

**29** Which of the following statements concerning nuclear properties is true?

- A** The greater the binding energy of a nucleus, the more stable it is.
- B** If the total rest mass of the products of a reaction is greater than the total rest mass of the reactants, this reaction is impossible.
- C** When a stationary nucleus decays by emitting a  $\gamma$ -photon, the nucleus will move off in an opposite direction to the photon.
- D** The half-life of a radioactive substance can be changed by allowing the substance to react chemically to produce a new radioactive compound.