

Ionic Solids

	IA	IIA	IIIB	IVB	VB	VIB	VIIIB	VIIIB	IB	IIB	IIIA	IVA	VA	VIA	VIIA	VIIIA		
1	H															He		
2	Li	Be							B	C	N	O	F			Ne		
3	Na	Mg							Al	Si	P	S	Cl			Ar		
4	K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga					
5	Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe
6	Cs	Ba	*	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn
7	Fr	Ra	**	Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg	Uub	Uut	Uuq	Uup	Uuh	Uus	Uuo
* lanthanides																		
** actinides																		
La Ce Pr Nd Pm Sm Eu Gd Tb Dy Ho Er Tm Yb Lu																		
Ac Th Pa U Np Pu Am Cm Bk Cf Es Fm Md No Lr																		

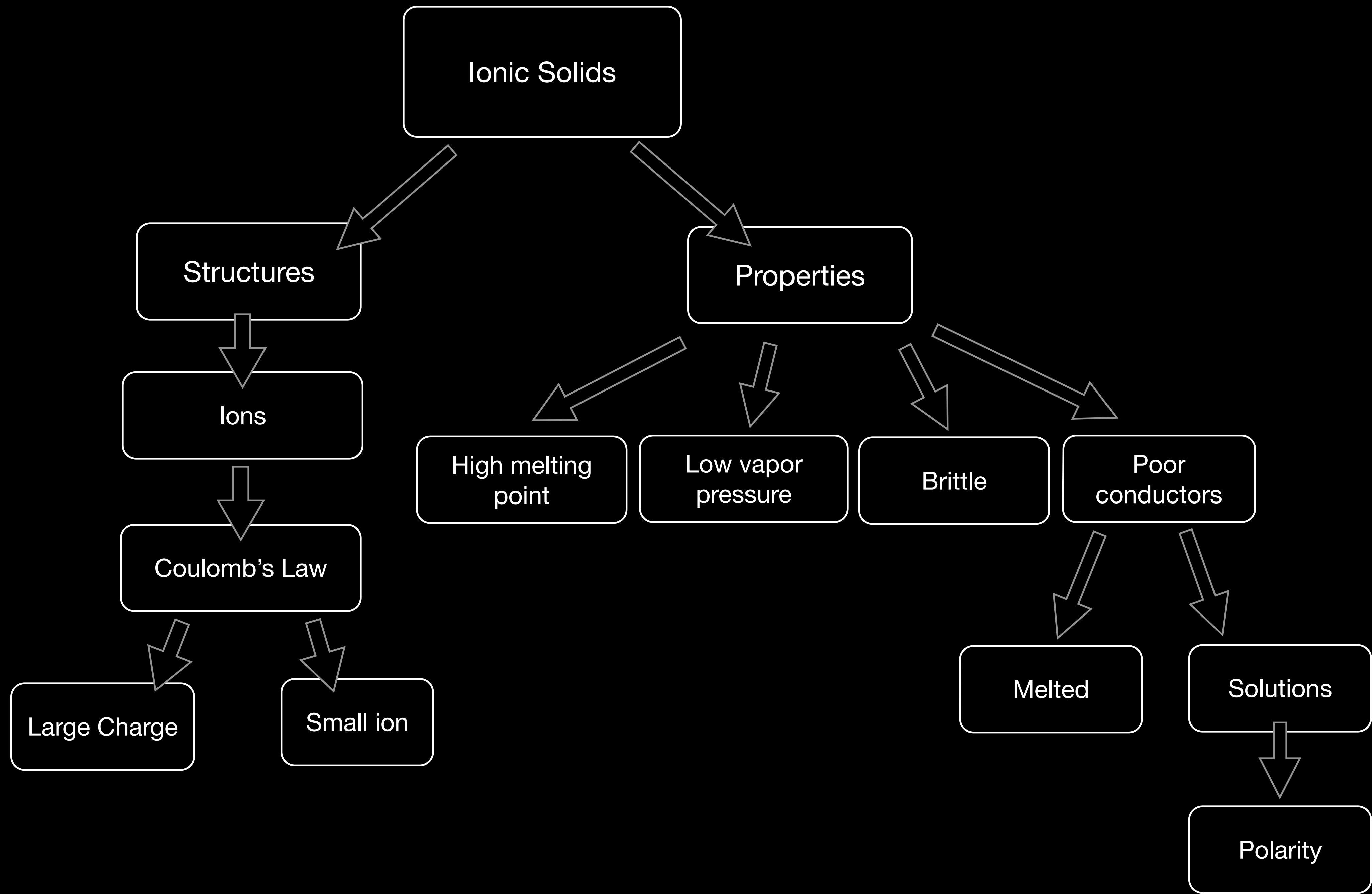
Ionic Solids

Covalent Network Solids

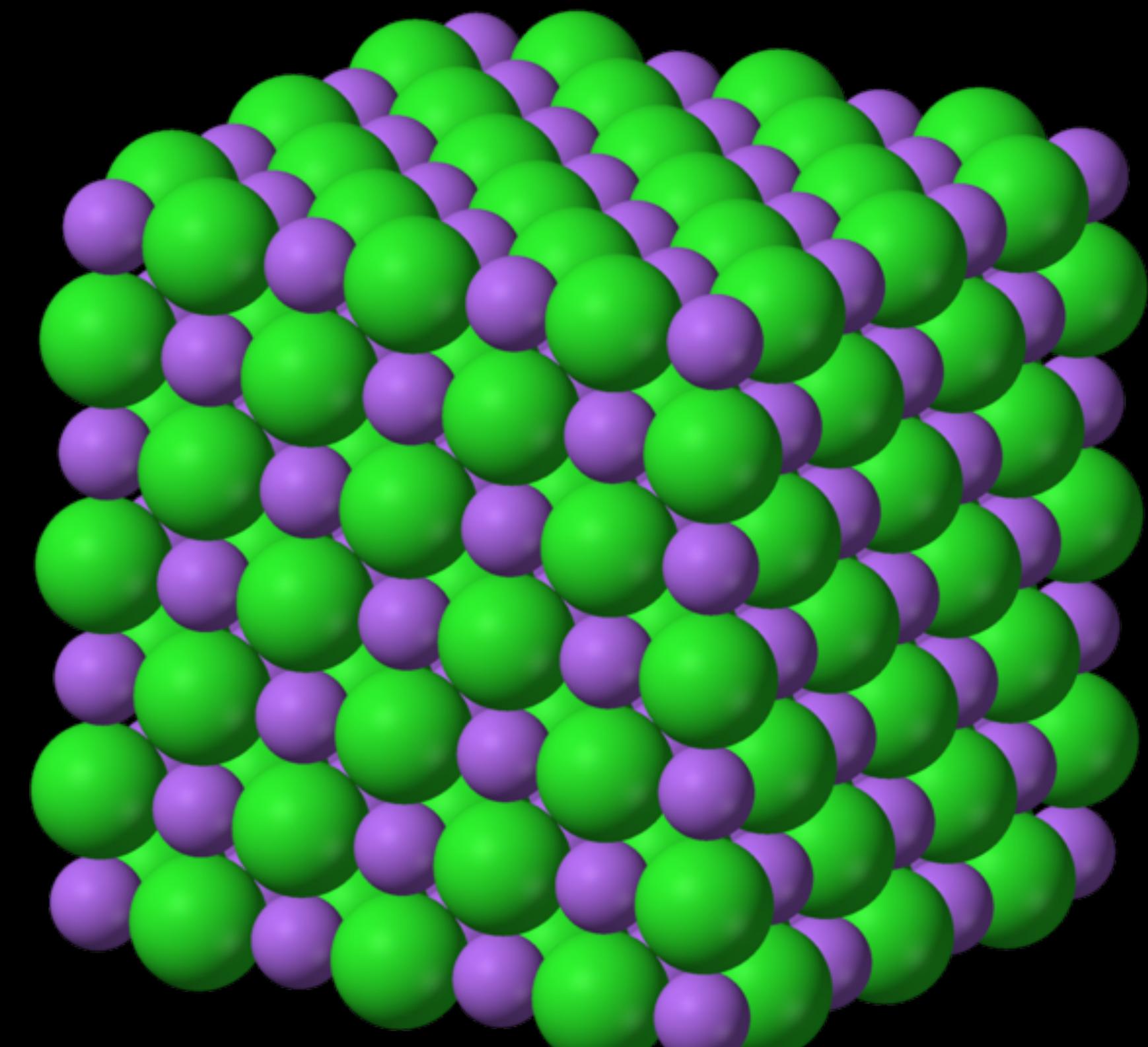
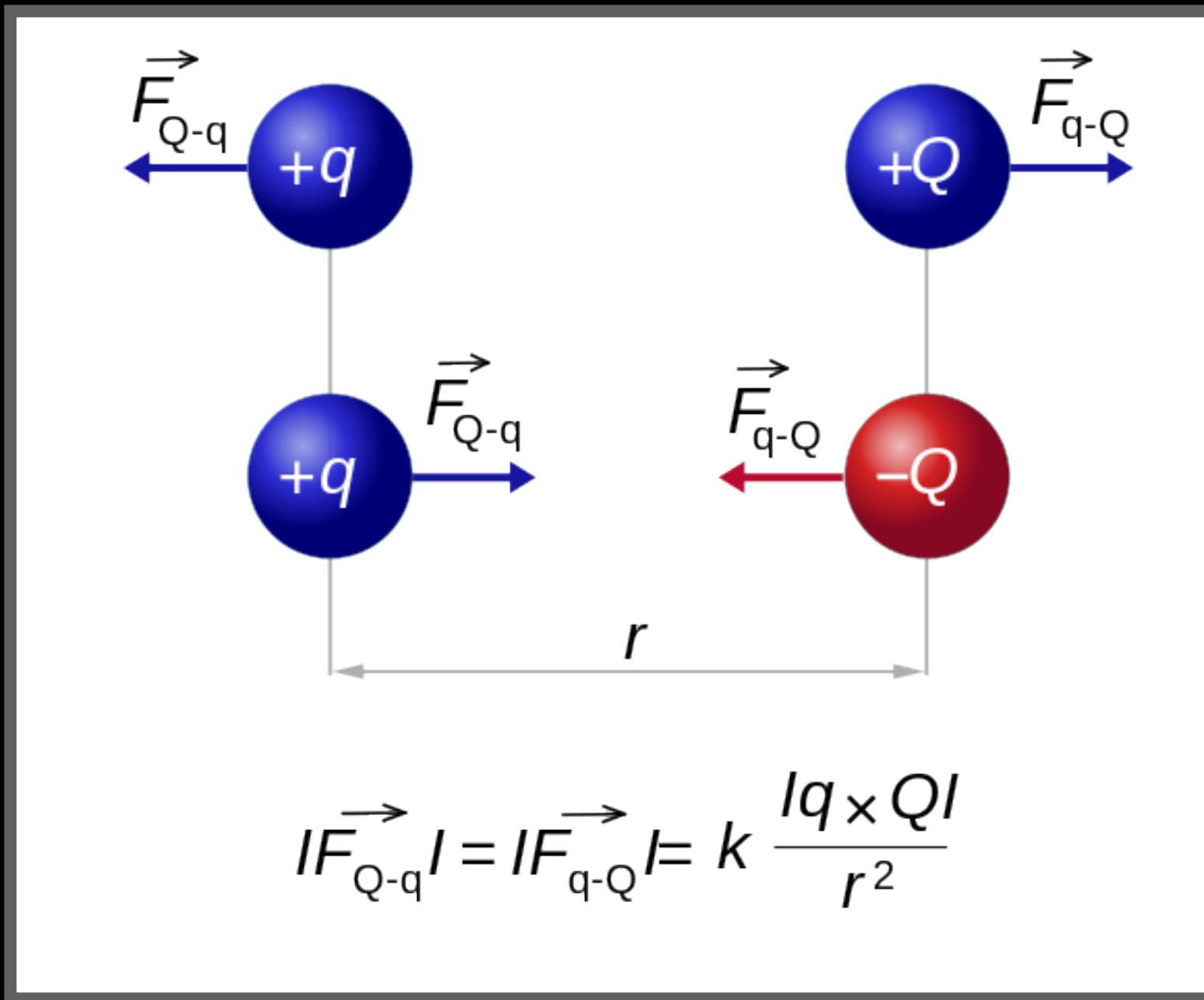
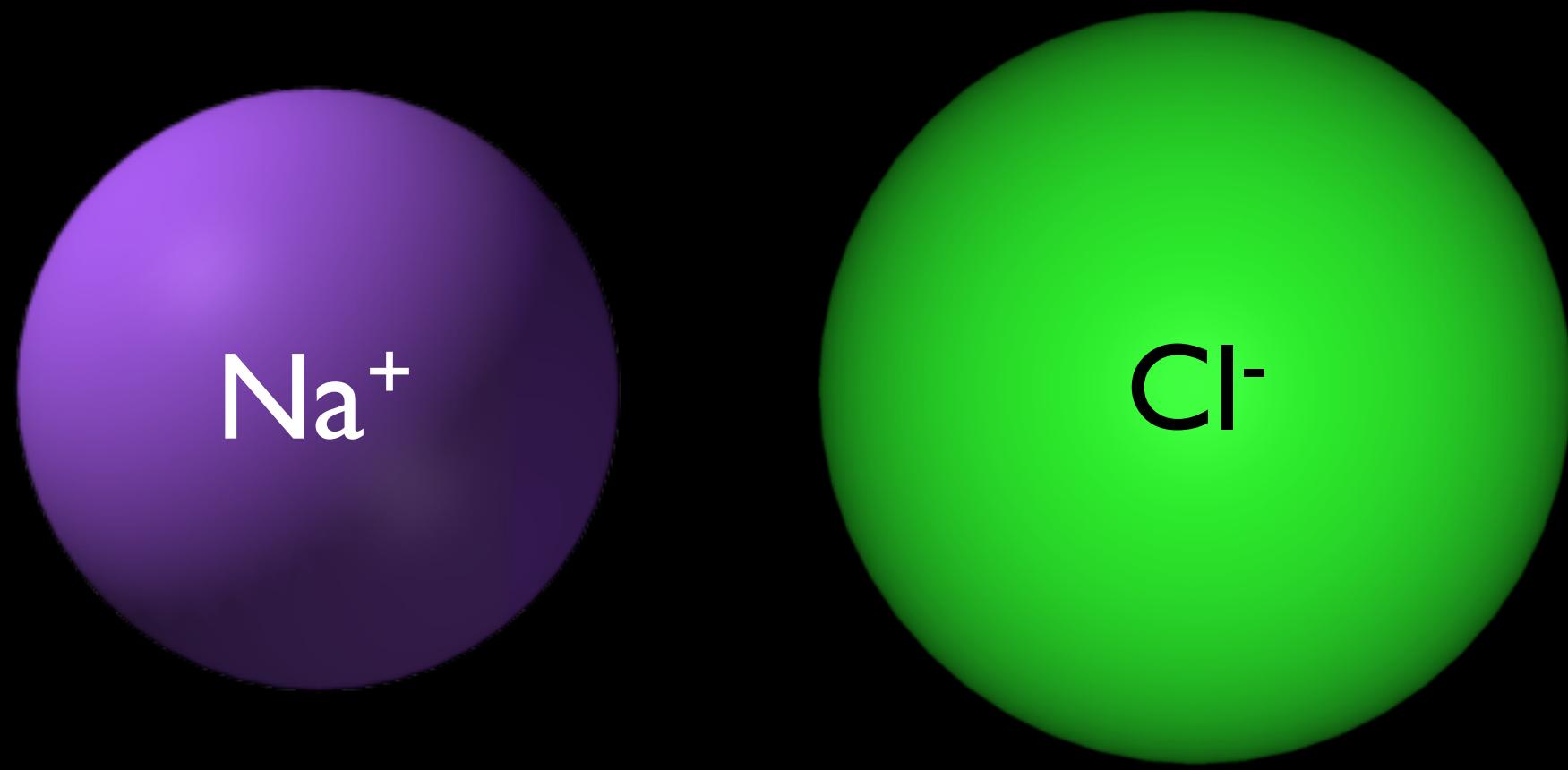
Molecular Solids

