

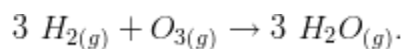
Entropy Worksheet

Use the following entropy of formation table in questions 1 – 5.

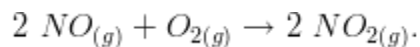
The Standard Enthalpy and Entropy of Various Substances

Substance	ΔH_f° (kJ/mol)	S° (J/K · mol)
$C_4H_{10(g)}$	-126	310
$CaC_{2(s)}$	-63	70.
$Ca(OH)_{2(s)}$	-987	83
$C_2H_{2(g)}$	227	201
$CO_{2(g)}$	-394	214
$H_{2(g)}$	0	131
$H_2O_{(g)}$	-242	189
$H_2O_{(L)}$	-286	70.
$NH_{3(g)}$	-46	193
$NO_{(g)}$	90.	211
$NO_{2(g)}$	34	240.
$N_2O_{(g)}$	82	220.
$O_{2(g)}$	0	205
$O_{3(g)}$	143	239

1. Using data from the entropy of formation table above, calculate the entropy of reaction for

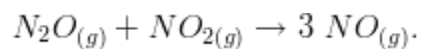


2. Using data from the entropy of formation table above, calculate the change in entropy for

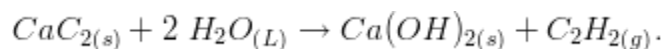


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3. Using data from the heat of formation table above, calculate the ΔS° for



4. Using data from the entropy of formation table above, calculate the heat of reaction for



5. Using the entropy of formation table above, calculate the change in entropy for the following reaction.

