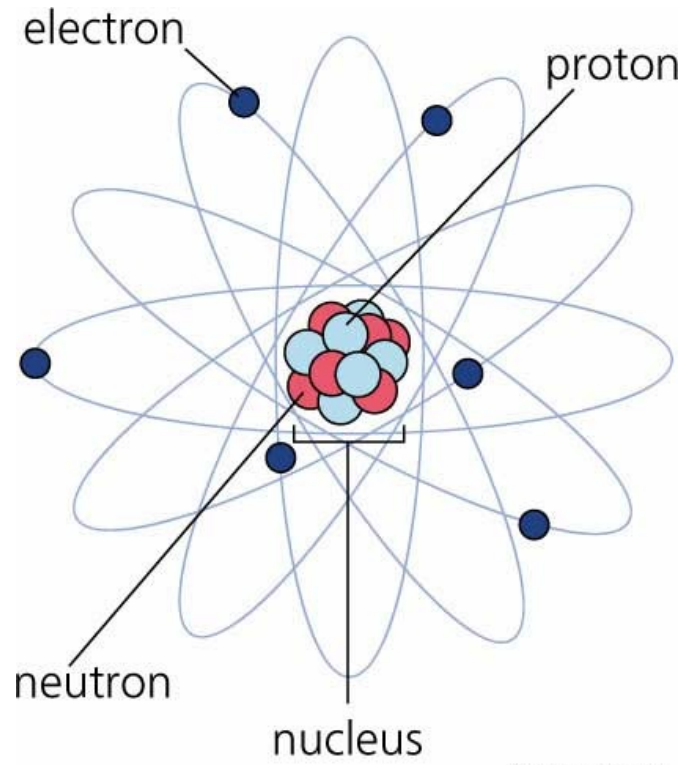
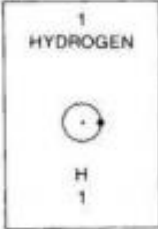
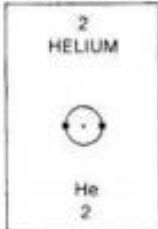








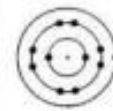

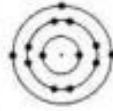

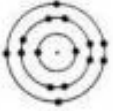
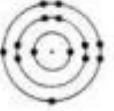