Metallic Solids

Chemistry Essentials - 023



Ionic Solid



Properties

High Melting Point



Low Vapor Pressure



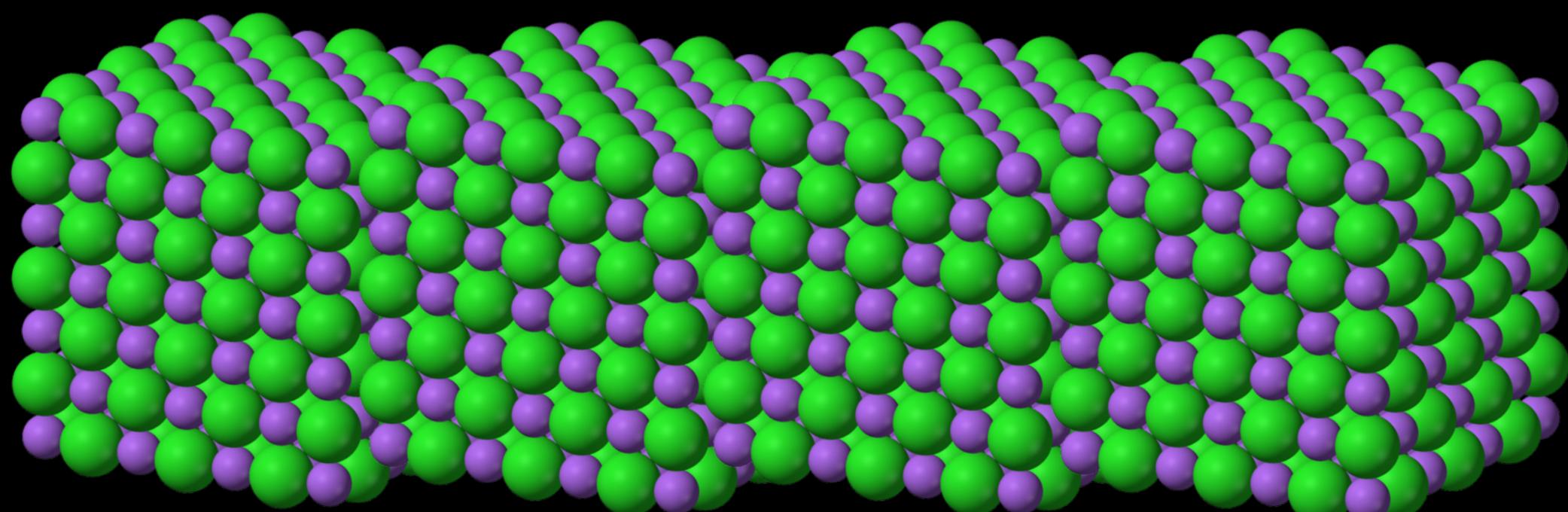
Brittle

801°C

Poor Conductors

186°C

Solutions



Properties

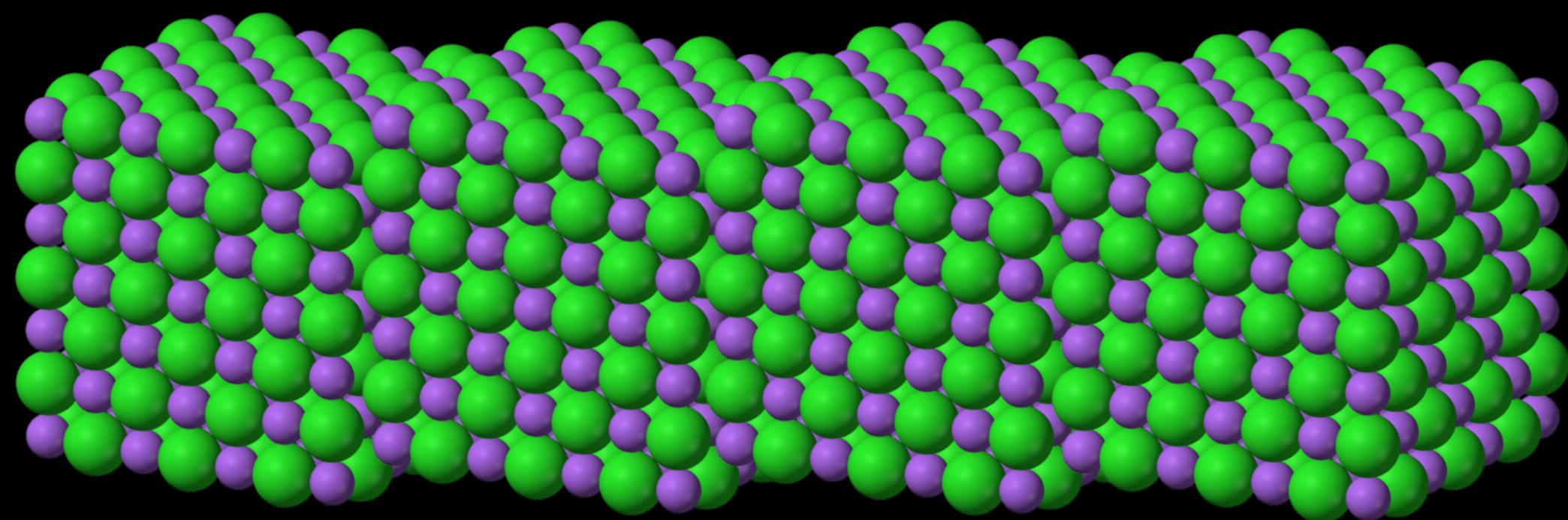
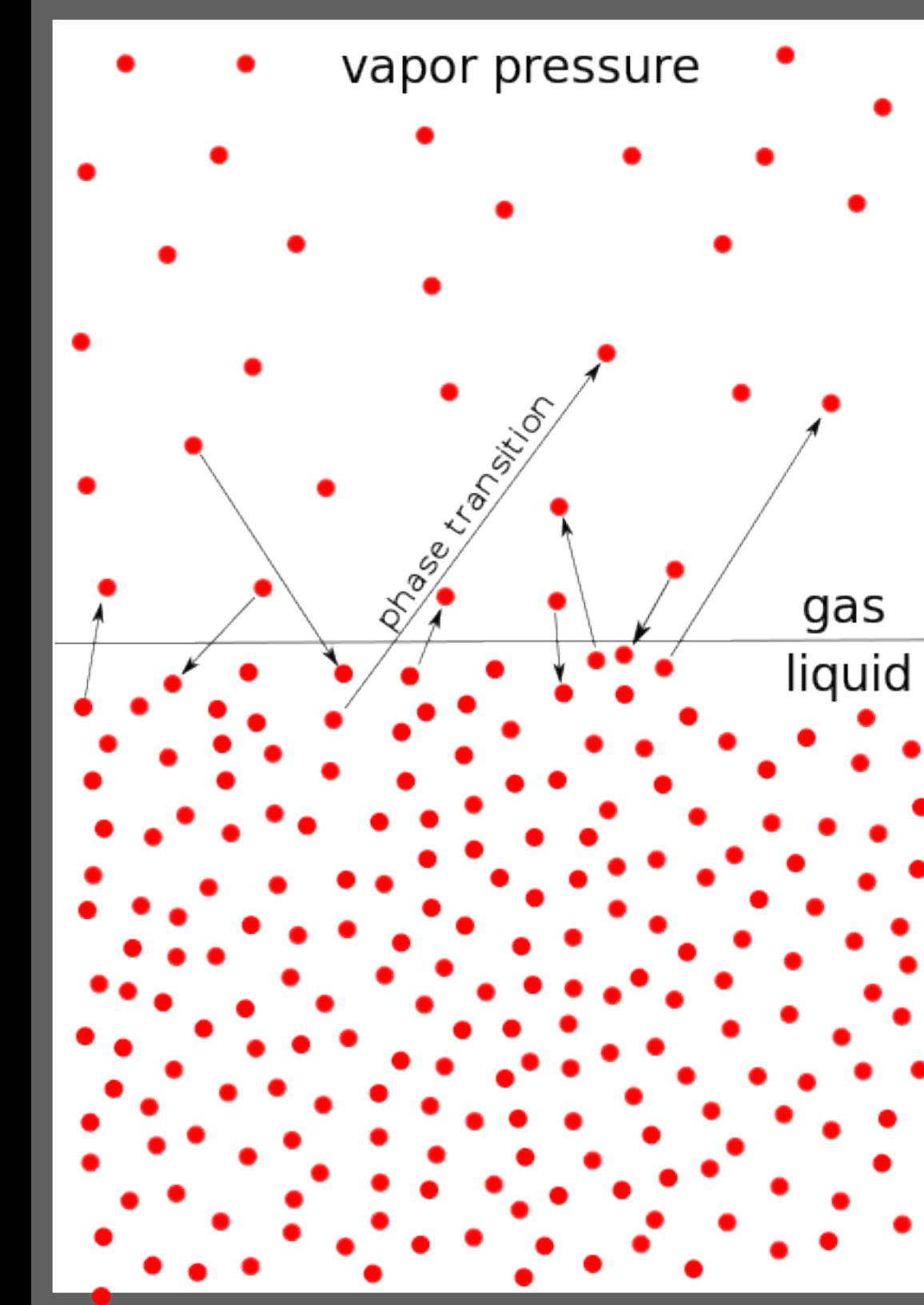
High Melting Point

