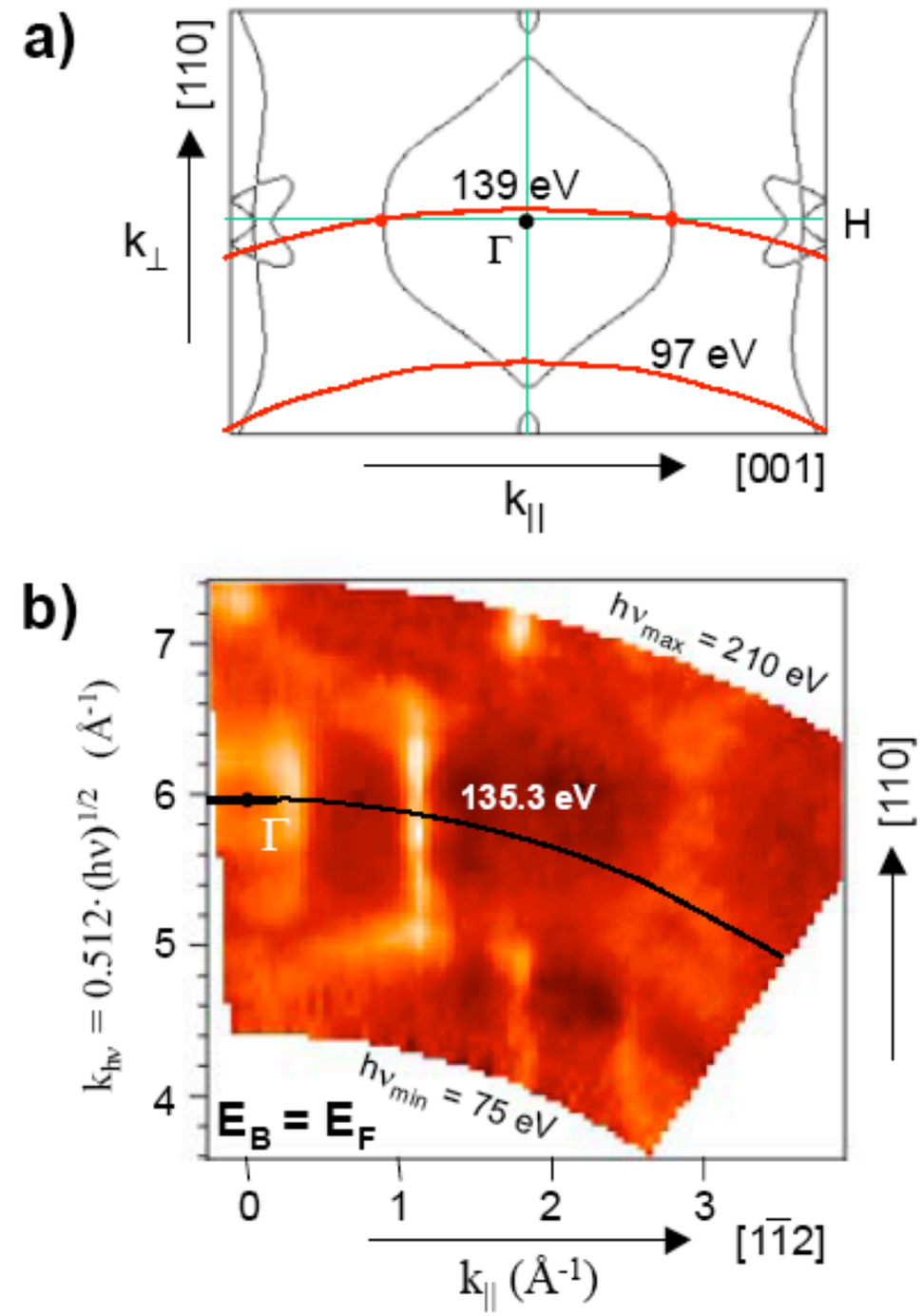
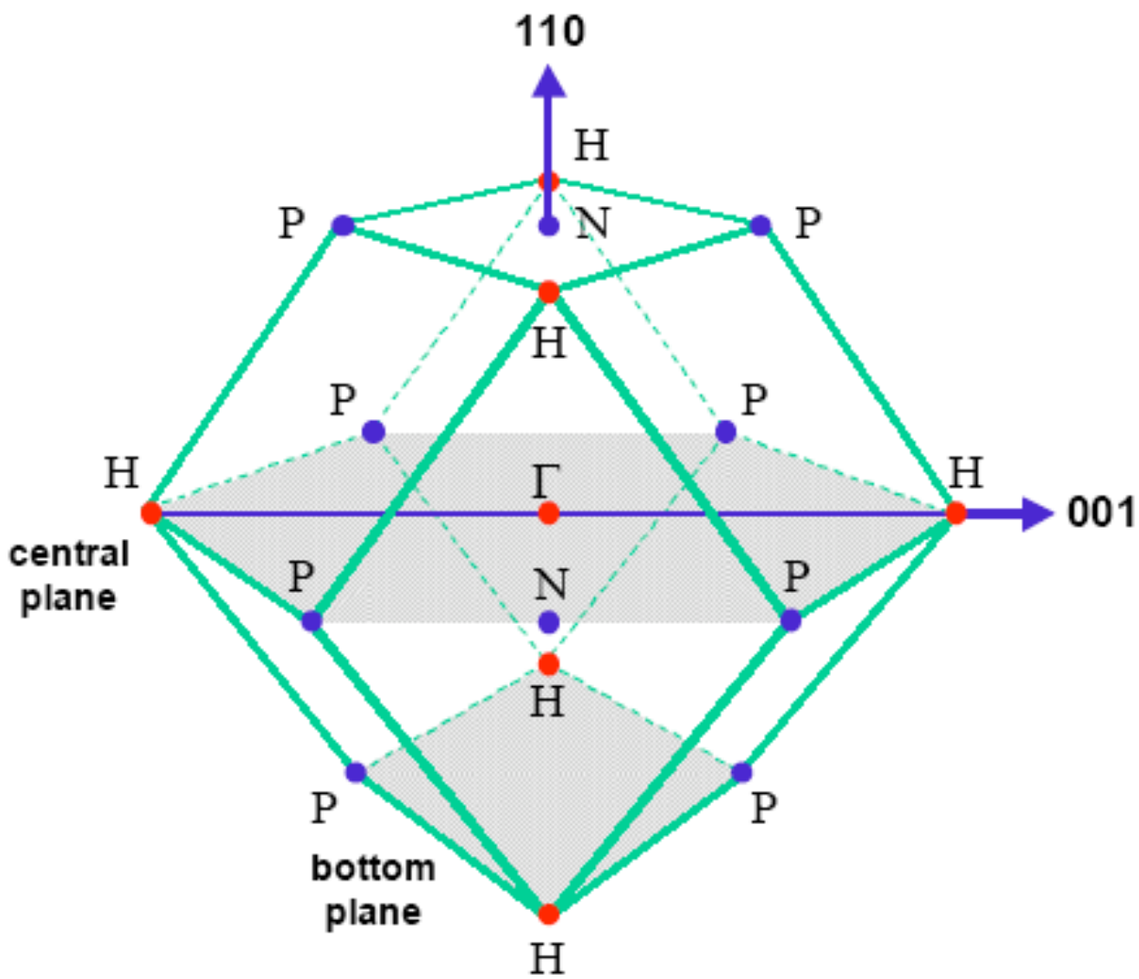


FIG. 4. a) Spherical measurement paths resulting for the photon energies utilized in this study, indicated in the DFT majority FS for an angle scan along [001]. b) Determination of the photon energy that intersects the Γ point in normal emission (angle scan along [1$\bar{1}$2]), color scale indicates states at E_F in bright intensity).



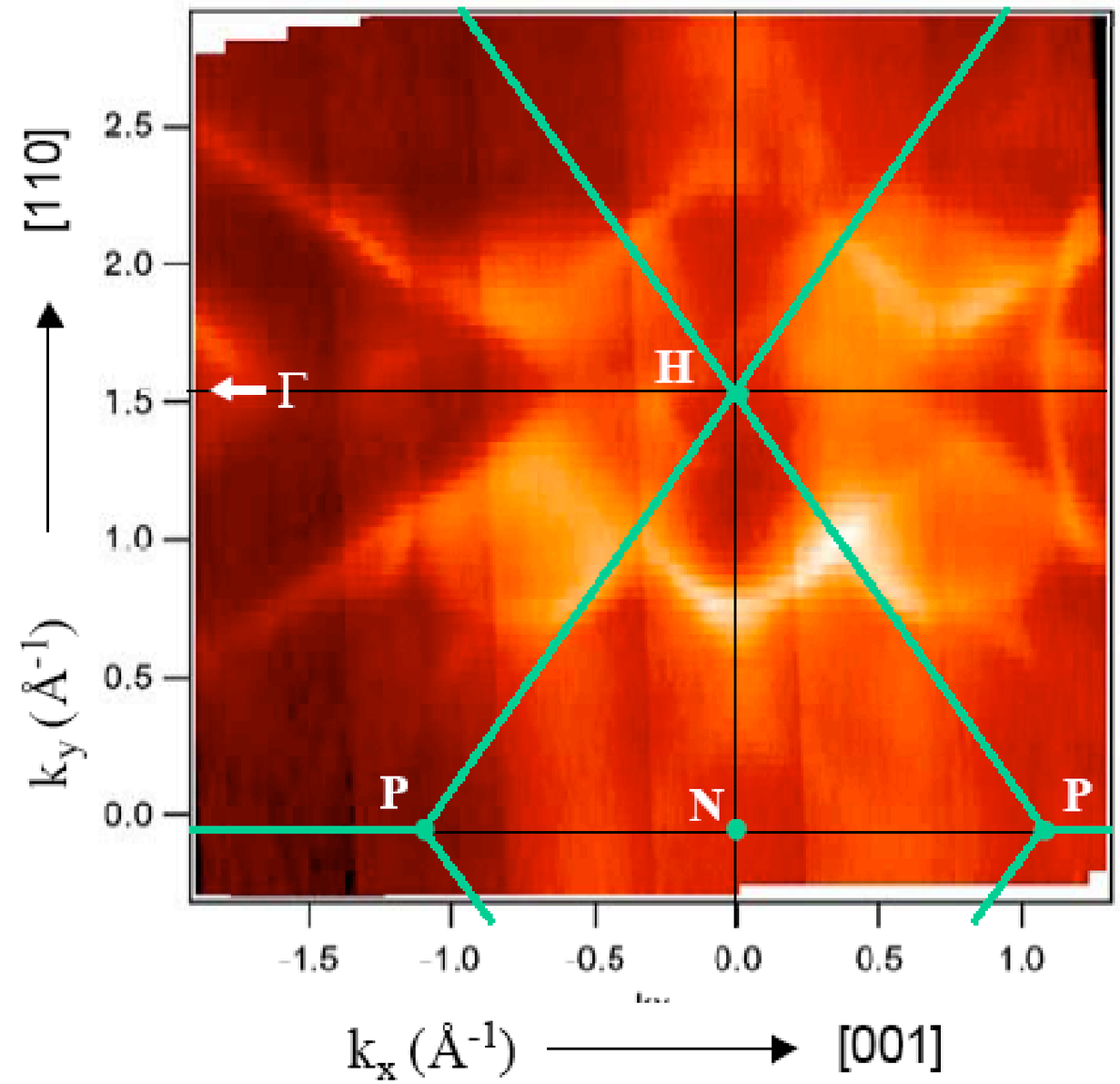
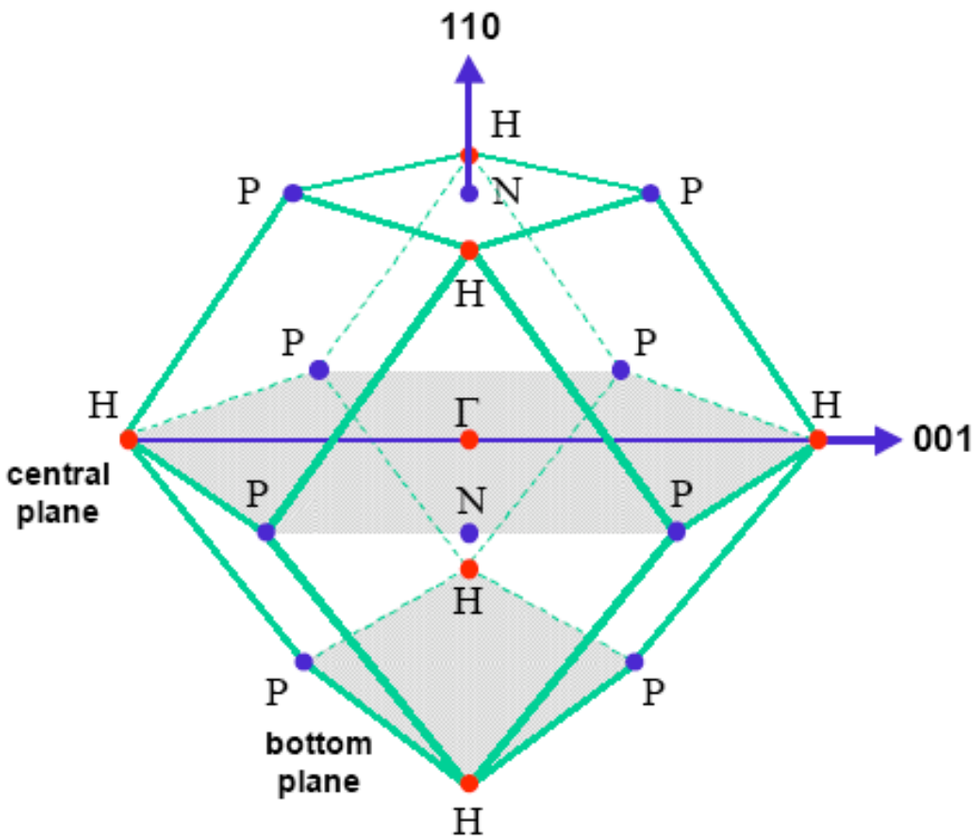


