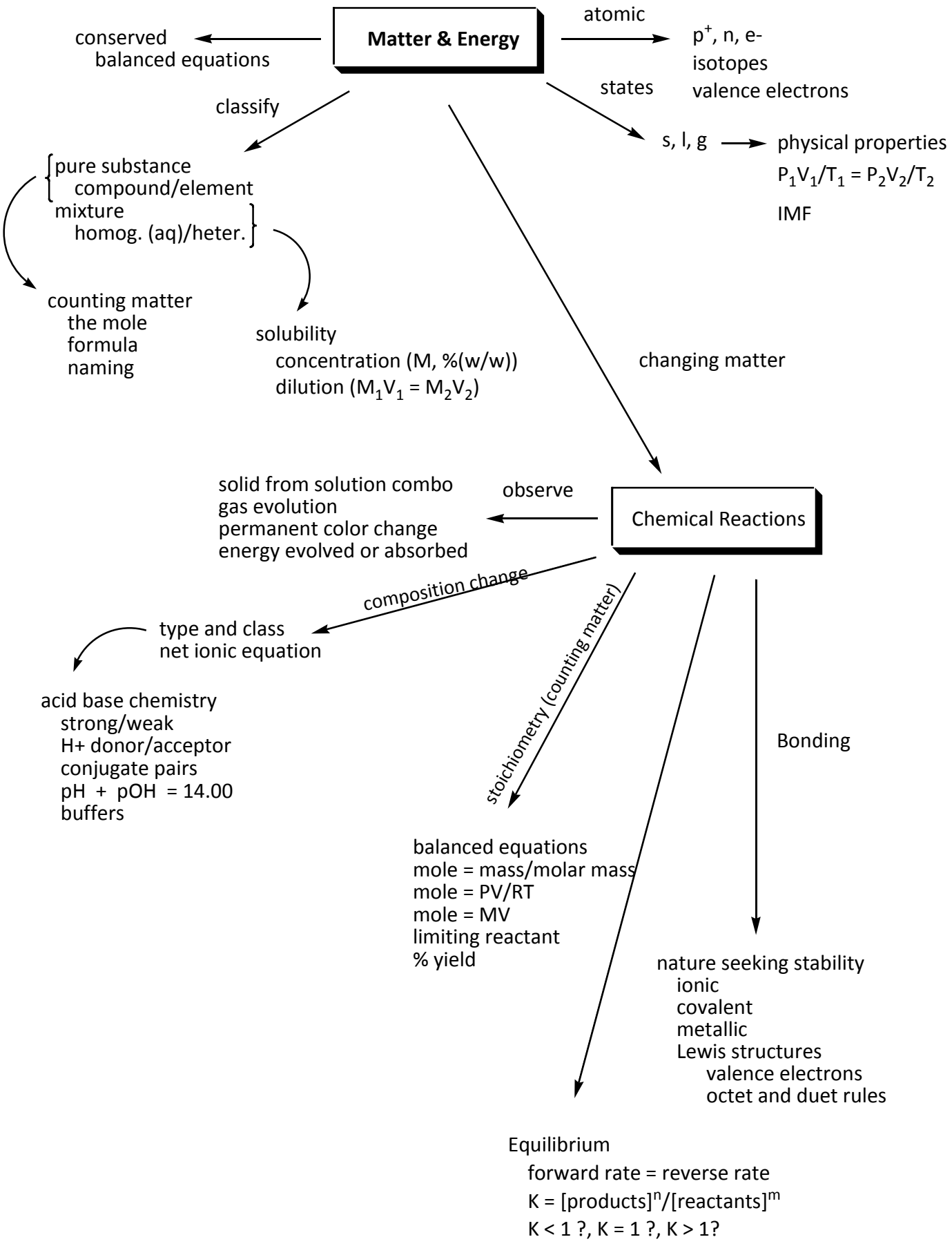
Matter & Energy
conserved
balanced equations
atomic
p+, n, e-
isotopes
valence electrons
states
s, l, g
physical properties
P1V1/T1 = P2V2/T2
IMF
classify
pure substance
compound/element
mixture
homog. (aq)/heter.
counting matter
the mole
formula
naming
solubility
concentration (M, %(w/w))
dilution (M1V1 = M2V2)
changing matter
Chemical Reactions
observe
solid from solution combo
gas evolution
permanent color change
energy evolved or absorbed
composition change
type and class
net ionic equation
acid base chemistry
strong/weak
H+ donor/acceptor
conjugate pairs
pH + pOH = 14.00
buffers
stoichiometry (counting matter)
balanced equations
mole = mass/molar mass
mole = PV/RT
mole = MV
limiting reactant
% yield
Bonding
nature seeking stability
ionic
covalent
metallic
Lewis structures
valence electrons
octet and duet rules
Equilibrium
forward rate = reverse rate
K = [products]n/[reactants]m
K < 1 ?, K = 1 ?, K > 1?