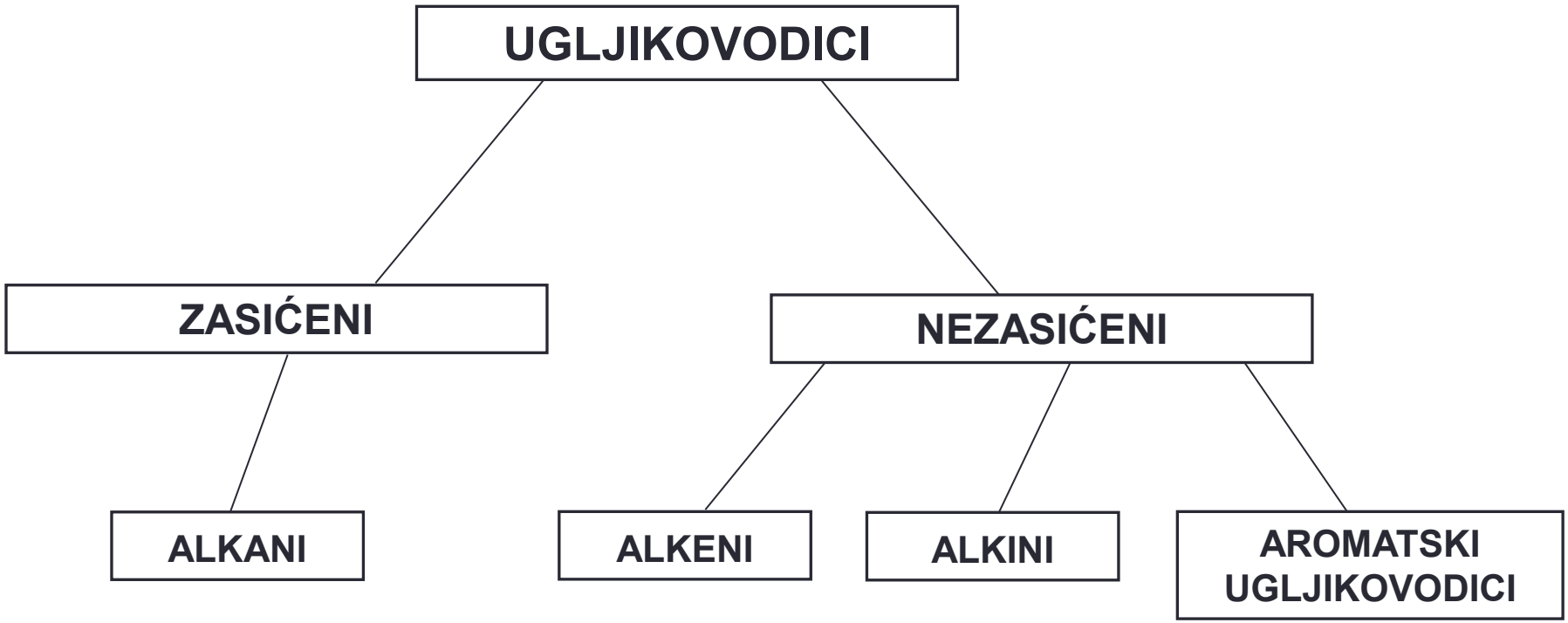
ALKANI

Podjela ugljikovodika



ALKANI

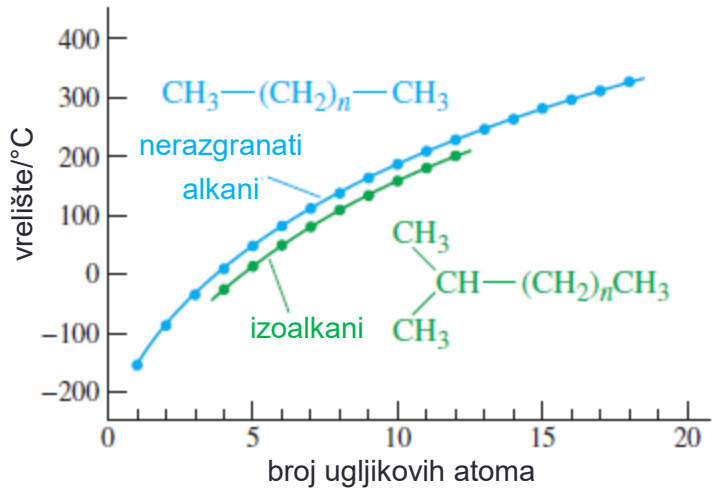
- Alkani su zasićeni ugljikovodici opće formule C_nH_{2n+2}.

