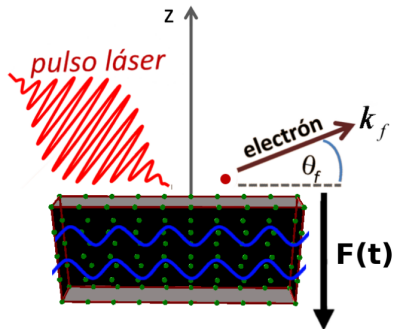


Ultrashort laser pulses with metal surfaces

El problema: un pulso laser (campo eléctrico dependiente del tiempo $F(t)$), incide en forma rasante sobre una superficie metálica. Un electrón de la banda de valencia se ioniza: Efecto fotoeléctrico.

$$\hat{H}(\vec{r}, t) = -\frac{\nabla^2}{2} + V_s(\vec{r}) + \vec{r} \cdot \vec{F}(t)$$



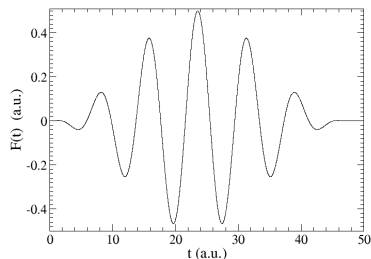
Ultrashort laser pulses with metal surfaces

The combined surface and laser potential is

$$V(z, t) = V_S(z) + zF(t)$$

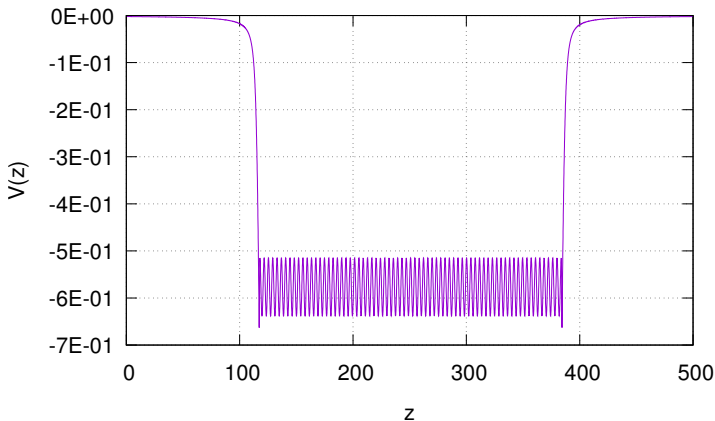
where

$$F(t) = F_0 \sin(\omega t + \varphi) \sin^2\left(\frac{\pi t}{\tau}\right)$$

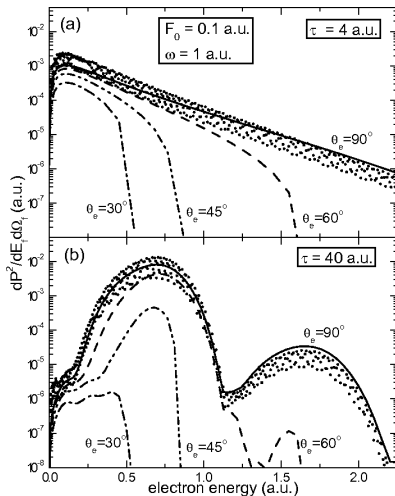


Ultrashort laser pulses with metal surfaces

Band-Structure-Based (BSB) Potential para el Al(100)



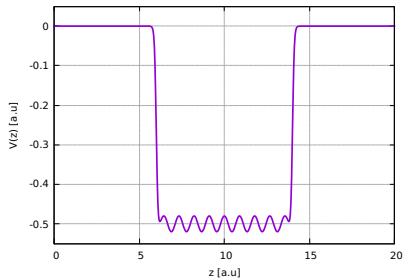
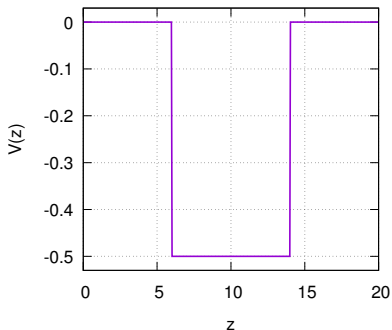
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M.N. Faraggi, M.S. Gravielle, and D.M. Mitnik, Phys. Rev. A **76**,

Ultrashort laser pulses with metal surfaces

Modelo Jellium



M. Barlari, Tesis de Licenciatura, Física, FCEyN.

Ultrashort laser pulses with metal surfaces

Resultados Modelo Jellium