FIG. 6. ARPES Fermi surface at BZ bottom (hν = 97 eV). The diamond-shaped minority FS sheet *V* is seen with high intensity.

J. Schäfer et al,
cond-mat/0501585



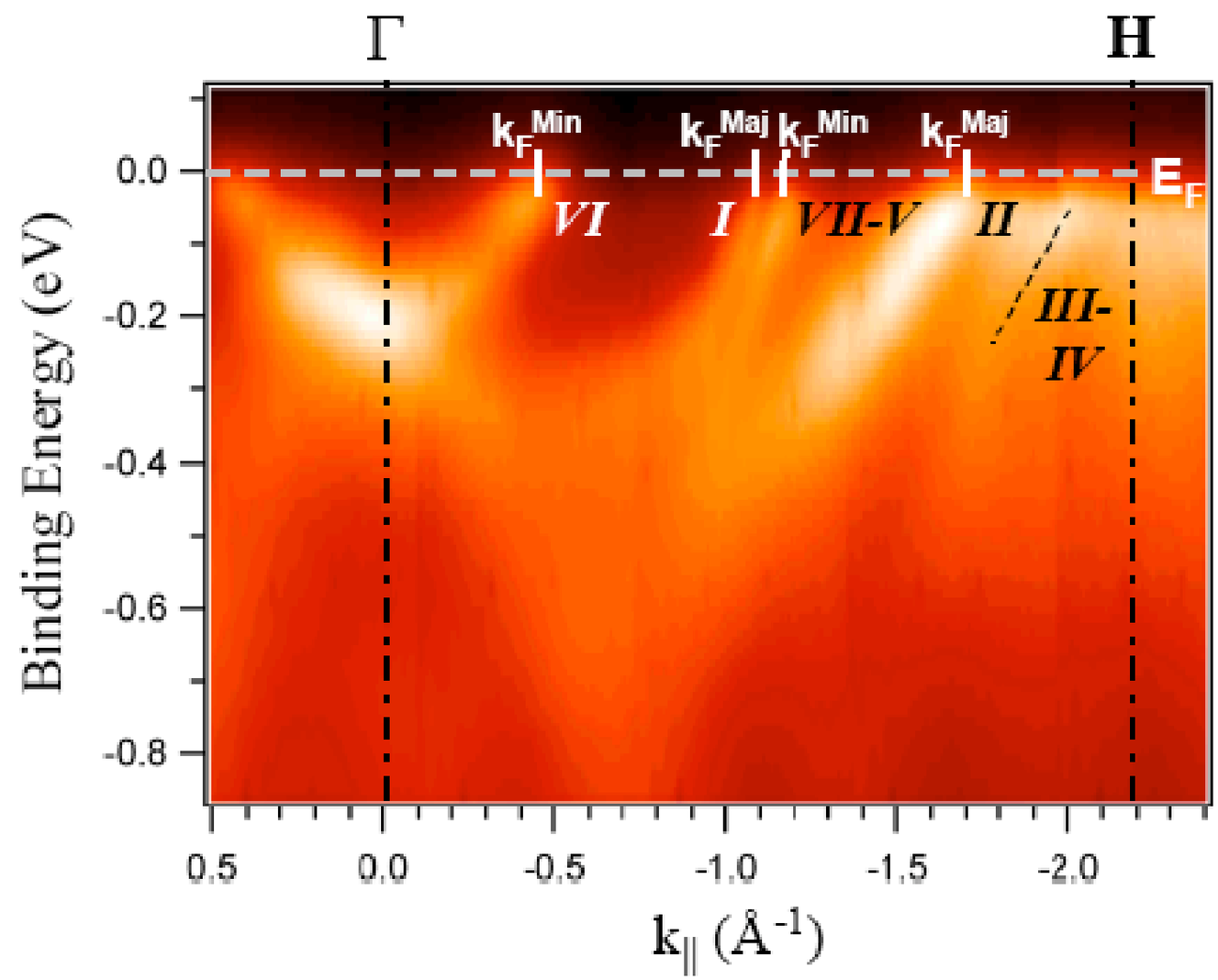
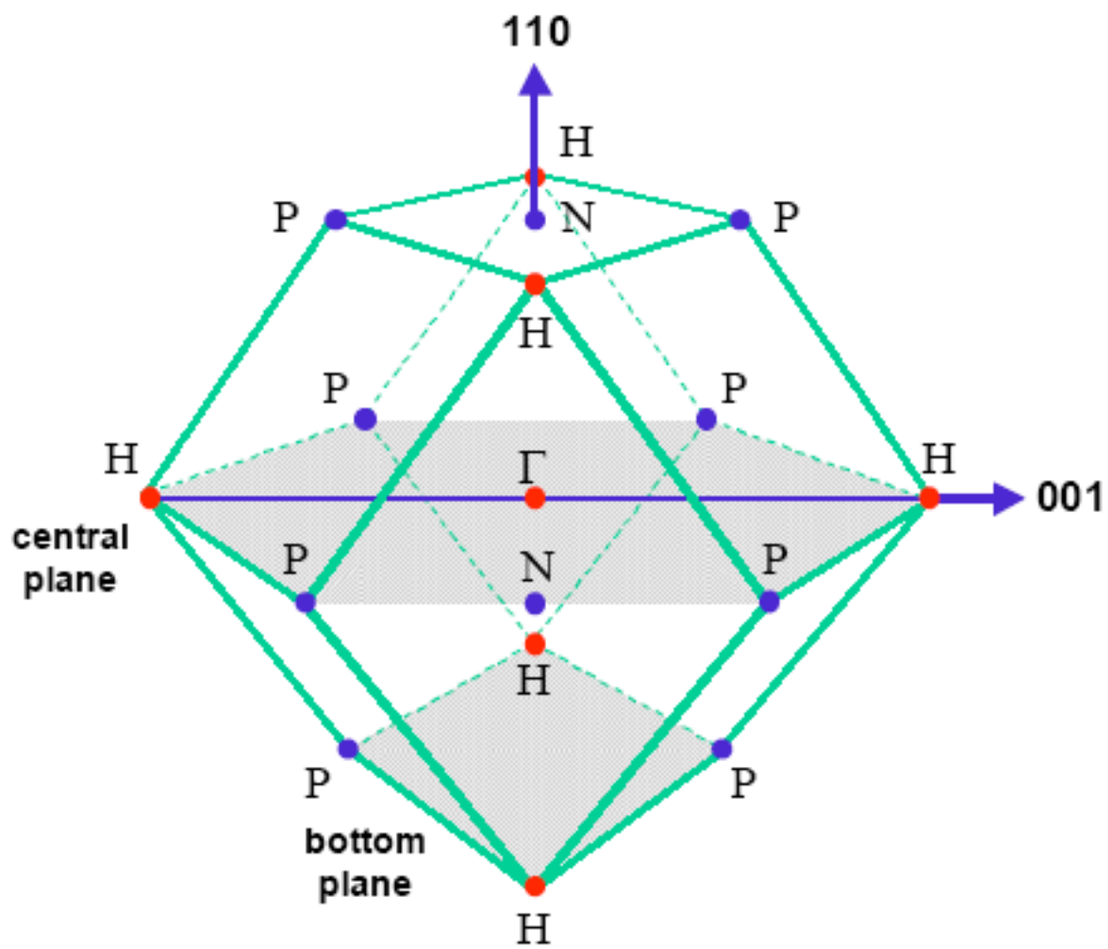


FIG. 12. ARPES band map along Γ-H (hν = 139 eV). In addition to the Fermi vector for minority FS sheet *VI*, two Fermi vectors for majority sheets *I* and *II* are observed. The splitting of the band for *I* relates to the minority FS VII (see also FS data Fig. 5).

