

Statistical Thermodynamics

Emanuele Coccia

Dipartimento di Scienze Chimiche e Farmaceutiche

- ecoccia@units.it
- C11 building, fourth floor, room 453/454
- Wednesday 15h-17h (or whenever you want, just send an email)
- Register on Moodle

Programme

- Definition of statistical mechanics and concepts of thermodynamics

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- Boltzmann distribution

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- Partition function: canonical (Z), microcanonical, grandcanonical

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- Quantum ideal gas: Fermi-Dirac and Bose-Einstein statistics

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- (Computational methods: molecular dynamics, Monte Carlo)

Where studying

- Lesson notes
- *Statistical mechanics: A concise introduction for chemists*, Benjamin Widom, Cambridge
- Notes on Moodle
- Further reading: *An Introduction to Statistical Thermodynamics*, Terrell L. Hill, Dover Publications

- Oral exam: (at least) three questions, possible simple numerical problems to solve
- Exam done in a lecture room (two rounds in winter session, two rounds in summer session, one round in September)