

## Chemistry 448

### Reading List, in alphabetical order by author

There is no textbook for the course. Instead we have a reading list and for each topic, a part of one or more books will be very helpful, in addition to the lecture notes. Some are old textbooks, but are still good and easy to read. Others are on computer simulations. In some books on the list we will use only one or two chapters. The same topic is treated in different ways by different authors, so you can look around to find what suits you best to supplement the lectures. Since the class is small, I have checked out of the library some books which I will be responsible for, and which we will have for the use of the entire class until April 30, 2001. These are marked with the symbol ☒. I also have my personal copies on the list, and these are marked ☒. These books will be available in Room 4240 SES.

The other (unmarked) books on the list (as well as those marked ☒) are available in the Science Library. You may wish to check them out yourself for your own use.

If you wish to do computer simulations for your research, you will need to own the first book on the list.

- ☒ M. P. Allen and D. J. Tildesley, Computer Simulation of Liquids, Clarendon Press, Oxford
- ☒. Frank Andrews, Equilibrium Statistical Mechanics, John Wiley
- ☒. Radu Balescu, Equilibrium and Non-equilibrium Statistical Mechanics, John Wiley
- ☒. K. Binder, ed. The Monte Carlo Method in Condensed Matter Physics, Springer-Verlag
- ☒. K. Binder, ed. Applications of the Monte Carlo Method in Statistical Physics, 2nd edition, Springer-Verlag
- ☒. K. Binder and D. W. Heermann, Monte Carlo Methods in Statistical Physics, An Introduction, 3rd edition, Springer
- ☒. Roger Bowley and Mariana Sanchez, Introductory Statistical Mechanics, Clarendon Press, Oxford
- ☒ David Chandler, Introduction to Modern Statistical Thermodynamics, Oxford University Press
- Norman R. Davidson, Statistical Mechanics, John Wiley
- Malcolm Dole, Introduction to Statistical Thermodynamics (an easy-to-read primer)
- Richard P. Feynman, Statistical Mechanics: a Set of Lectures

- ☑. E. S. R. Gopal, Statistical Mechanics and Properties of Matter, Theory and Applications, John Wiley
- ☑. Dieter W. Heermann, Computer Simulation Methods in Theoretical Physics, Springer-Verlag
- Terrell L. Hill, Statistical Mechanics: Principles and Selected Applications  
QC175.H49 (he wrote more than one book)
- ☑. E. Atlee Jackson, Equilibrium Statistical Mechanics, Prentice-Hall  
McQuarrie, Statistical Thermodynamics
- ☑. George D. J. Phillies, Elementary Lectures in Statistical Mechanics, Springer