



Capitalization in Physics

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Adjectives taken from proper names are capitalized, nouns are not

Proper name used as an adjective:

Fermi energy or Fermi–Dirac statistics

en dash

New class of things named after a proper name:

fermions, fermi (unit)

Noun exceptions:

Hamiltonian, Lagrangian

Units of measure are never capitalized when written in words, only when they are abbreviated

Examples: watt (W), joule (J), tesla (T), volt (V)

Note: “kilo” (1000) is *never* capitalized:

kV, keV, kg, kA, kHz, k Ω , \$100k

And: abbreviations for units are always singular

45 mm, 10 GeV, 3.6×10^7 n s cm



Names of elements are never capitalized when written as words, only when they are abbreviated

argon (Ar)

curium (Cm)

silicon (Si)

californium (Cf)

And while we're on the subject of elements...

^{60}C

mass number

$^{14}\text{N}_2$

number of atoms in molecule

Ca^{2+}

state of ionization

$^{110}\text{Ag}^m, ^{14}\text{N}^*$

excited state



Particle names are always written lower case:

quarks, muons, neutrinos

...even when they are derived from proper names

fermions, bosons

**...except when the proper name is used as
an adjective**

Higgs boson

... and please Avoid random Capitalization:

“Comments on Likelihood fits with Variable resolution”



Lower case symbols and abbreviations are never capitalized in titles, headings, or the beginnings of sentences

This title is okay—

New Mixed Alkali Effect in the ac Conductivity of Ion-Conducting Glasses

This sentence is not—

ac conductivity measurements of ion-conducting glasses revealed a new mixed alkali effect.

Recast it as—

Measurements of ac conductivity in ion-conducting glasses revealed a new mixed alkali effect.



Single words or phrases following a colon are not capitalized

“Values were obtained for two parameters: the quantum cyclotron radius and the Debye shielding radius.”

Full sentences may be capitalized

“The experimental results led to one conclusion: The fast electron mode represents an unloading of excess excitons formed during excitation.”

but they look kind of stupid—*cme*



Theories are not capitalized

**Einstein's theory of general relativity
quantum chromodynamics
second law of thermodynamics**

Phenomena are not capitalized

**high-temperature superconductivity
sonoluminescence**

Experimental apparatus and techniques are not capitalized

**scanning tunneling microscope
secondary ion mass spectrometry
Auger electron spectroscopy**



Protected trade names must be capitalized

Plexiglas

tempered glass

stainless steel

Manet steel

Different journals have different rules for capitalizing words in a title

PRL: “Observation of Resonance Condensation of Fermionic Atom Pairs”

Phys. Rev. B: “Spin-orbit coupling and intrinsic spin mixing in quantum dots”

