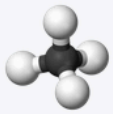
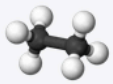
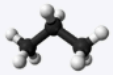
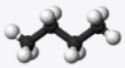
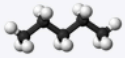
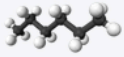
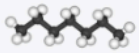
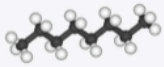
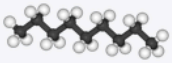
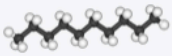
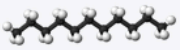
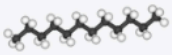
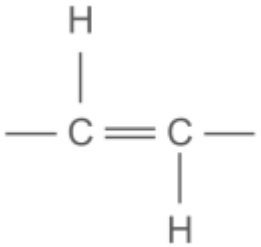
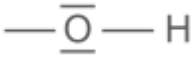
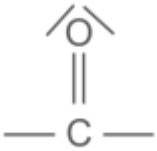
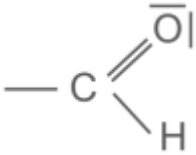
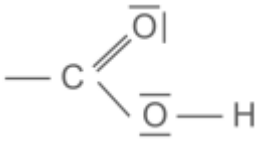
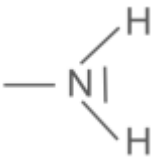
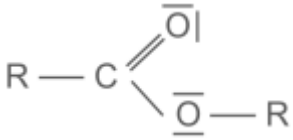
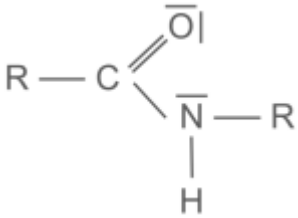
Die homologe Reihe der n-Alkane

Alkane sind Kohlenwasserstoffe, also Verbindungen, die ausschließlich aus Kohlenstoff- und Wasserstoffatomen bestehen. Die allgemeine Summenformel lautet: $\mathbf{C_nH_{2n+2}}$.

Name	Summenformel	Molare Masse	Schmelzpunkt	Siedepunkt	Dichte	Kugel-Stab-Modell
Methan	CH_4	16,04 $g \cdot mol^{-1}$	90,65 K	111,4 K	0,72 kg/m^3 gasförmig 0,42 g/cm^3 flüssig	
Ethan	C_2H_6	30,07 $g \cdot mol^{-1}$	90 K	185 K	1,36 kg/m^3 (g) 0,54 g/cm^3 (fl.)	
Propan	C_3H_8	44,10 $g \cdot mol^{-1}$	85 K	231 K	2,01 kg/m^3 (g) 0,58 g/cm^3 (fl.)	
n-Butan	C_4H_{10}	58,12 $g \cdot mol^{-1}$	135 K	272,5 K	2,71 kg/m^3 (g) 0,60 g/cm^3 (fl.)	
n-Pentan	C_5H_{12}	72,15 $g \cdot mol^{-1}$	144 K	309 K	0,626 g/cm^3	
n-Hexan	C_6H_{14}	86,18 $g \cdot mol^{-1}$	178 K	342 K	0,659 g/cm^3	
n-Heptan	C_7H_{16}	100,2 $g \cdot mol^{-1}$	182 K	371 K	0,684 g/cm^3	
n-Octan	C_8H_{18}	114,2 $g \cdot mol^{-1}$	216 K	399 K	0,703 g/cm^3	
n-Nonan	C_9H_{20}	128,3 $g \cdot mol^{-1}$	222 K	424 K	0,718 g/cm^3	
n-Decan	$C_{10}H_{22}$	142,3 $g \cdot mol^{-1}$	243 K	447 K	0,73 g/cm^3	
n-Undecan	$C_{11}H_{24}$	156,3 $g \cdot mol^{-1}$	248 K	469 K	0,74 g/cm^3	
n-Dodecan	$C_{12}H_{26}$	170,3 $g \cdot mol^{-1}$	263 K	489 K	0,75 g/cm^3	

Screenshot von: Wikipedia

Stoffklassen und funktionelle Gruppen

Funktionelle Gruppe	Bezeichnung	Benennung in organischen Verbindungen	Verbundene Themen
	Doppelbindung	-en	Additionsreaktion
	Dreifachbindung	-in	Additionsreaktion
	Hydroxygruppe	hydroxy- / -ol	Alkohole Saccharide Ester
	Ketogruppe	-on	Ketone Carbonylverbindungen
	Aldehydgruppe	-al	Aldehyde Carbonylverbindungen
	Carboxygruppe	-carboxy	Carbonsäuren Ester
	Aminogruppe	-amin / -amino	Aminosäuren Peptidbindung Eiweiße
	Estergruppe	-ester	Ester Kondensationsreaktion
	Peptidbindung	-	Peptide Eiweiße Kondensationsreaktion

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