Low Vapor Pressure

Brittle

Poor Conductors

Solutions



Properties

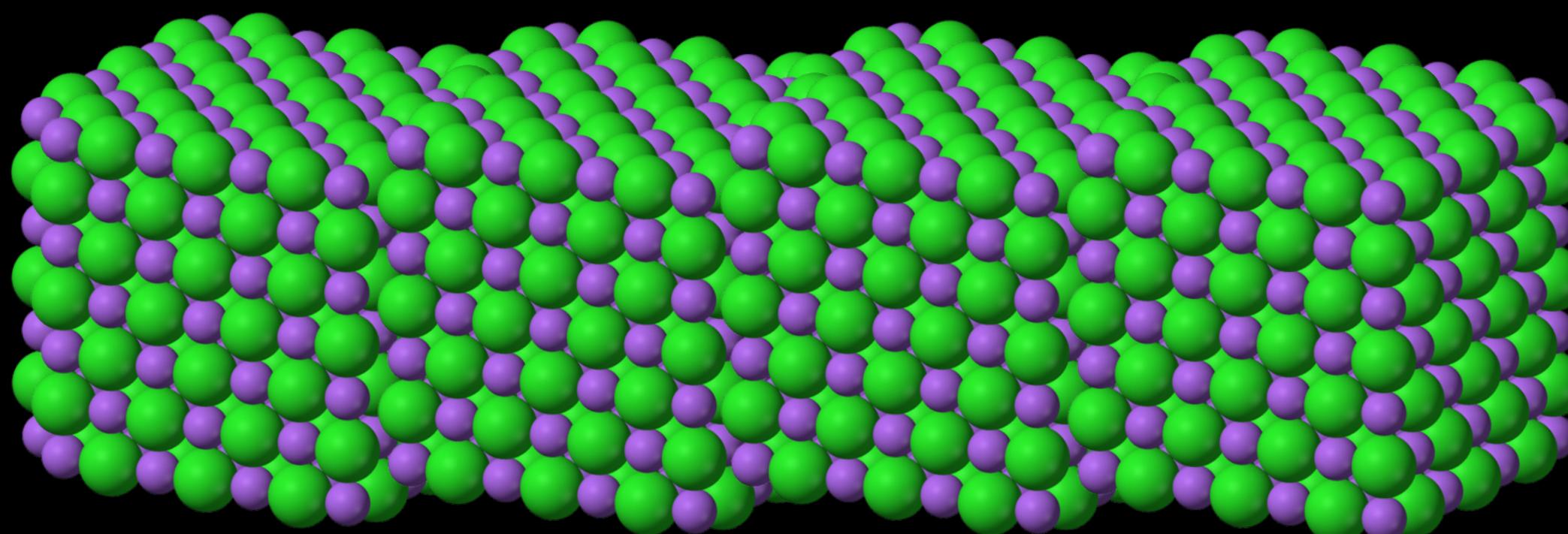
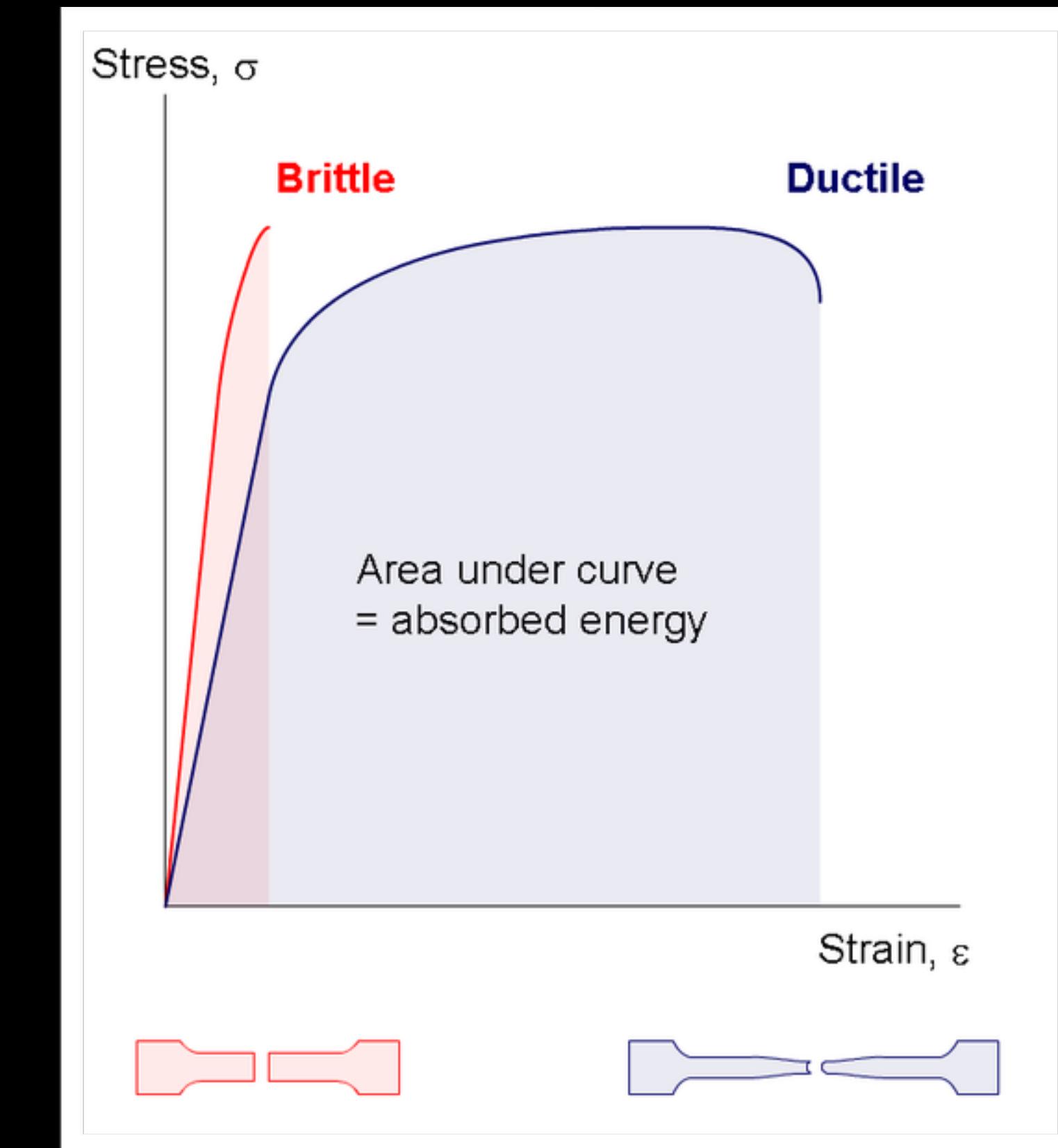
High Melting Point