J. Schäfer et al, cond-mat/0501585



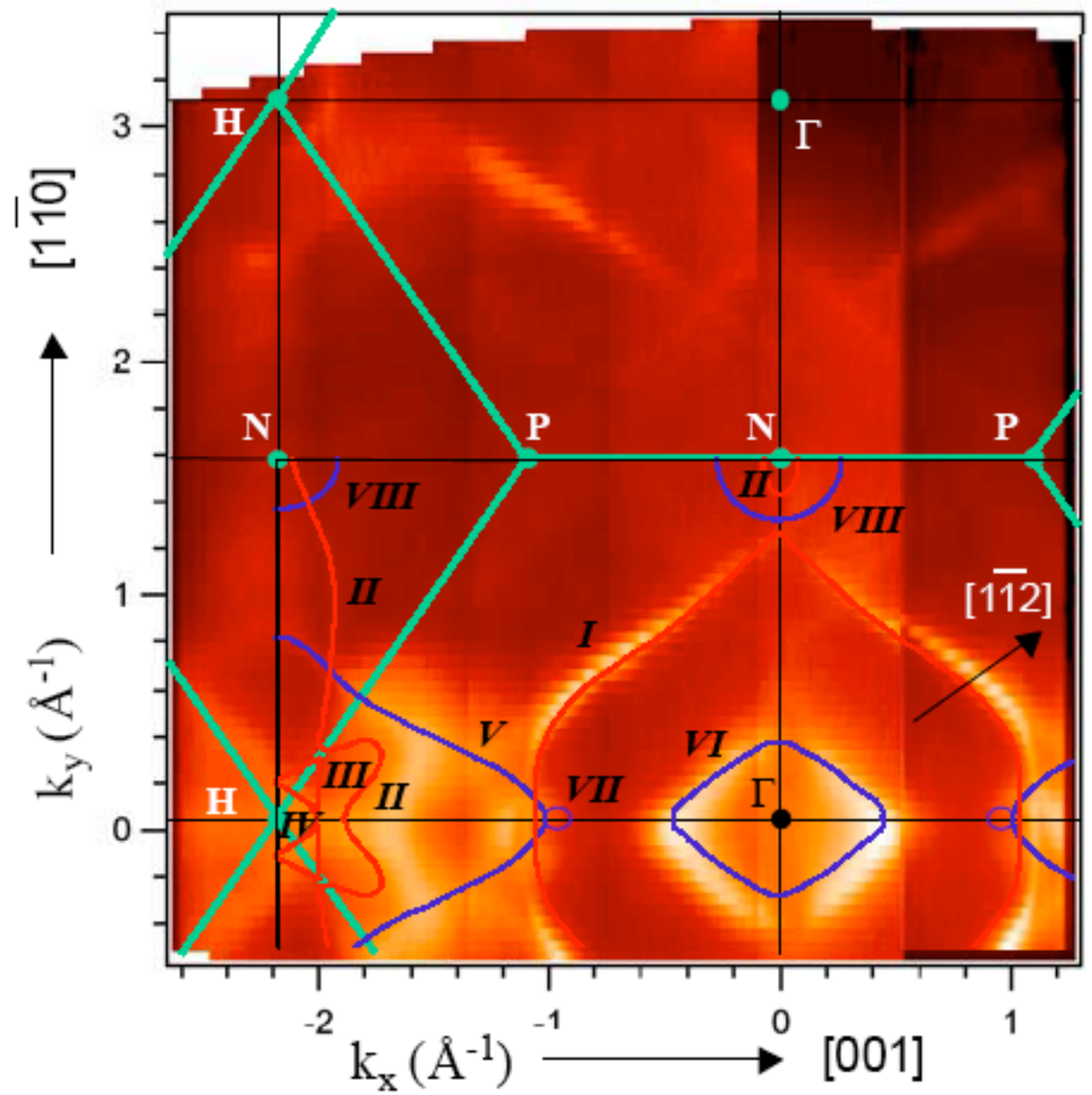


FIG. 5. ARPES Fermi surface at BZ central plane (hν = 139 eV). The experimental data are overlaid with the DFT calculation for minority and majority FS sheets. For discussion see text.

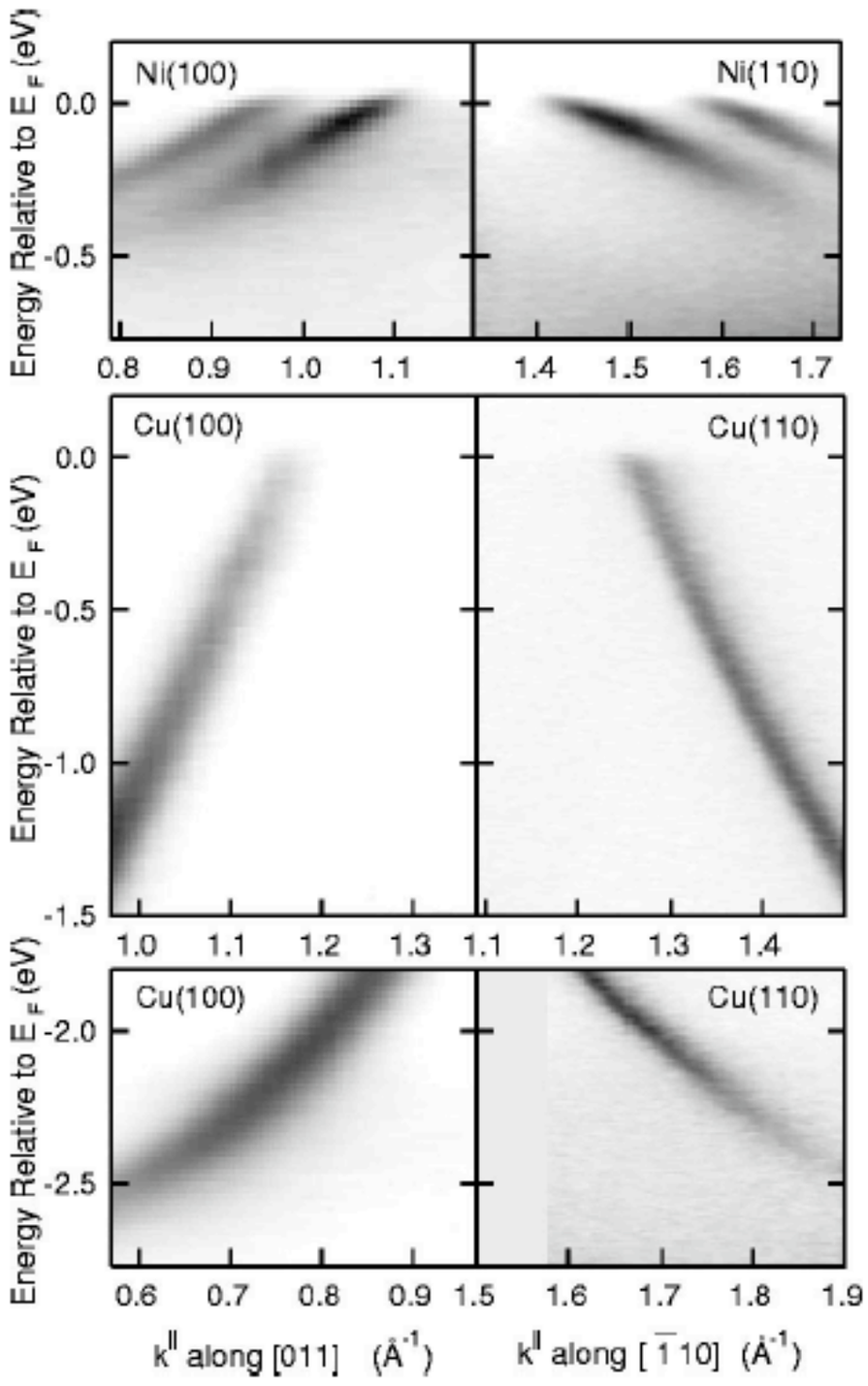
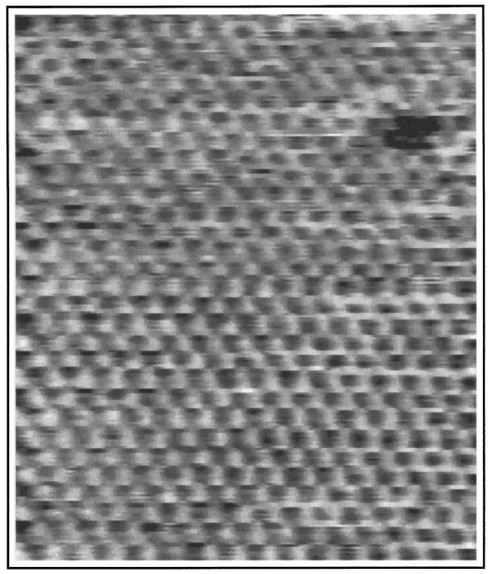
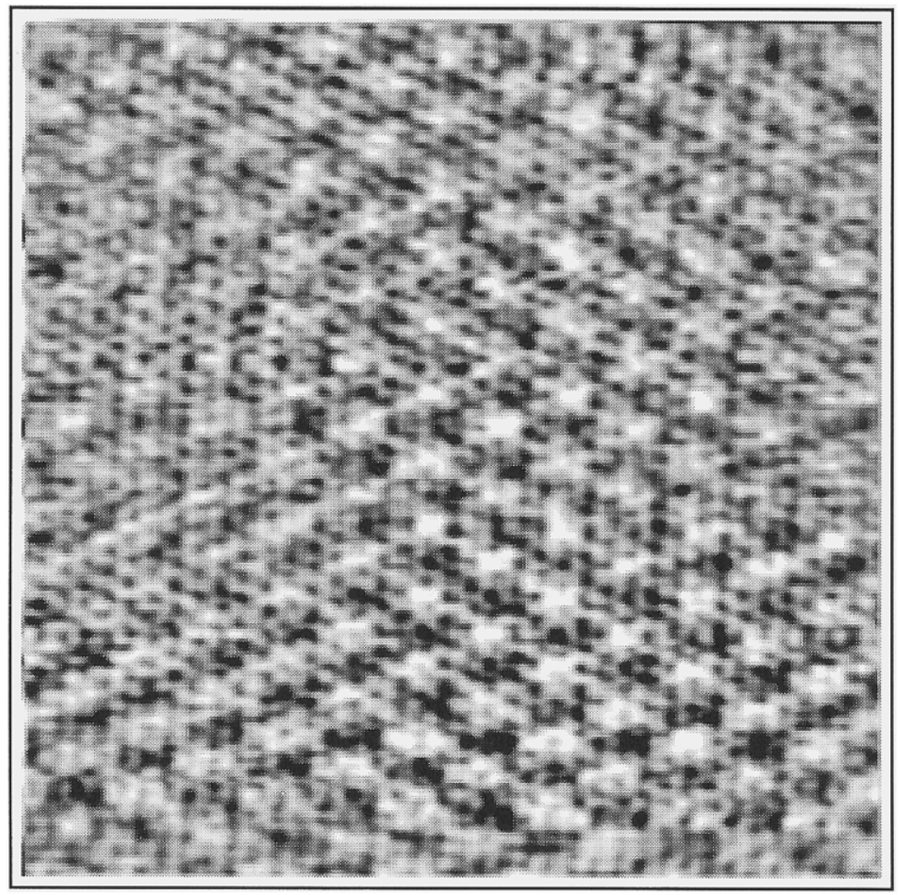


