**EXERCISE 4 – BOND ENTHALPY CALCULATIONS**

1. Calculate the enthalpy of combustion for the combustion of methanol.

Methanol + Oxygen 🡪 Carbon Dioxide + Water

**CH3OH + 1.5O2 🡪 CO2 + 2H2O**

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| Methanol  Methanol | Structure, Density & Molar Mass - Lesson | Study.com | Oxygen  O2 Lewis Structure – Easy Hard Science | Carbon dioxide  The Lewis structure of Carbon dioxide_Chemicalbook | Water  H2O Lewis Structure - Drawing Method of H2O Lewis Structure, Molecular  Geometry of H2O, Polarity and Hybridisation in H2O molecule, with FAQs |

1. Calculate the enthalpy of combustion for the combustion of propane.

Propane + Oxygen 🡪 Carbon Dioxide + Water

**CH3CH2CH3 + 5O2 🡪 3CO2 + 4H2O**

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| Propane  Draw the lewis dot structure for propane. What is the molecular geometry at  each carbon? 1. Trigonal planar 2. Bent | Homework.Study.com | Oxygen  O2 Lewis Structure – Easy Hard Science | Carbon dioxide  The Lewis structure of Carbon dioxide_Chemicalbook | Water  H2O Lewis Structure - Drawing Method of H2O Lewis Structure, Molecular  Geometry of H2O, Polarity and Hybridisation in H2O molecule, with FAQs |

1. Calculate the enthalpy of formation of water.

Hydrogen + Oxygen 🡪 Water

**H2 (g) + O2 (g) 🡪 H2O (l)**

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| Hydrogen  Draw the lewis dot structure for propane. What is the molecular geometry at  each carbon? 1. Trigonal planar 2. Bent | Homework.Study.com | Oxygen  O2 Lewis Structure – Easy Hard Science | Water  H2O Lewis Structure - Drawing Method of H2O Lewis Structure, Molecular  Geometry of H2O, Polarity and Hybridisation in H2O molecule, with FAQs |