INTERPARTICLE FORCES & RELATIVE STRENGTH SUMMARY

ref. *Chemistry, 7th ed.*, Zumdahl & Zumdahl; sections 10.1-10.7

Strength	Interparticle Forces	Particles	Examples
strongest	**ionic bonds**	ions	NaCl, Al_2O_3, $FeSO_4$ (*ionic compounds*)
	covalent bonds	C or Si atoms	$C_{diamond}$, Si, SiO_2 or SiC only (*network solids*)
		metallic atoms	Fe, Ti, Hg… (*metals*)
weak	**hydrogen bonding**	molecules with –O–H, –N–H or F–H	H_2O, NH_3, HF, CH_3CH_2OH…
weaker	**dipole-dipole forces**	polar molecules	PCl_3, H_2CO…
weakest	**London Dispersion forces**	non-polar molecules ~or~ non-metal atoms (*except C or Si*)	CH_4, Ar, H_2…

NOTE that interparticle forces can be much more complex than represented here, and there are other examples and/or exceptions to these rules. However, these will be the rules that we will use for CHM102.