

- 30** In a photoelectric effect experiment, white light shone on a piece of metal causes the emission of photoelectrons. The threshold wavelength for this metal is 580 nm (yellow light).

Which statement is correct?

- A** If a violet filter is placed in front of the light source, the rate of emission of photoelectrons will increase.
- B** If a red filter is placed in front of the light source, the rate of emission of photoelectrons will decrease to zero.
- C** If the light source is focused onto a smaller surface area of the metal, photoelectrons will be emitted with greater maximum kinetic energy.
- D** If another metal of twice the work function of the original metal is used, there will still be photoemission.