# Kapittel 18: Atomfysikk

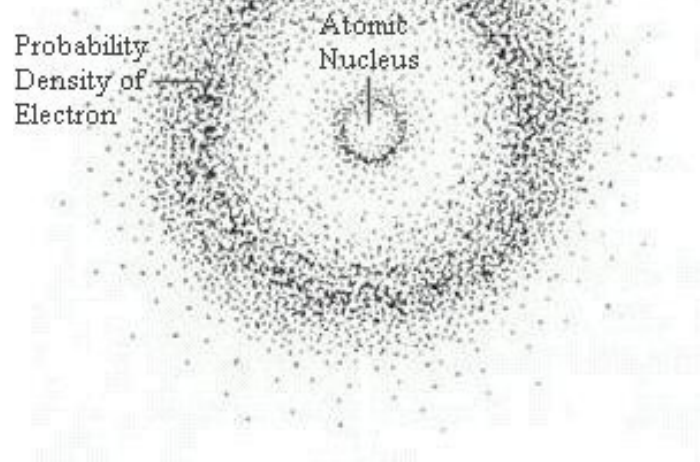
# Atomets oppbygning



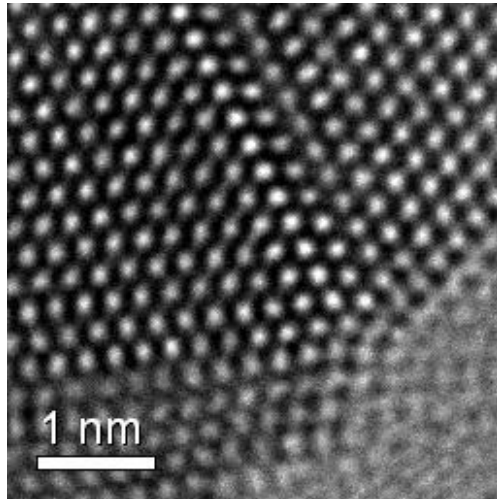
Academy Artworks

Group number →	I	II	III	IV	V	VI	VII	0
	1 <b>HYDROGEN</b>  H 1							2 <b>HELIUM</b>  He 2
	3 <b>LITHIUM</b>  Li 2.1	4 <b>BERYLLIUM</b>  Be 2.2	5 <b>BORON</b>  B 2.3	6 <b>CARBON</b>  C 2.4	7 <b>NITROGEN</b>  N 2.5	8 <b>OXYGEN</b>  O 2.6	9 <b>FLUORINE</b>  F 2.7	10 <b>NEON</b>  Ne 2.8
Proton number →	11	12	13	14	15	16	17	18
Name of element →	<b>SODIUM</b>	<b>MAGNESIUM</b>	<b>ALUMINIUM</b>	<b>SILICON</b>	<b>PHOSPHORUS</b>	<b>SULPHUR</b>	<b>CHLORINE</b>	<b>ARGON</b>
Full electronic structure →	 Na 2.8.1	 Mg 2.8.2	 Al 2.8.3	 Si 2.8.4	 P 2.8.5	 S 2.8.6	 Cl 2.8.7	 Ar 2.8.8
Symbol of element →	K	Ca						
Simplified electronic structure →	19 <b>POTASSIUM</b> K 2.8.8.1	20 <b>CALCIUM</b> Ca 2.8.8.2						