Low Vapor Pressure

Brittle

Poor Conductors

Solutions



Properties

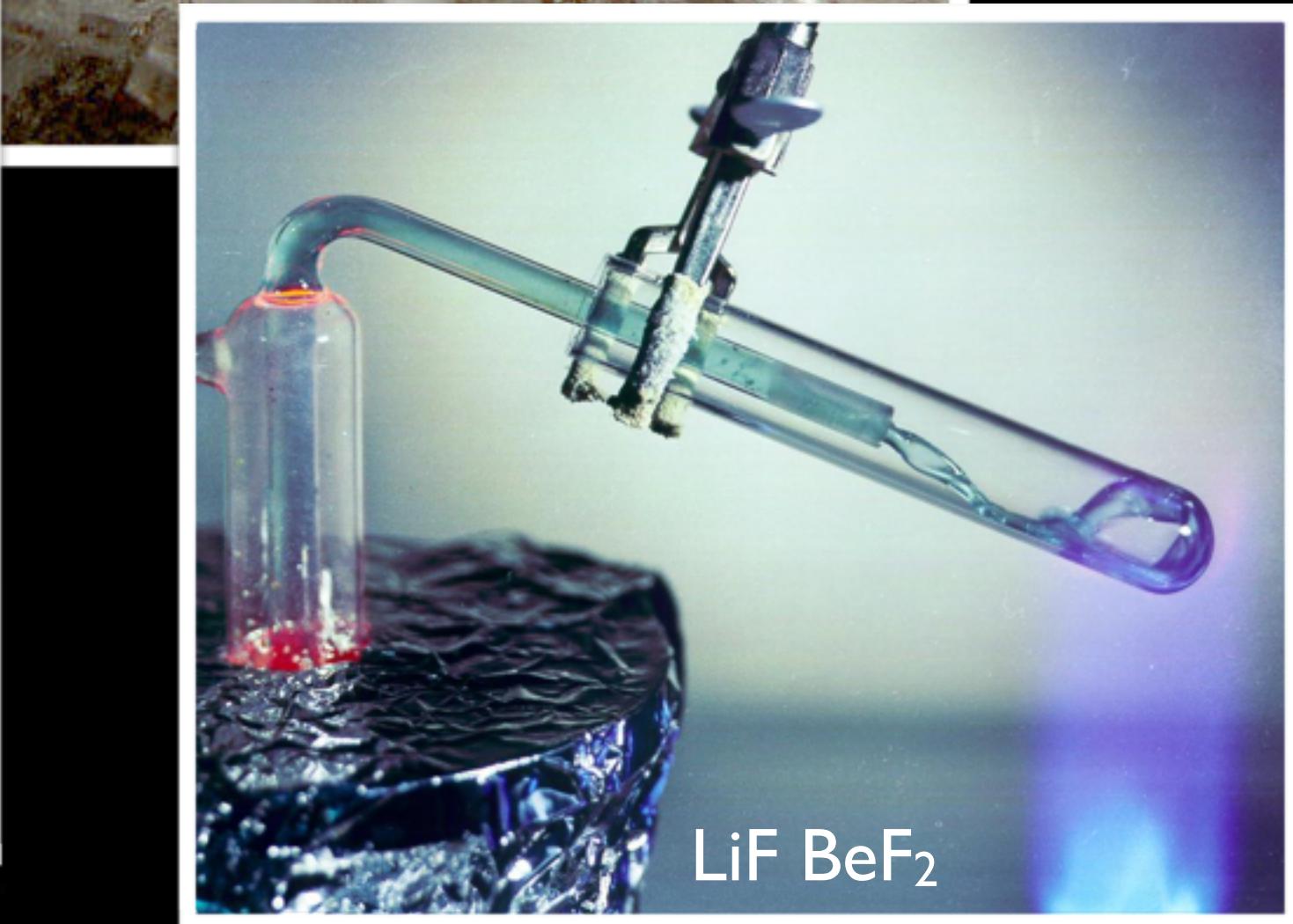
High Melting Point



Low Vapor Pressure

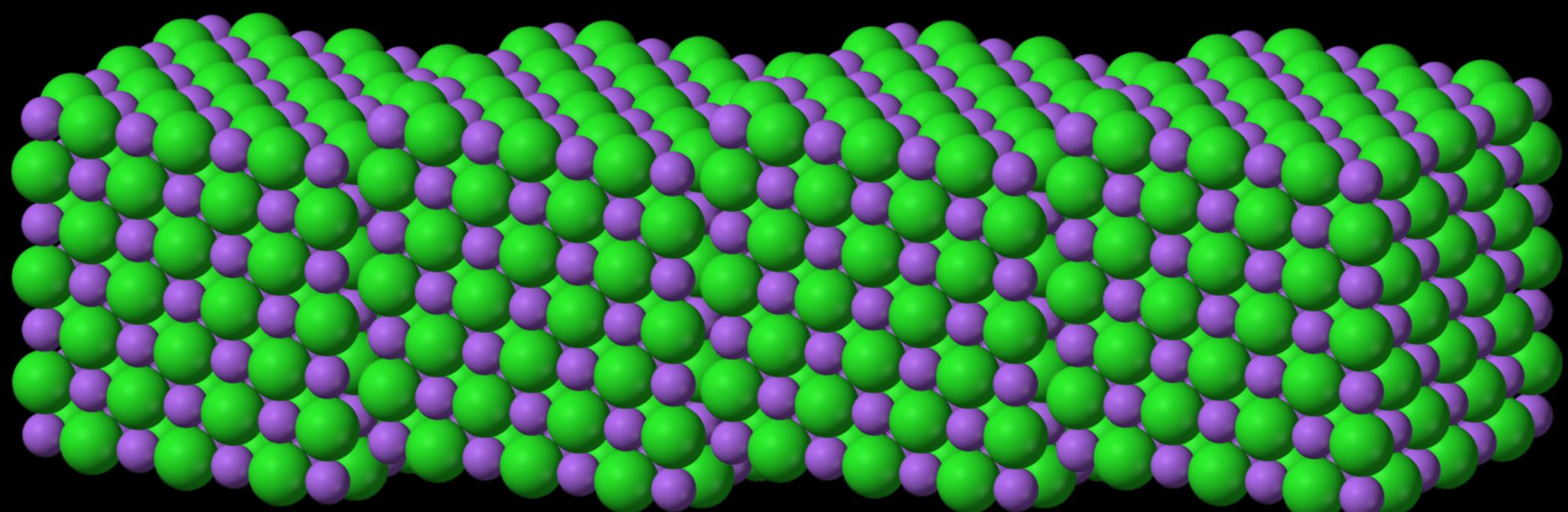