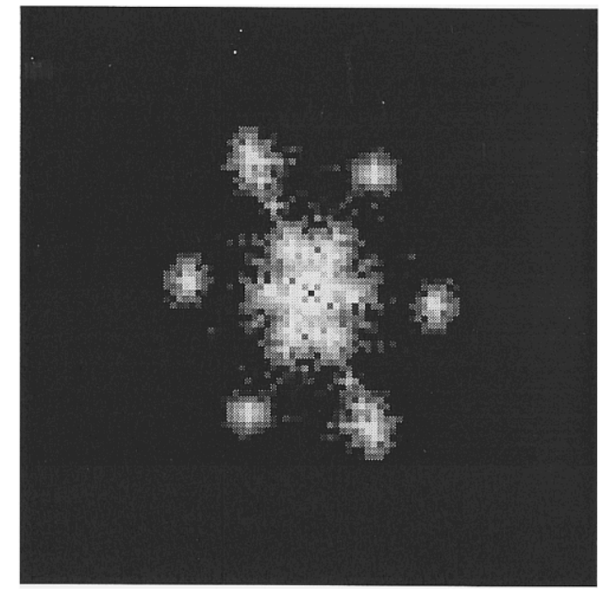
FIG. 1. E versus $\mathbf{k}^{\parallel}$ band dispersions of Ni and Cu near the Fermi level E_F, obtained by parallel detection of E and ϑ. In Ni, the spectral weight drops rapidly below E_F (top), in Cu it increases (center). Cu behaves similar to Ni when looking at 2 eV lower energies, where the d hybridization is comparable (bottom). The Σ_1 conduction band is mapped from two surfaces at different photon energies in opposite directions (left and right). The gray scale represents high-photoemission intensity as dark.

K. N. Altmann et al,
PRB **61**, 15661 (2000)

Charge density wave (CWD) - 2H $NbSe_2$







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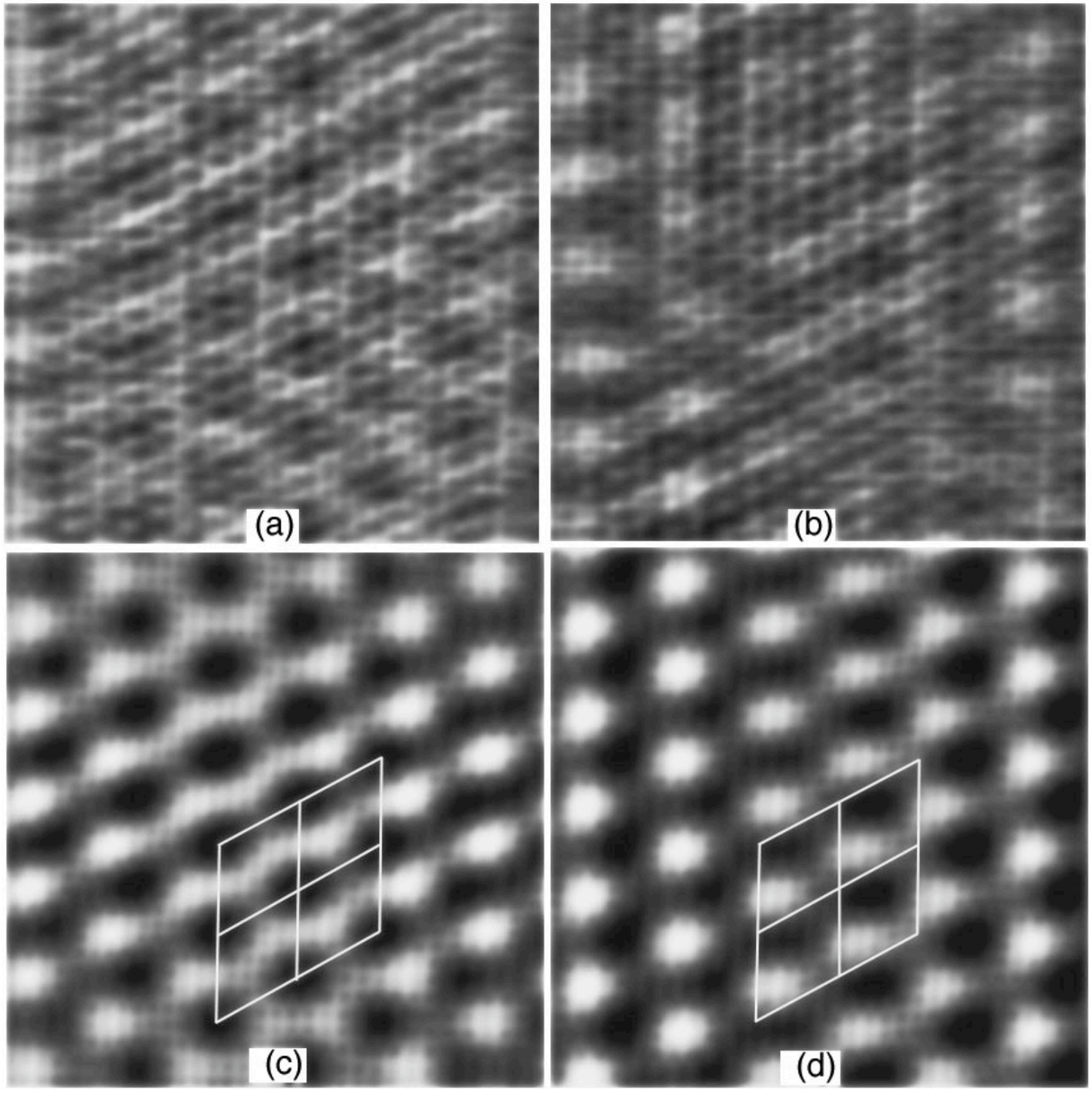
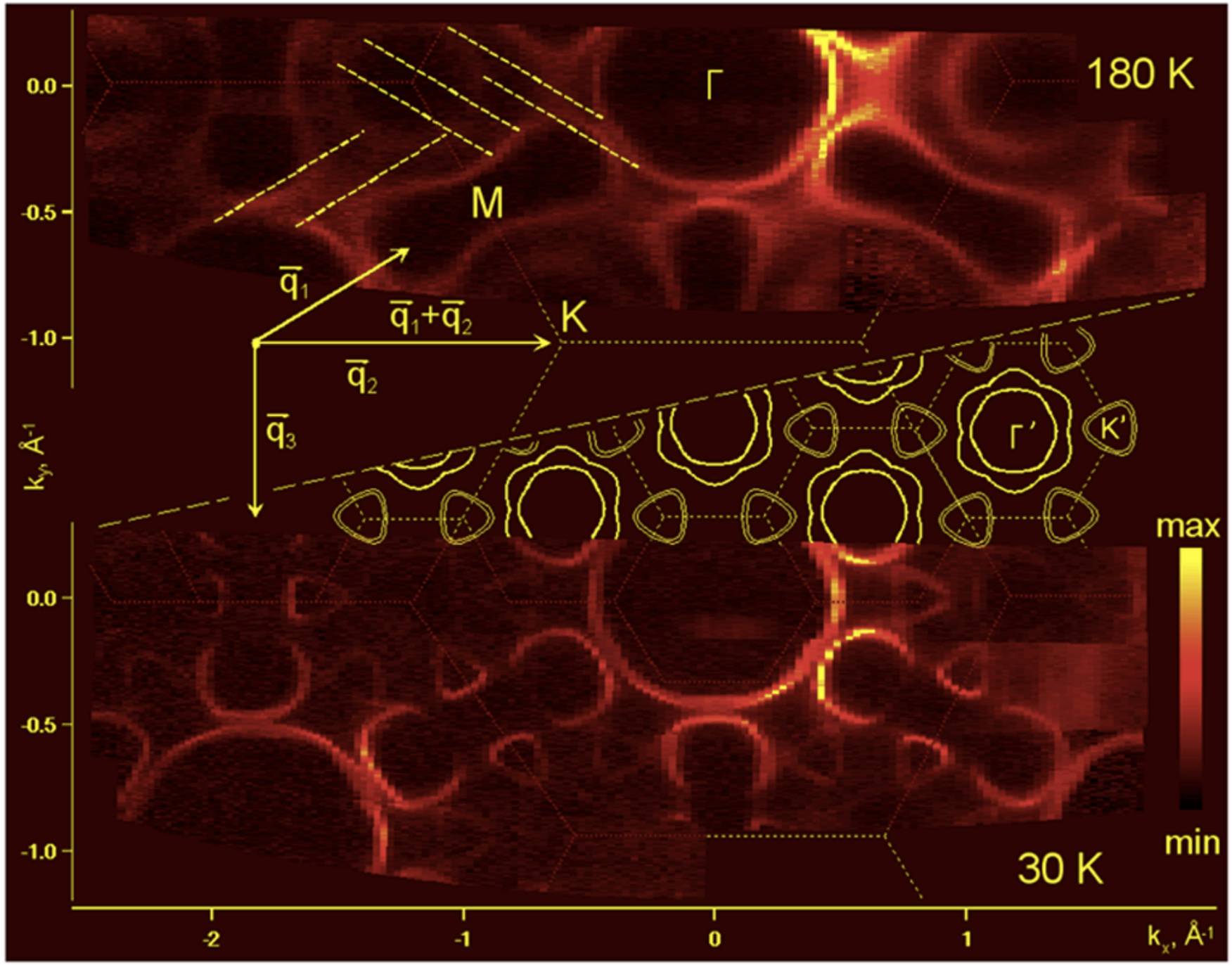
P. Mallet et al., J. J. Vac. Sci. Technol. B 14, 1070 (1996)