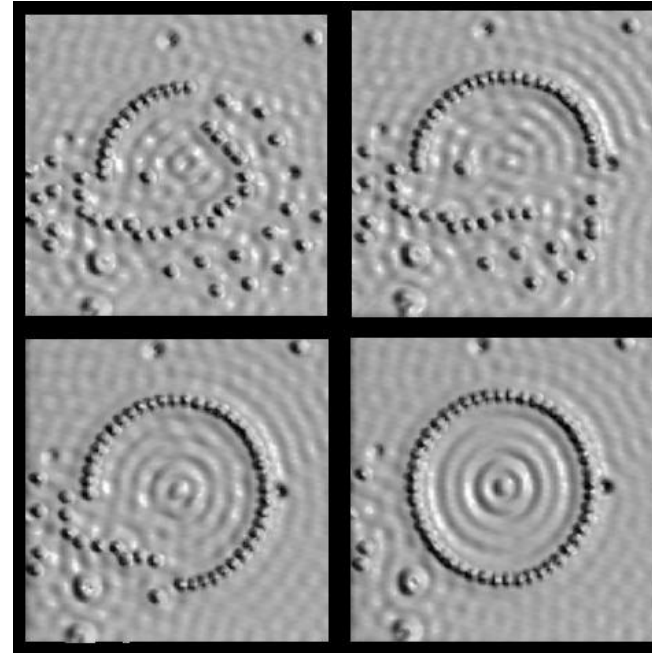
# Elektronskymodellen



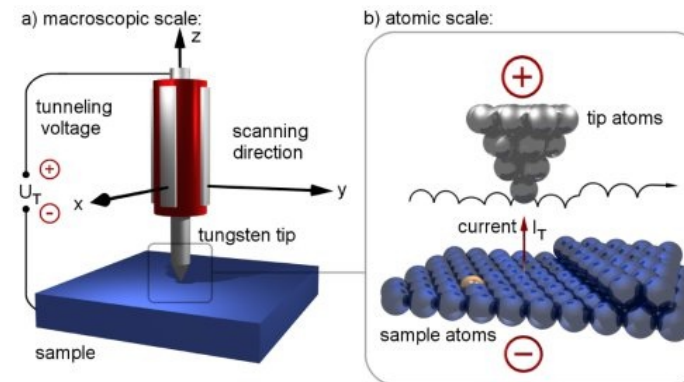
Vi kan "se" atomer



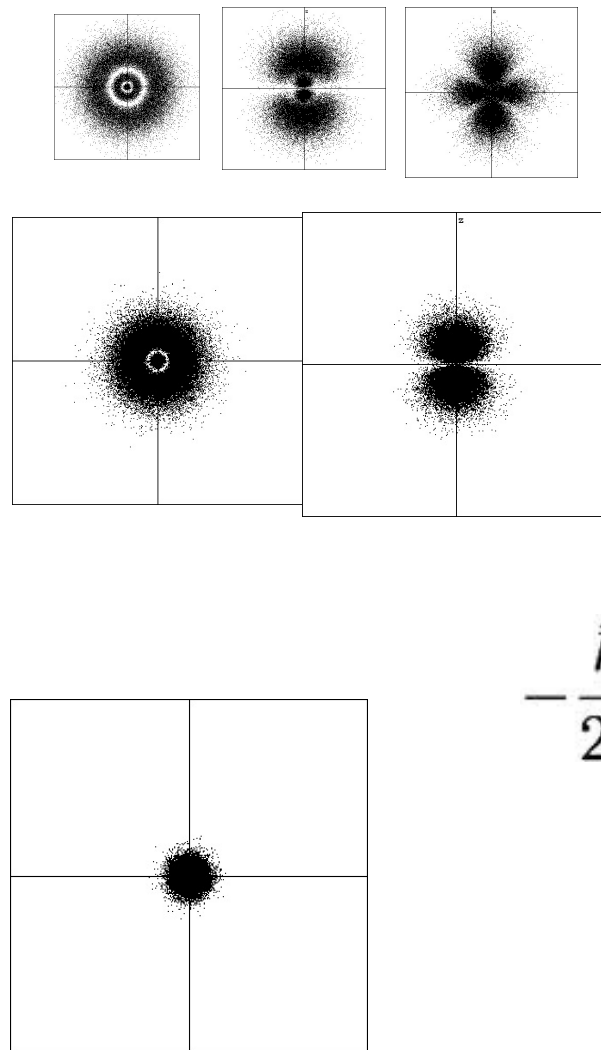
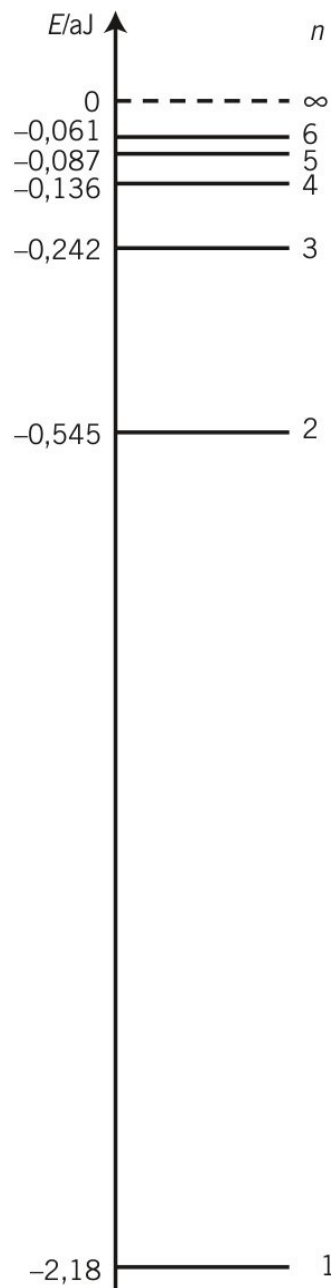
Elektronmikroskop



Scanning tunneling  
mikroskop



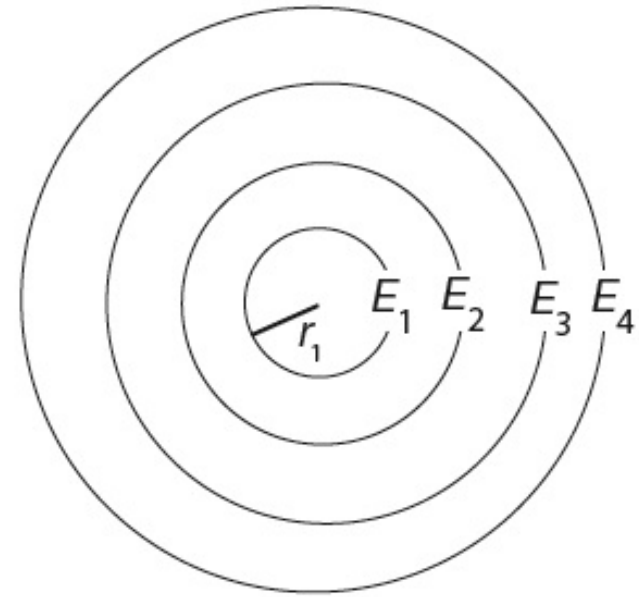
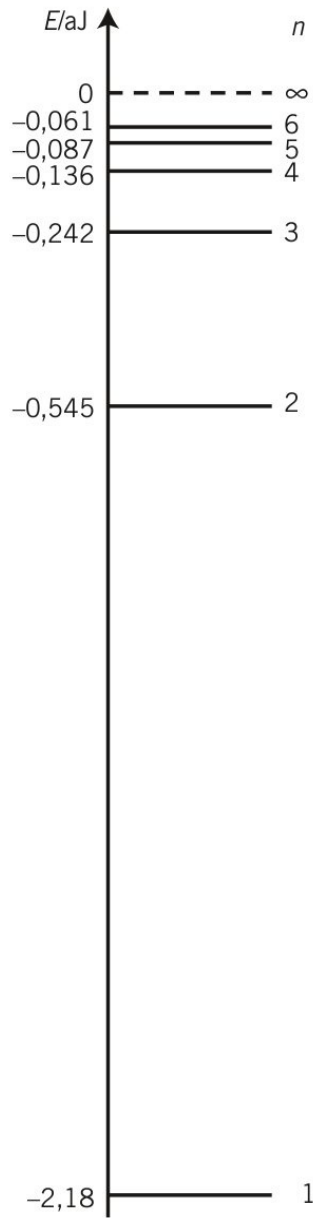
# Energivåer



