

- 29 Light of wavelength  $\lambda$  is incident on a clean metal surface. Electrons are not emitted from the surface when the wavelength is longer than  $\lambda_0$ .

Which equation enables the maximum velocity  $v$  of electrons of mass  $m$  emitted from the surface to be calculated?

A  $\frac{1}{2}mv^2 = \frac{hc}{(\lambda - \lambda_0)}$

B  $mv = \frac{h}{(\lambda - \lambda_0)}$

C  $\frac{1}{2}mv^2 = \frac{hc}{\lambda} - \frac{hc}{\lambda_0}$

D  $mv = \frac{h}{\lambda} - \frac{h}{\lambda_0}$