after bit of clean-up



P. Mallet et al., J. J. Vac. Sci. Technol. B 14, 1070 (1996)

Fermi surface - 2H $TaSe_2$



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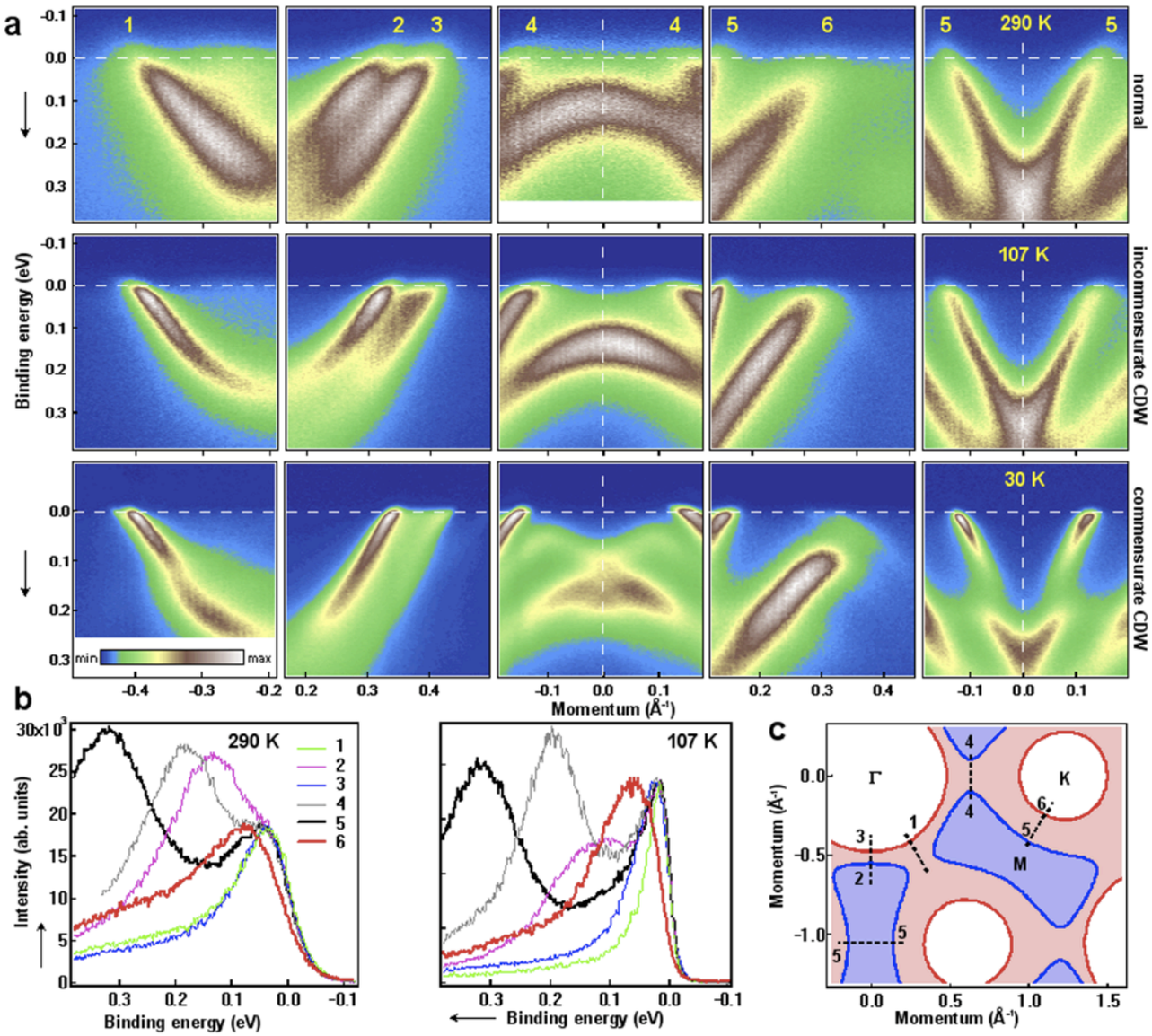
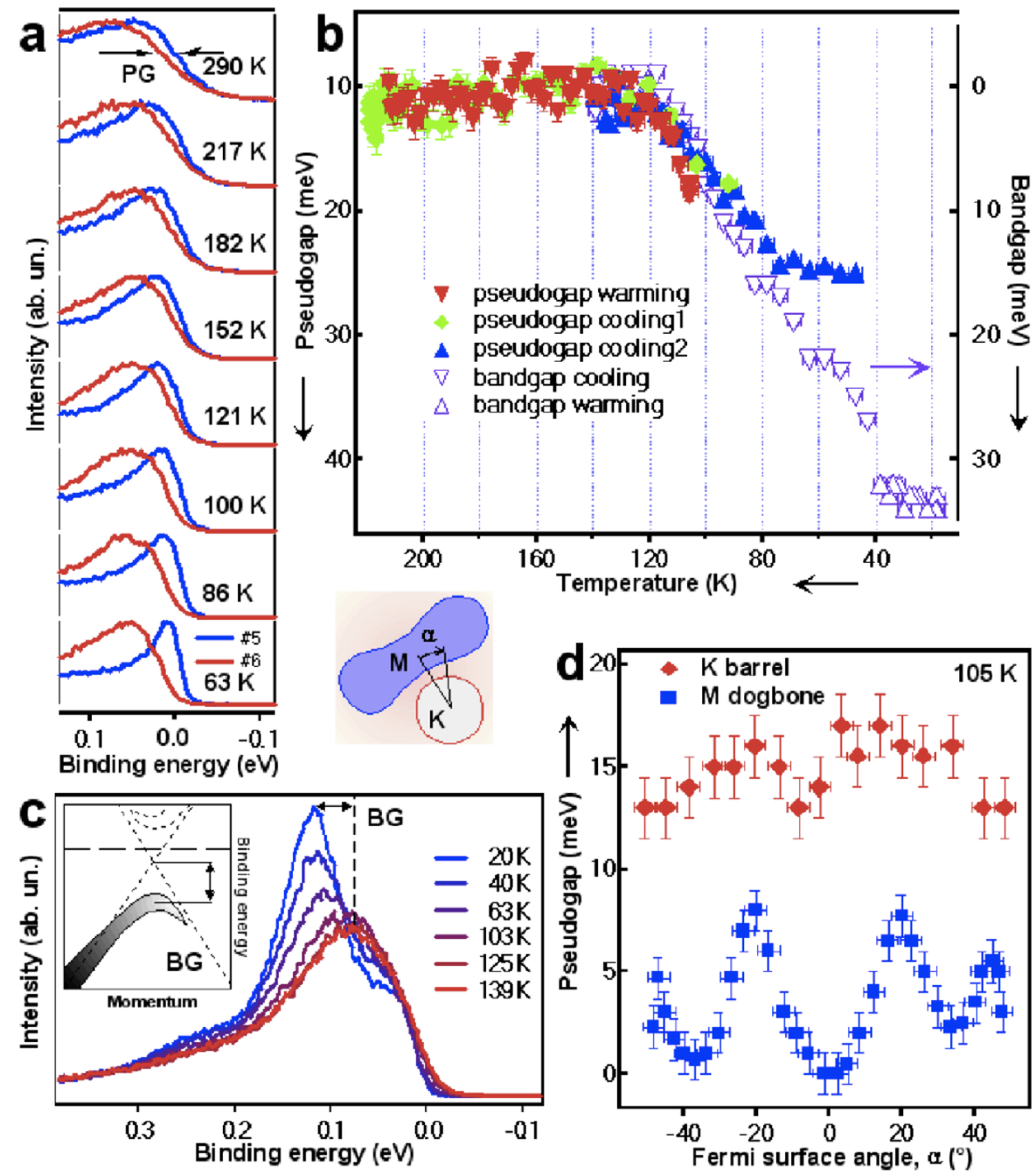
S. V. Borisenko et al., PRL 101, 196402 (2008)





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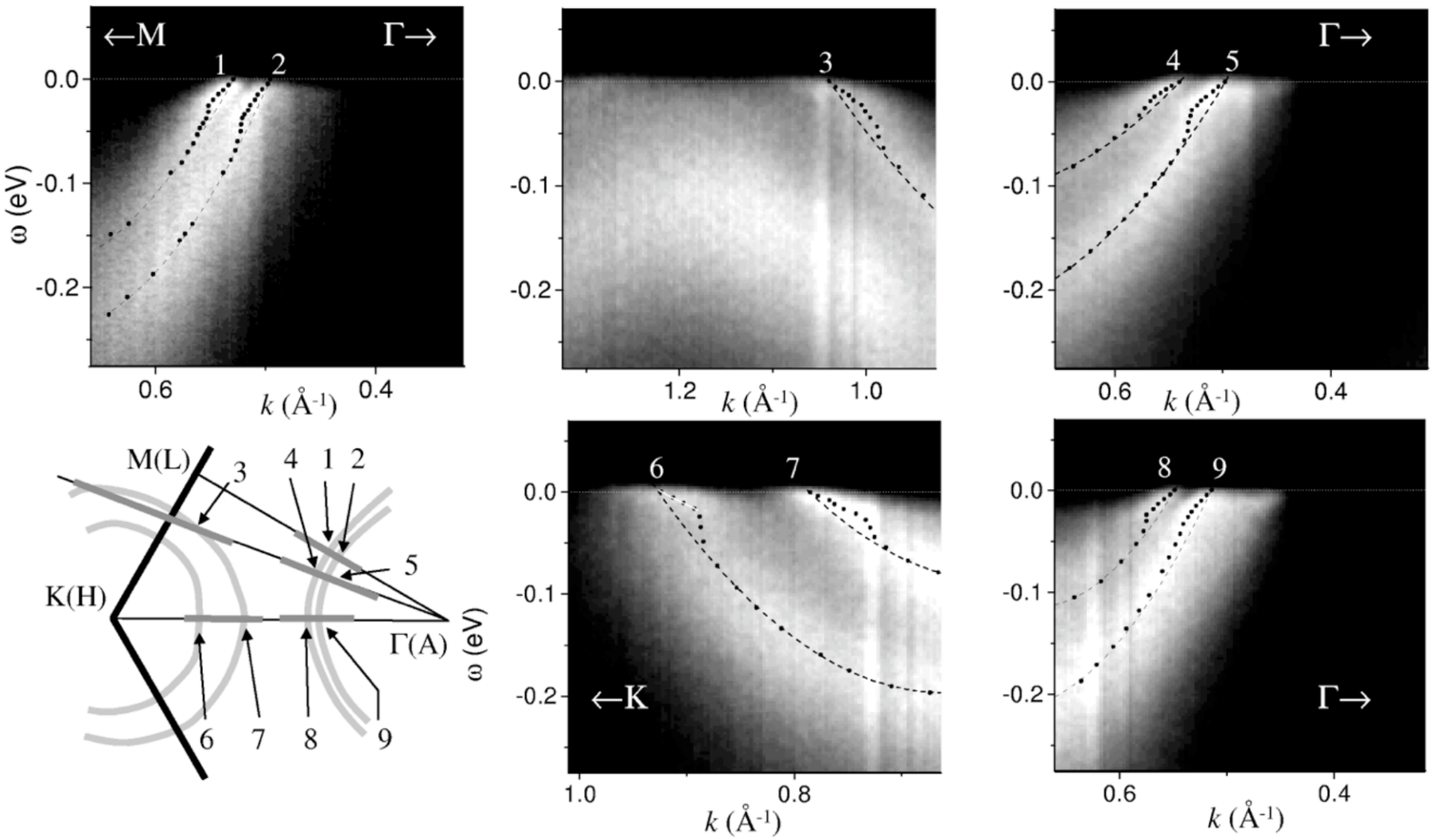
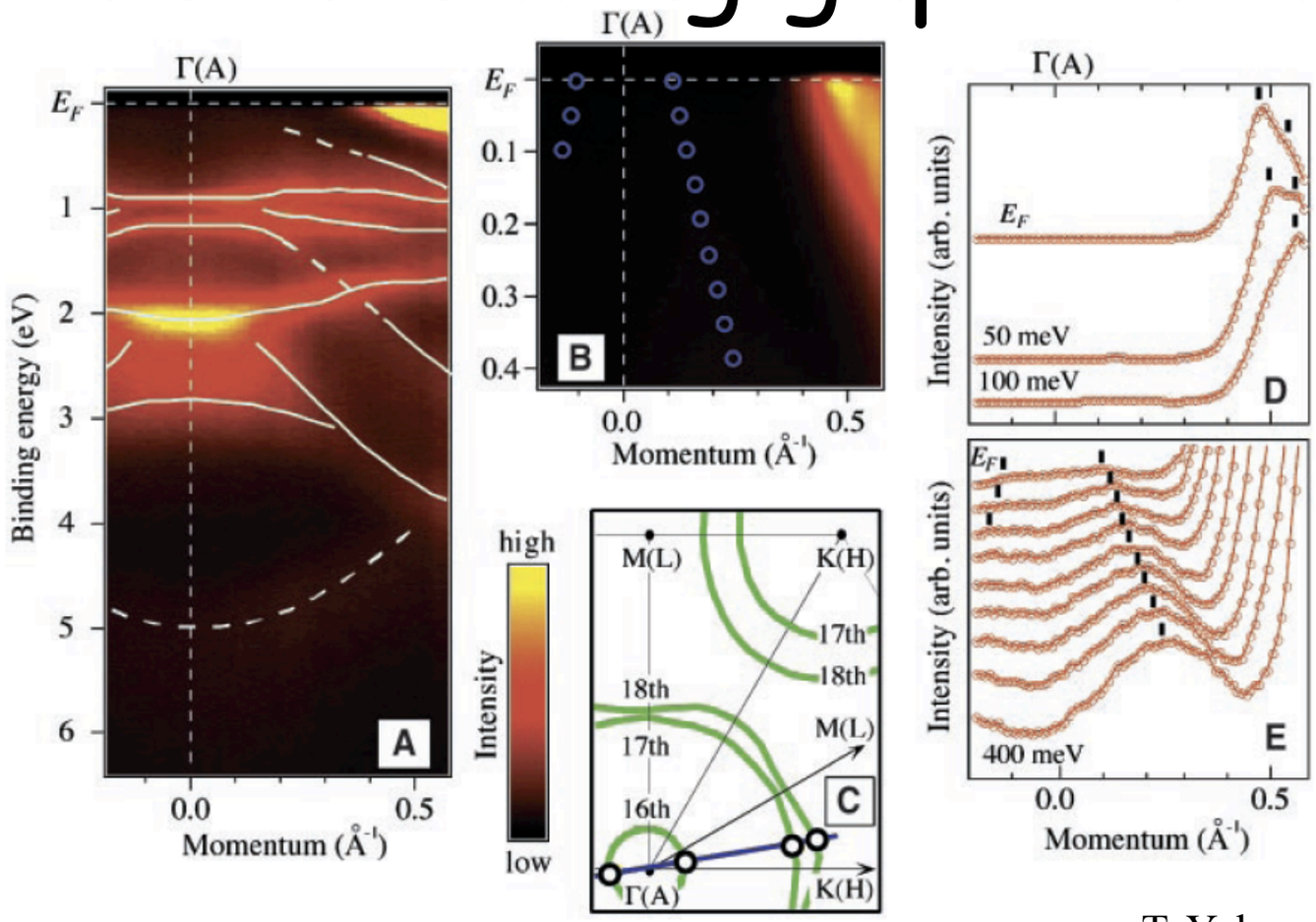
S. V. Borisenko et al., PRL 101, 196402 (2008)