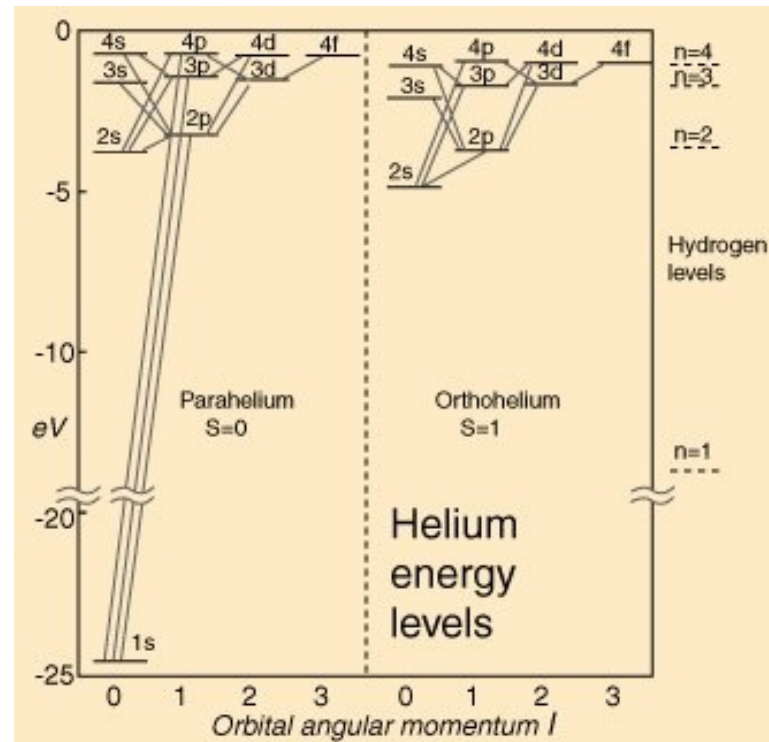
Et elektron i et atom kan bare ha bestemte verdier for energien. Vi kan i prinsippet beregne energivåene og elektronskyene (absolutt ikke pensum!!) ved å løse bølgelikningen:

$$-\frac{\hbar^2}{2m} \frac{d^2\psi}{dx^2} + V(x)\psi = E\psi$$

# Hydrogen



# Helium





# Periodesystemet

Group number →	I	II	III	IV	V	VI	VII	0
	1 HYDROGEN							2 HELIUM
	3 LITHIUM	4 BERYLLIUM	5 BORON	6 CARBON	7 NITROGEN	8 OXYGEN	9 FLUORINE	10 NEON
	Li 2.1	Be 2.2	B 2.3	C 2.4	N 2.5	O 2.6	F 2.7	Ne 2.8
Proton number →	11 SODIUM	12 MAGNESIUM	13 ALUMINIUM	14 SILICON	15 PHOSPHORUS	16 SULPHUR	17 CHLORINE	18 ARGON
Name of element →								
Full electronic structure →	Na 2.8.1	Mg 2.8.2	Al 2.8.3	Si 2.8.4	P 2.8.5	S 2.8.6	Cl 2.8.7	Ar 2.8.8
Symbol of element →	19 POTASSIUM	20 CALCIUM						
Simplified electronic structure →								
	K 2.8.8.1	Ca 2.8.8.2						

Pauliprinsippet: To elektroner kan ikke ha samme tilstand.