

- 30** Photoelectric emission occurs from a certain metal when light of wavelength less than or equal to  $\lambda$  is incident on the metal surface. When light of wavelength  $\lambda/2$  is incident on the surface, the maximum kinetic energy of the emitted electrons is  $E_k$ .

What is the maximum kinetic energy of the emitted electrons when light of wavelength  $\lambda/3$  falls on the surface?

**A**  $\frac{1}{3}E_k$

**B**  $\frac{2}{3}E_k$

**C**  $2E_k$

**D**  $3E_k$

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