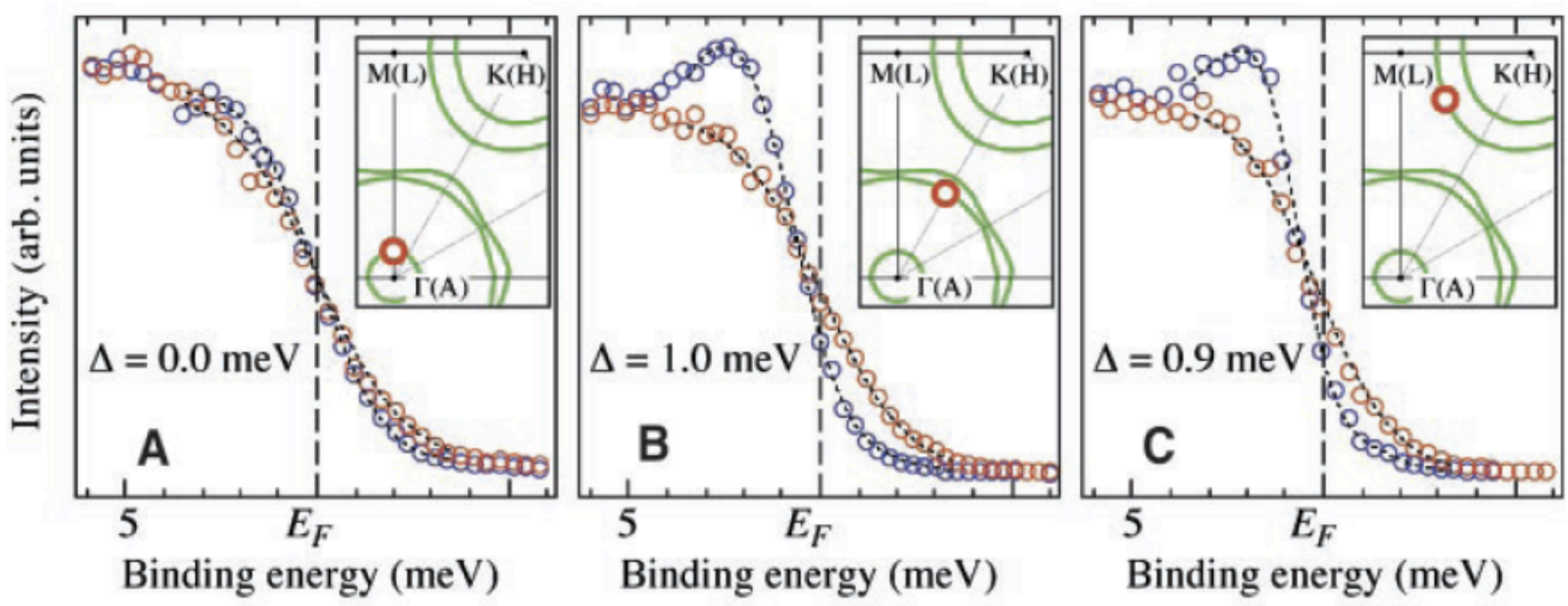


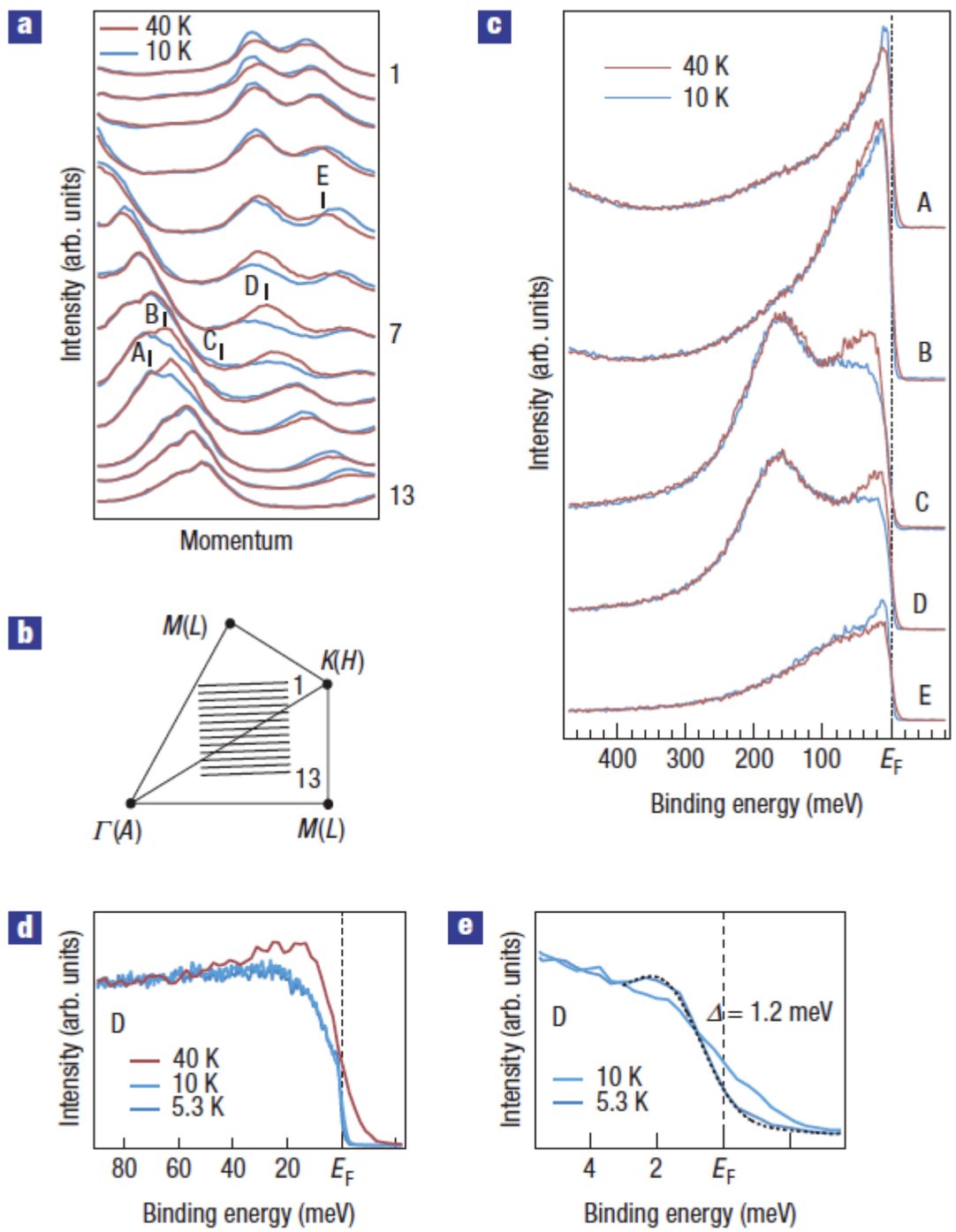
T. Valla et al., PRL 92, 086401 (2004)