Brittle



Poor Conductors

Solutions



Properties

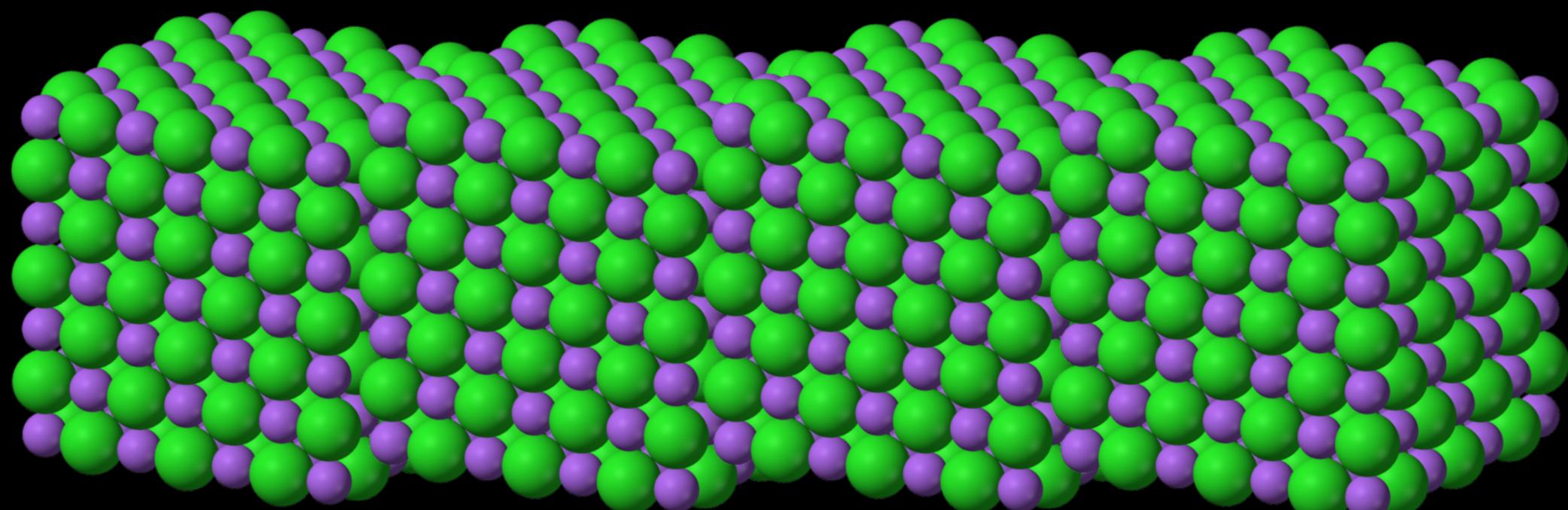
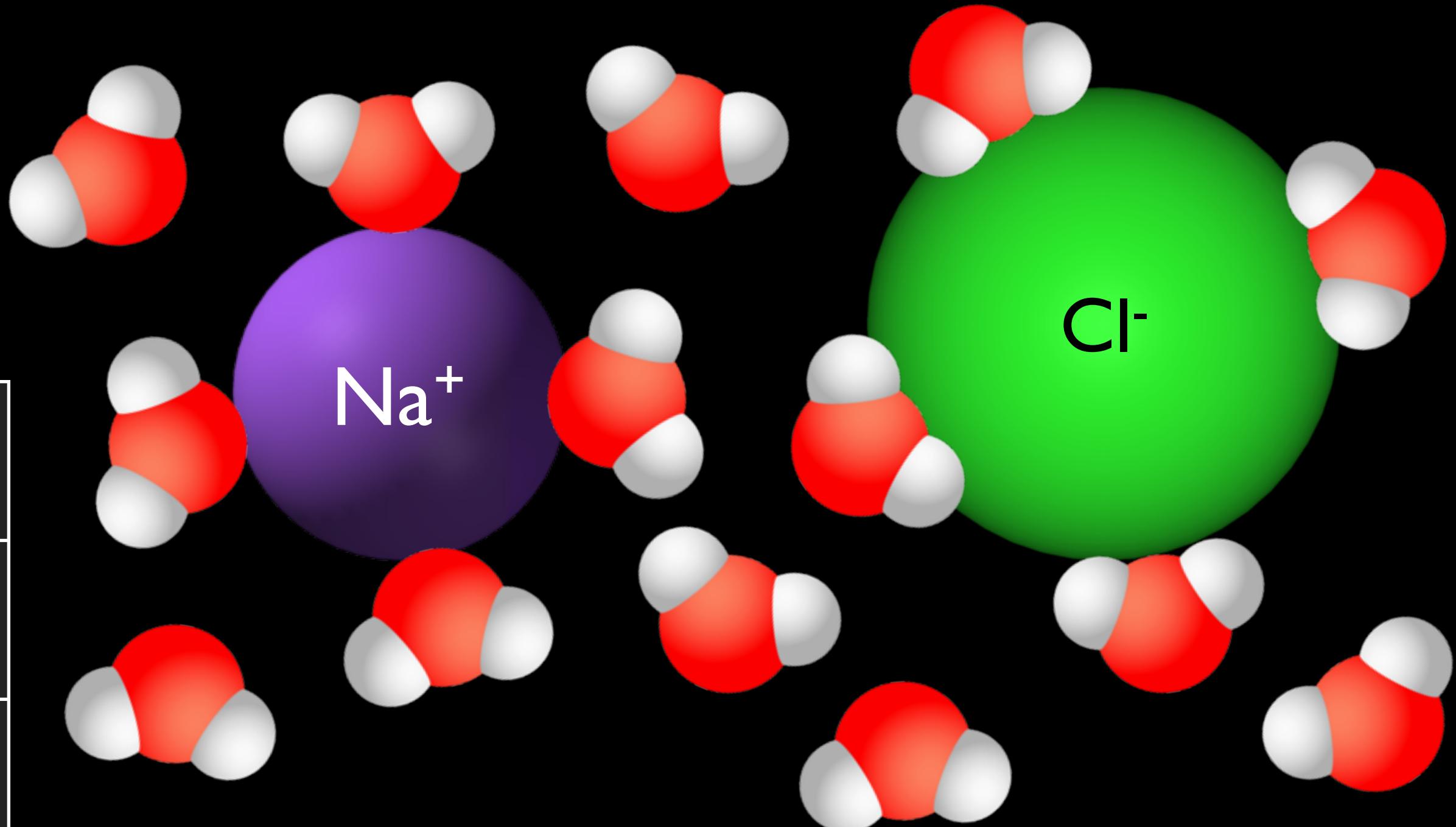
High Melting Point

