

CHAPTER OVERVIEW

5: Classical Ideal Gases

End of principles, beginning of applications. There is still more that could be done with principles, but “the proof of the pudding is in the eating”. And in this case the pudding is excellent eating indeed. . . calculations made from statistical mechanics theory give results that are actually more accurate than experiment.

This chapter considers ideal (i.e. non-interacting) gases made up of atoms or molecules that may have internal structure (i.e. not point particles). The internal degrees of freedom will be treated either classically or quantally, but the translational degrees of freedom will always be treated classically.

[5.1: Classical Monatomic Ideal Gases](#)

[5.2: Classical Diatomic Ideal Gases](#)

[5.3: Heat Capacity of an Ideal Gas](#)

[5.4: Specific Heat of a Hetero-nuclear Diatomic Ideal Gas](#)

[5.5: Chemical Reactions Between Gases](#)

[5.6: Problems](#)

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