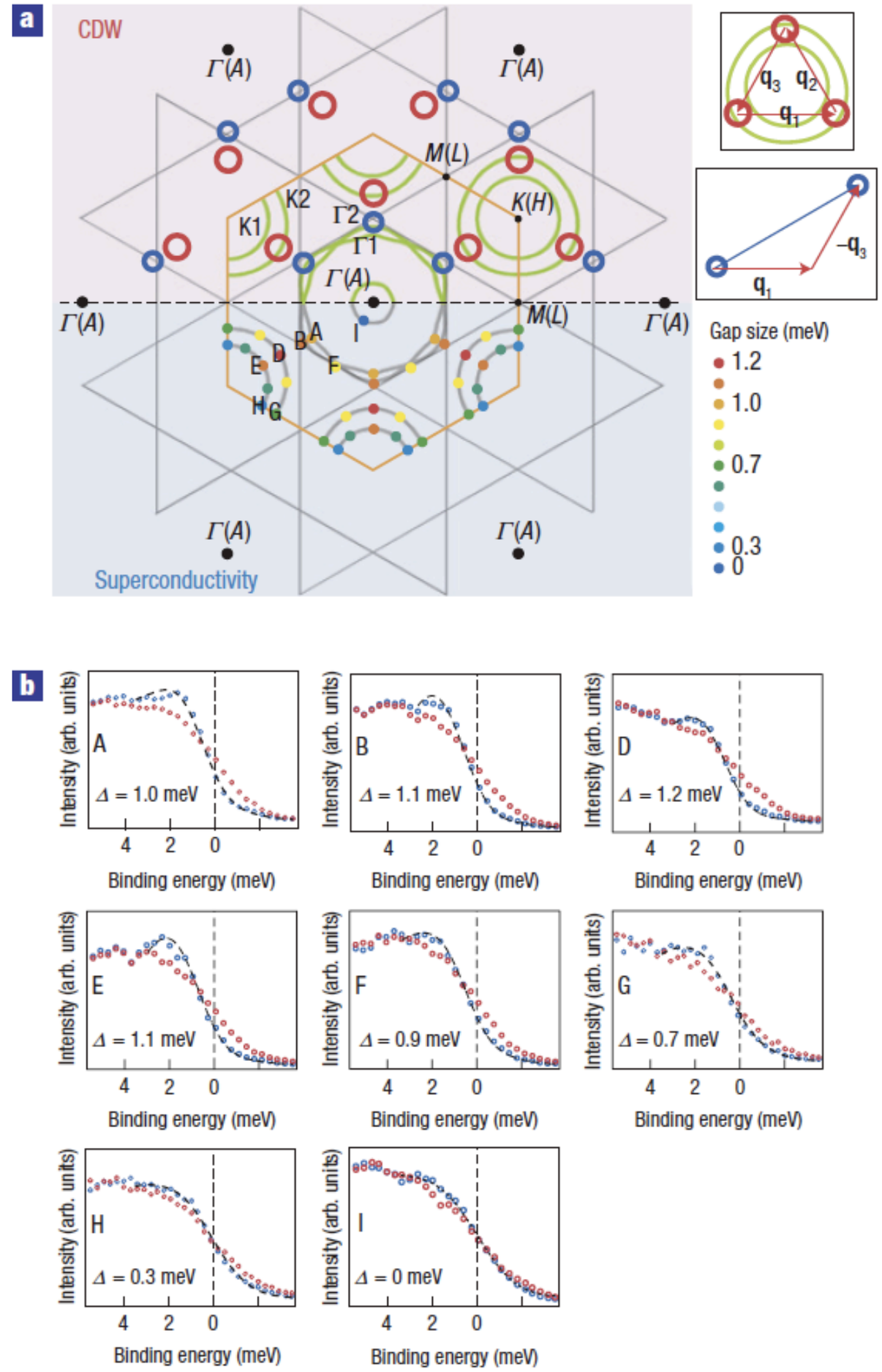
Supercondcuting gap - 2H $NbSe_2$



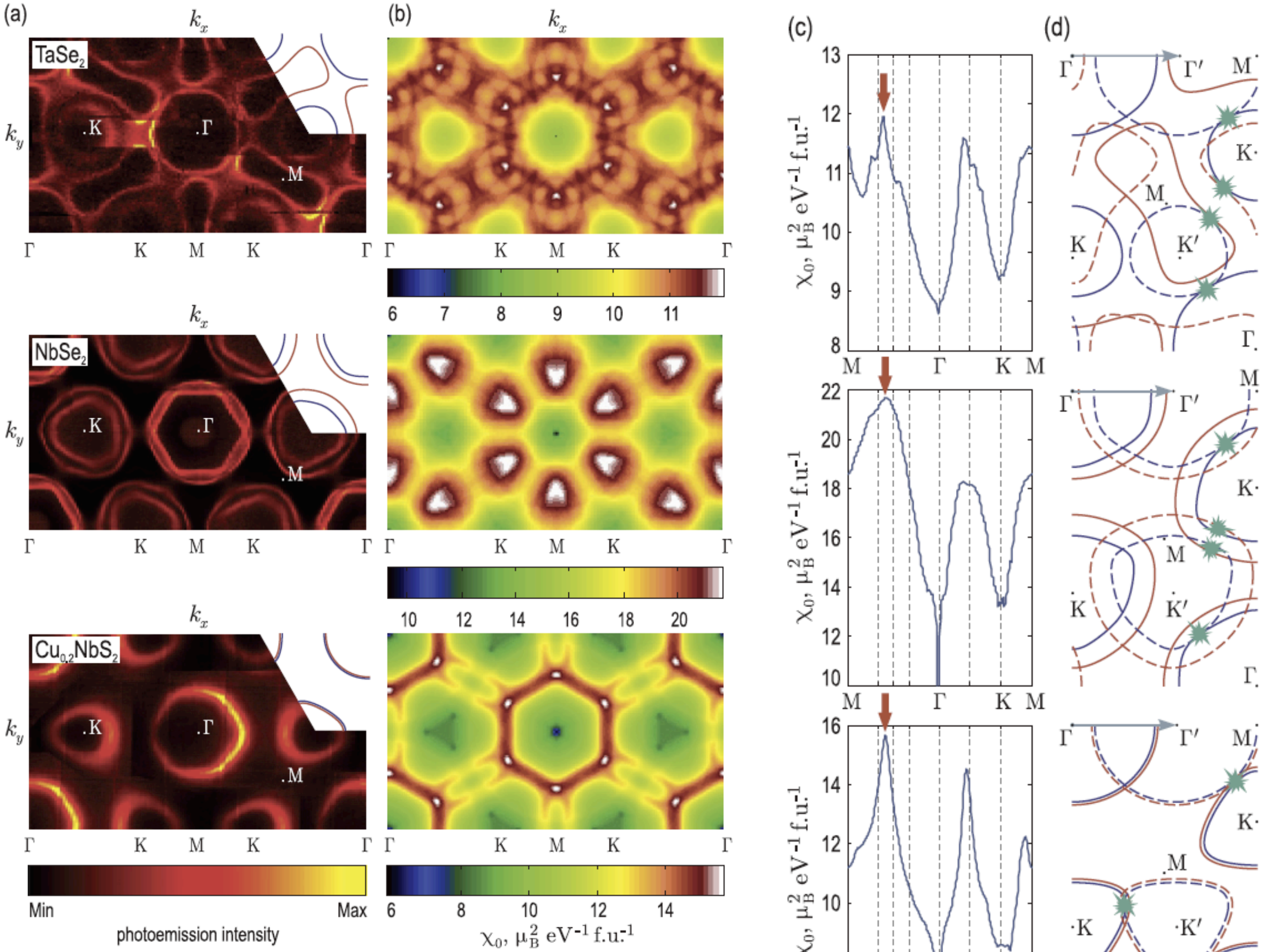
T. Yokoya et al., Science 294, 2518 (2001)





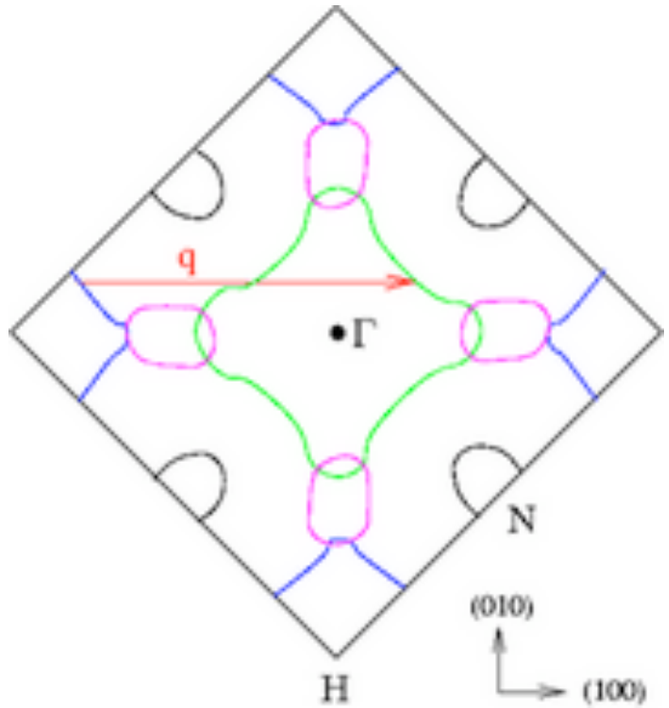


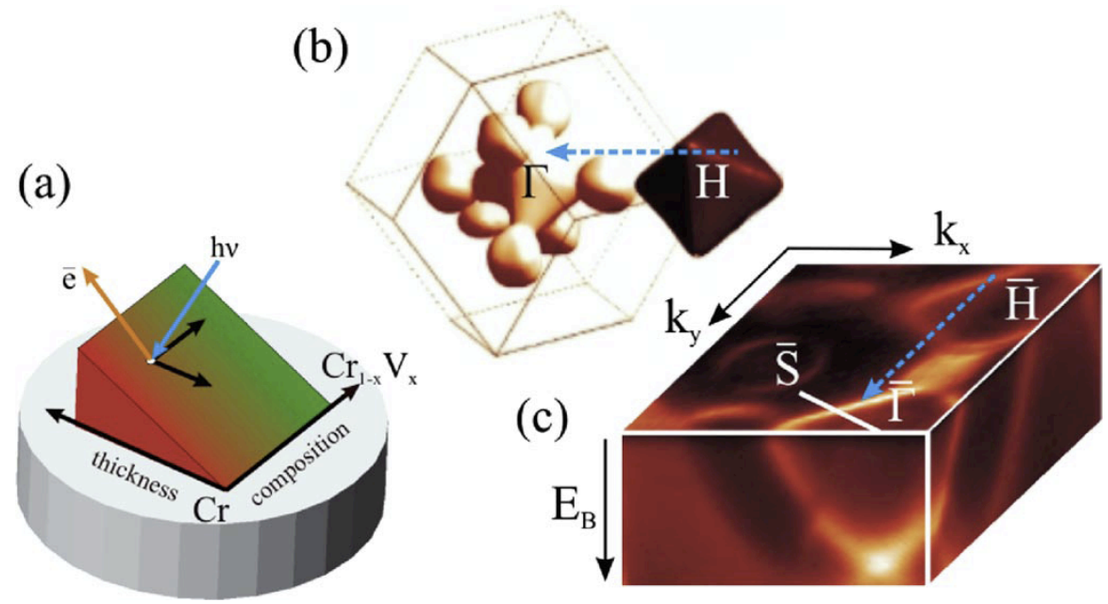
T. Kiss et al., N. Phys. 3, 720 (2007)