Low Vapor Pressure

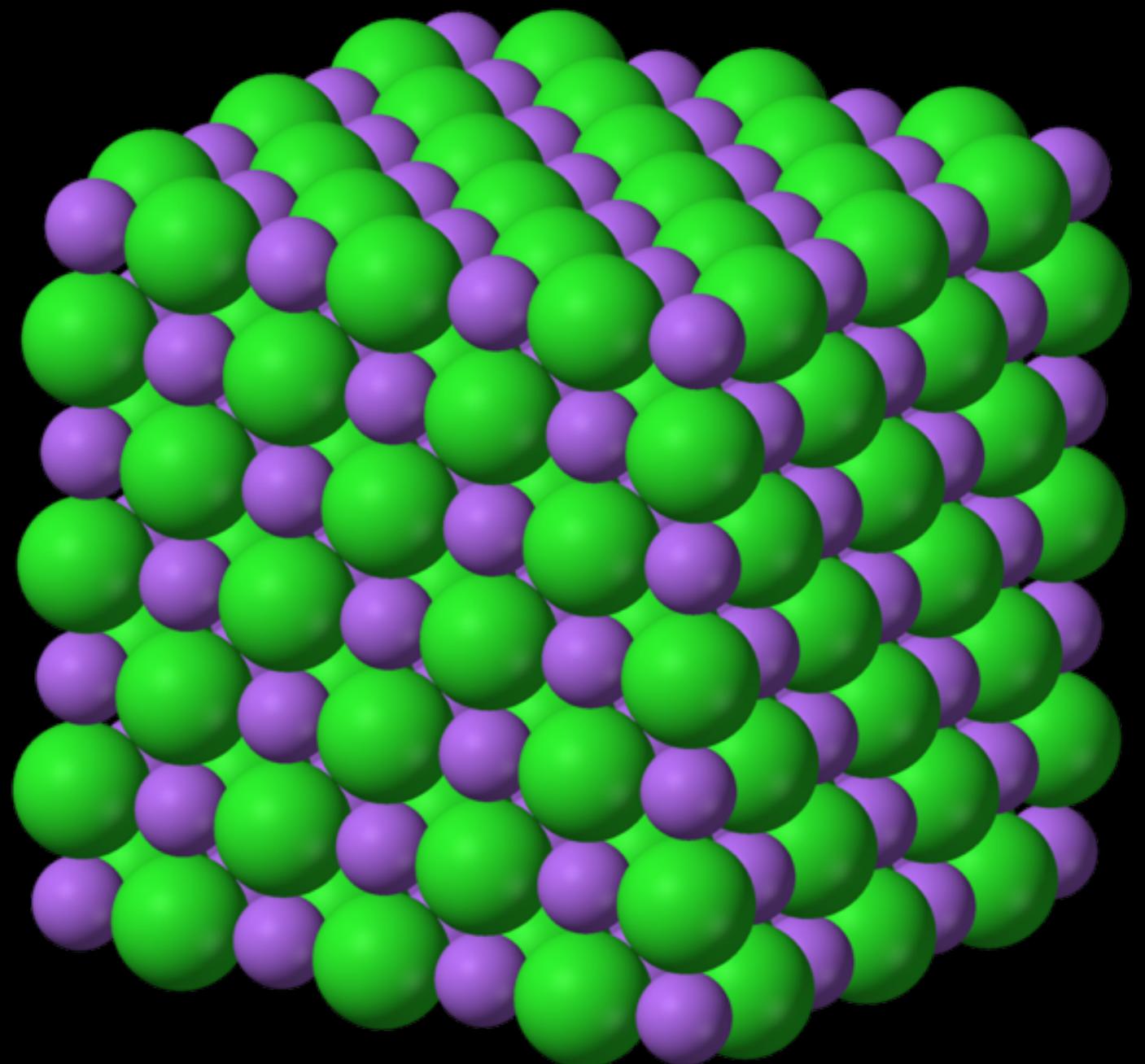
Brittle

Poor Conductors

Solutions



Did you learn?

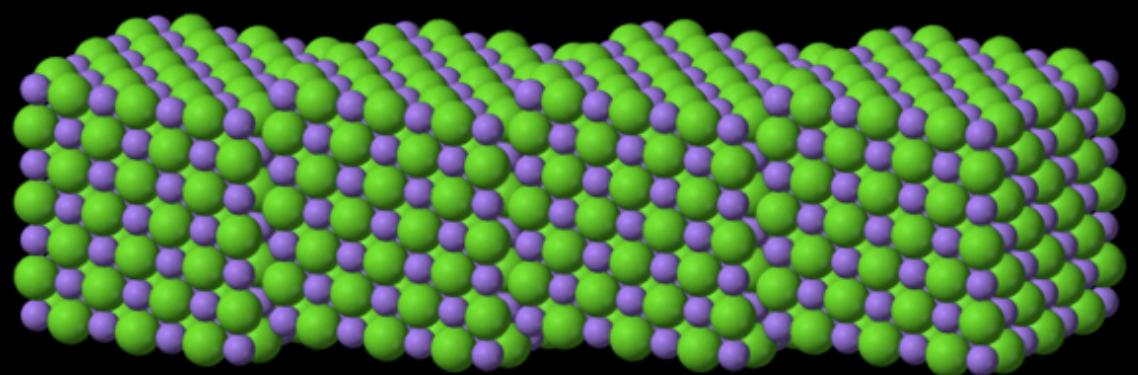


To create an ionic solid representation.

Did you learn?

Properties

High Melting Point
Low Vapor Pressure
Brittle
Poor Conductors
Solutions



To relate the characteristics on an ionic solid to the interactions at the atomic level.

Acknowledgements

2004, Picture taken by me-- Chris 73 14:12, 11 Dec. *Solution of Salt in Water (regular Table Salt, Regular Tap Water)*, [object HTMLTableCellElement]. Licensing: <http://commons.wikimedia.org/wiki/File:SaltInWaterSolutionLiquid.jpg>.
Cdang, Tableau_periodique_base.svg: Cdangderivative work: English: *Periodic Table of the Elements: Metals and Non-Metals.*, 16:36 (UTC). Tableau_periodique_base.svg. http://commons.wikimedia.org/wiki/File:Tableau_periodique_metaux_et_non_metaux.svg.
“File:Brittle v Ductile Stress-Strain Behaviour.png,” August 18, 2013. http://en.wikipedia.org/wiki/File:Brittle_v_ductile_stress-strain_behaviour.png.
“File:CoulombsLaw.svg,” August 18, 2013. <http://en.wikipedia.org/wiki/File:CoulombsLaw.svg>.
“File:FLiBe.png,” August 18, 2013. <http://en.wikipedia.org/wiki/File:FLiBe.png>.
“File:Halit-Kristalle.jpg,” August 18, 2013. <http://en.wikipedia.org/wiki/File:Halit-Kristalle.jpg>.
“File:NaCl Polyhedra.png,” August 12, 2013. http://en.wikipedia.org/wiki/File:NaCl_polyhedra.png.
“File:NaCl.png,” August 12, 2013. <http://en.wikipedia.org/wiki/File:NaCl.png>.
“File:Sugar 2xmacro.jpg,” August 18, 2013. http://en.wikipedia.org/wiki/File:Sugar_2xmacro.jpg.
“File:Vapor Pressure.svg,” August 18, 2013. http://en.wikipedia.org/wiki/File:Vapor_pressure.svg.
work, Own. English: *Structure of the Water Molecule (H₂O)*, August 2008. Based in part on the public domain image Image:H₂O (water molecule).jpg by Solkoll. Corrected by Plenz. http://commons.wikimedia.org/wiki/File:Water_molecule.svg.



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