Question #77045, Chemistry / Physical Chemistry

Which of the following processes would be expected to have a positive ΔS value?

- A) $2NO(g) + O_2(g) = 2NO_2(g)$
- B) $Cl_2(g) + Br_2(g) = 2ClBr(g)$
- C) $N_2(g) + 3H_2(g) = 2NH_3(g)$
- D) $H_2O(I) = H_2O(s)$
- E) $CaCO_3(s) = CaO(s) + CO_2(g)$

Answer:

E)
$$CaCO_3(s) = CaO(s) + CO_2(g)$$

Increase of disorder, gas as product, only solid compound as reagent.

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