### Comparing Hydrocarbon Compounds

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| HomologousSeries | Alkane | **Alkene** | **Alkyne** | Cycloalkane | Cycloalkene |
| General formula | CnH2n + 2 | **CnH2n** | **CnH2n ─ 2** | CnH2n | CnH2n ─ 2 |
| **Functional group** | **C C** | **C C** | **C C** | **C C** | **C C** |
| **Combustion/O2** | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Solubility/H2O** | 🗶 | 🗶 | 🗶 | 🗶 | 🗶 |
| **m.pt./b.pt.** | Low | **Low** | **Low** | Low | **Low** |
| **Br2** | 🗶  **(slow/u.v. light)** | ✓  **(fast)** | ✓  **(fast)** | 🗶  **(slow/u.v. light)** | ✓  **(fast)** |
| **MnO4−/H+** | 🗶 | ✓ | ✓ | 🗶 | ✓ |
| **Cr2O72−/H+** | 🗶 | ✓ | ✓ | 🗶 | ✓ |