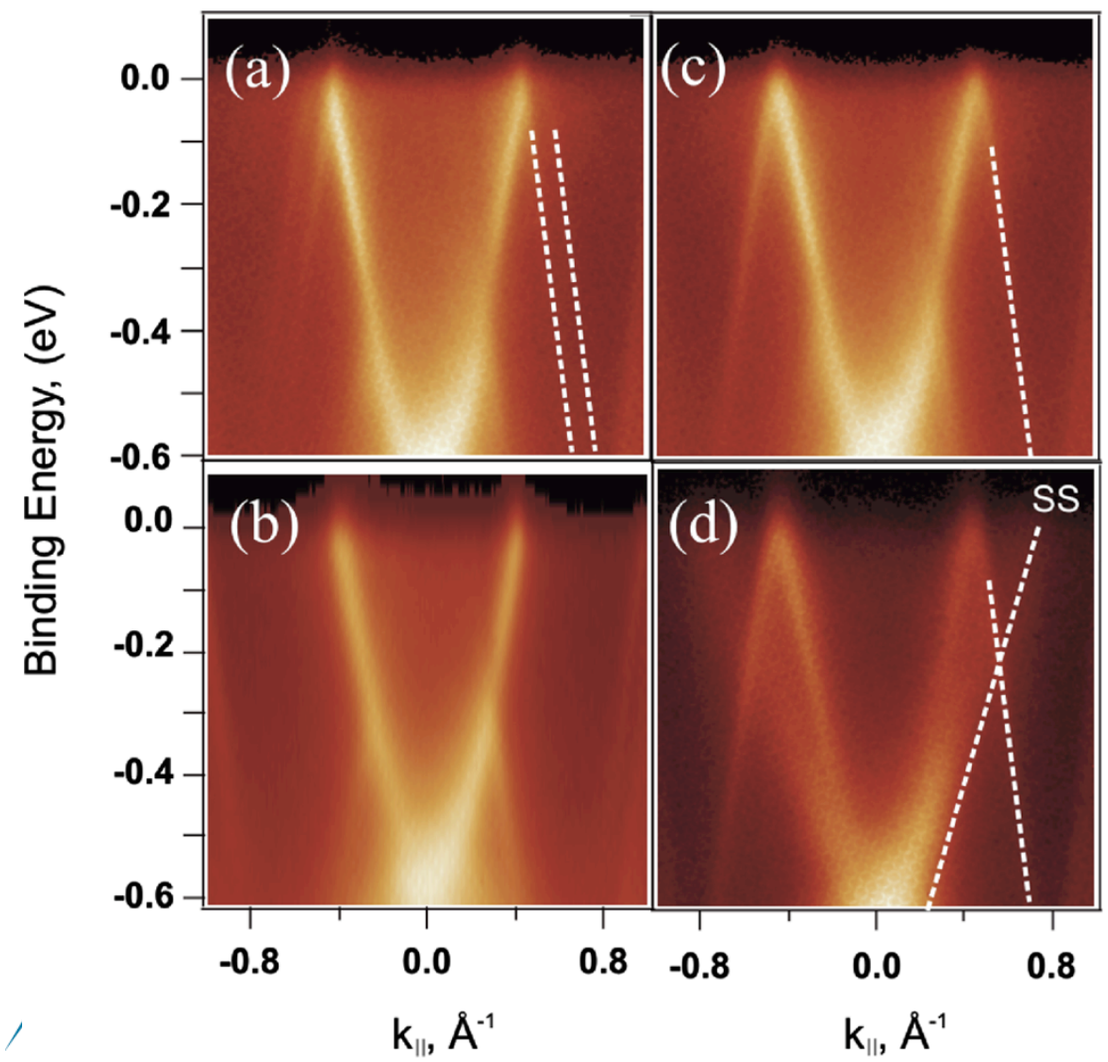


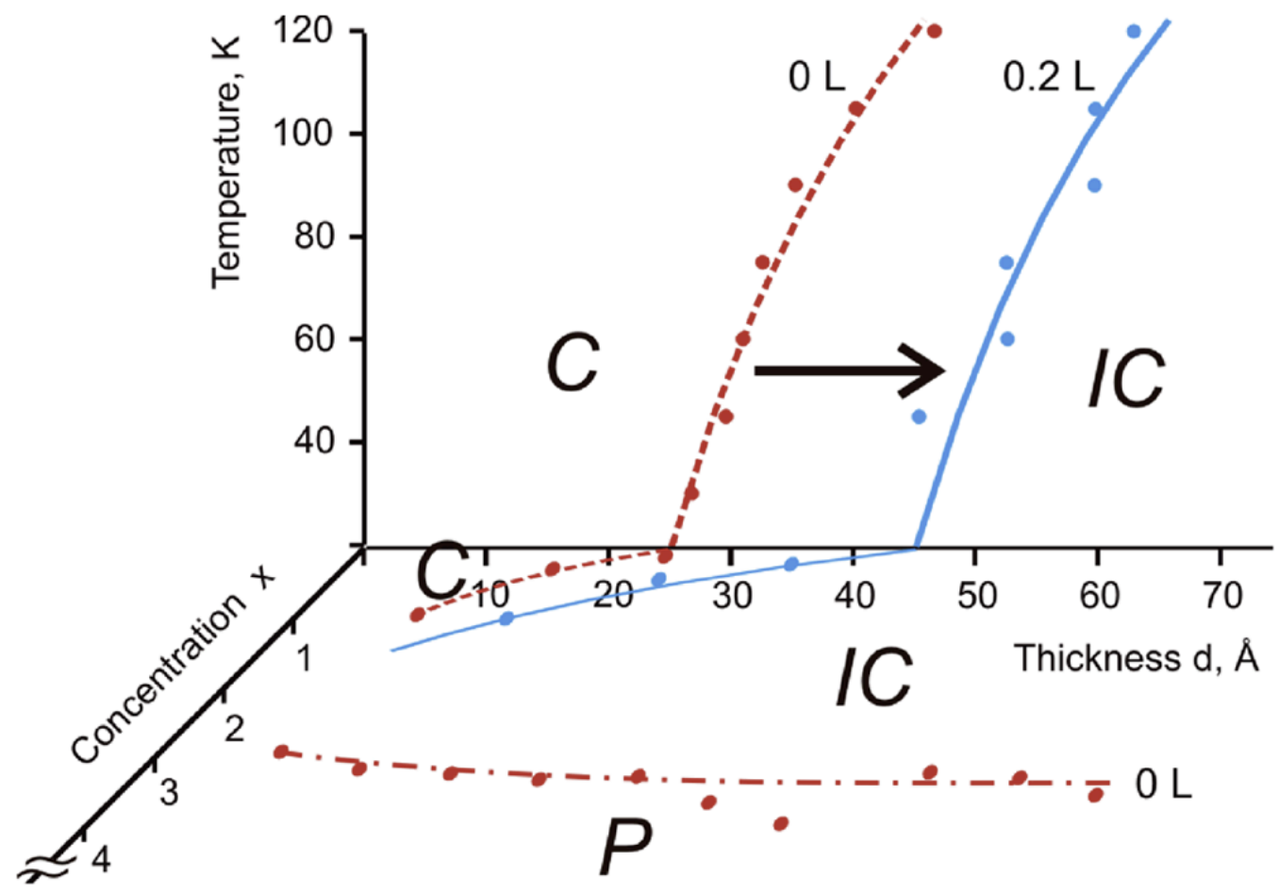
D. S. Inosov et al., NJP 3, 125027 (2008)

Spin Density Wave (SDW) in $Cr_{1-x}V_x$

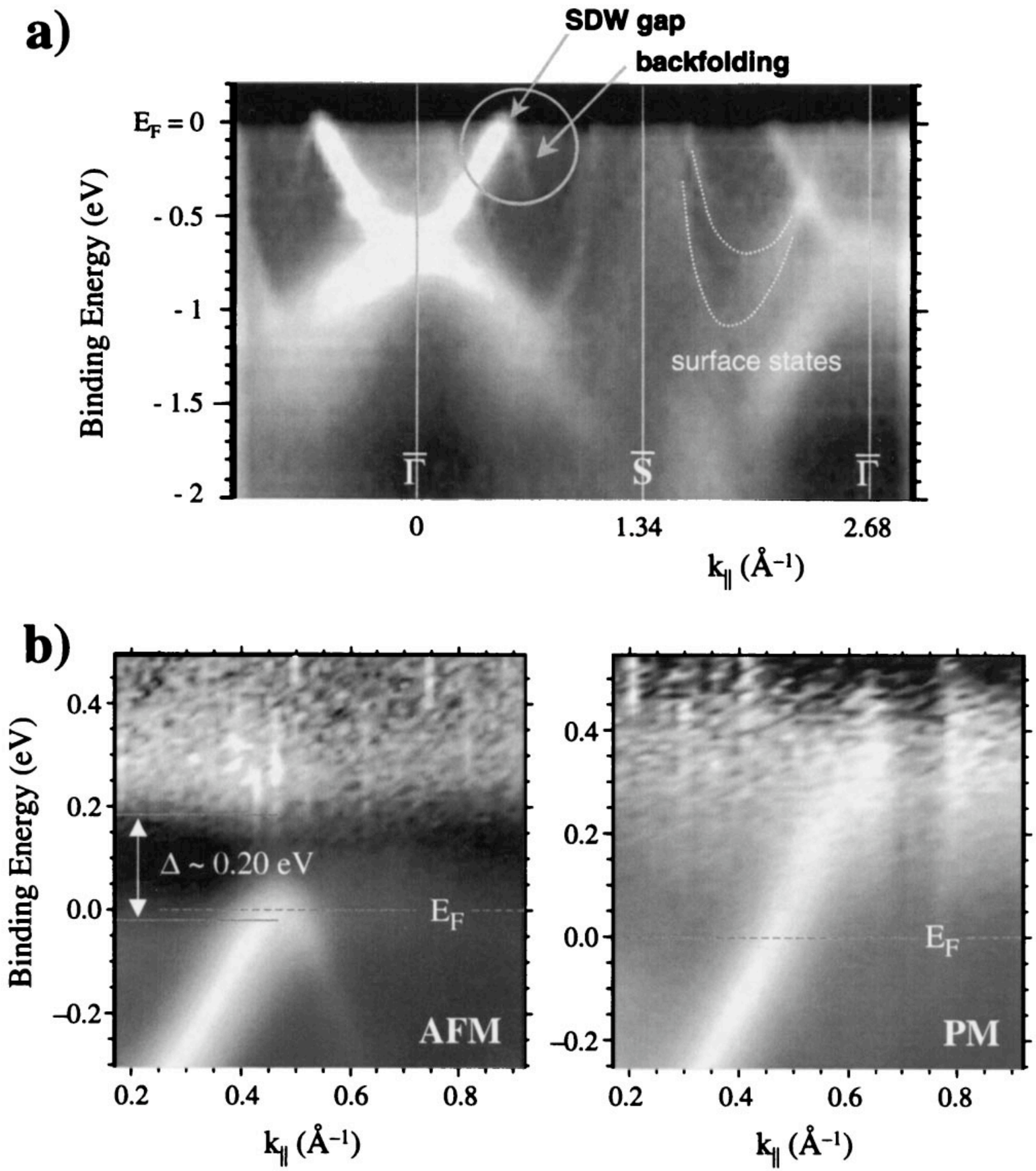








O. Krupin et al., PRL 99, 147208 (2007)



J. Schaefer et al., Surf. Sci. 454, 885 (2000)