HOMOLOGNI NIZ ALKANA

Broj C-atoma	Formula	Ime	Kondenzirana formula	Vrelište / °C	Gustoća / g cm^{-3} (pri 20 °C)
1	CH_4	metan	CH_4	-164	
2	C_2H_6	etan	CH_3CH_3	-89	
3	C_3H_8	propan	$CH_3CH_2CH_3$	-42	
4	C_4H_{10}	butan	$CH_3CH_2CH_2CH_3$	0	
5	C_5H_{12}	pentan	$CH_3(CH_2)_3CH_3$	36	0,63
6	C_6H_{14}	heksan	$CH_3(CH_2)_4CH_3$	69	0,66
7	C_7H_{16}	heptan	$CH_3(CH_2)_5CH_3$	98	0,68
8	C_8H_{18}	oktan	$CH_3(CH_2)_6CH_3$	126	0,70
9	C_9H_{20}	nonan	$CH_3(CH_2)_7CH_3$	151	0,72
10	$C_{10}H_{22}$	dekan	$CH_3(CH_2)_8CH_3$	174	0,73
11	$C_{11}H_{24}$	undekan	$CH_3(CH_2)_9CH_3$	196	0,74
12	$C_{12}H_{26}$	dodekan	$CH_3(CH_2)_{10}CH_3$	216	0,75
13	$C_{13}H_{28}$	tridekan	$CH_3(CH_2)_{11}CH_3$	235	0,76
:	:	:	:	:	:
20	$C_{20}H_{42}$	ikosan	$CH_3(CH_2)_{18}CH_3$	343	0,79
30	$C_{30}H_{62}$	triakontan	$CH_3(CH_2)_{18}CH_3$	7450	0,81

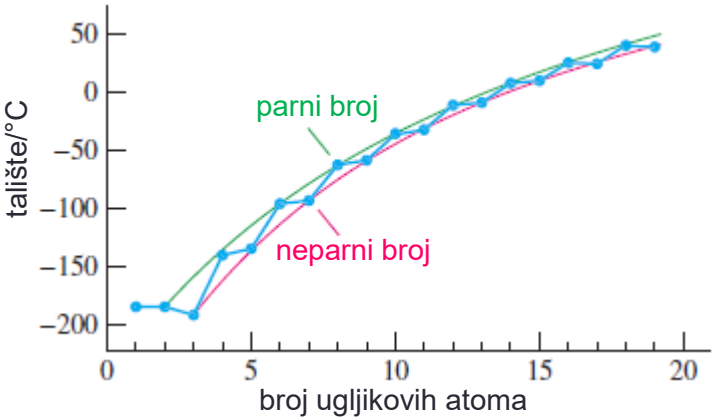
Fizikalna svojstva alkana

Vrelišta alkana



- razgranati alkani imaju niža vrelišta od nerazgranatih s jednakim brojem ugljikovih atoma zbog slabijih Londonovih sila.

Tališta alkana

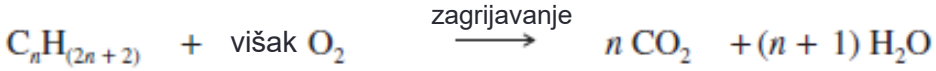


- alkani s parnim brojem ugljikovih atoma bolje se pakiraju u čvrstom stanju te se tale pri višim temperaturama.
- razgranati alkani su kompaktniji od nerazgranatih s jednakim brojem ugljikovih atoma zbog čega imaju viša tališta.

ALKANI

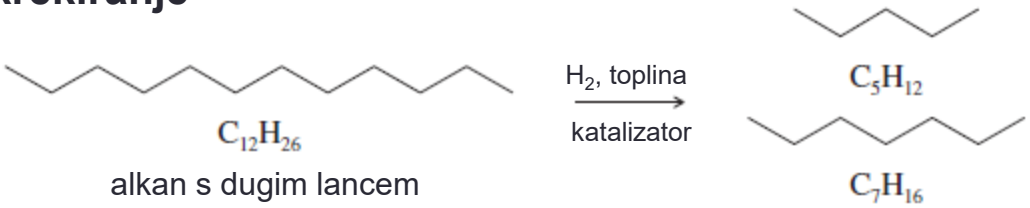
Reakcije alkana

Izgaranje

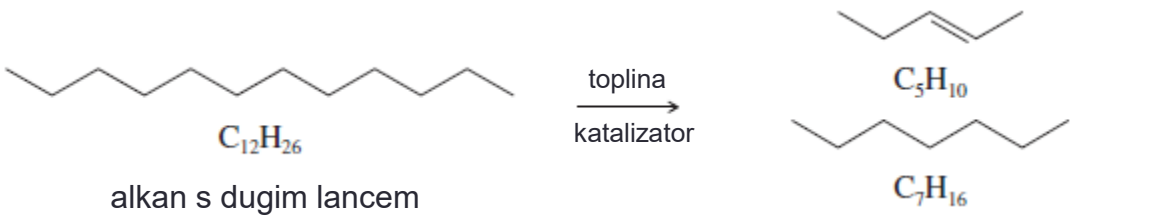




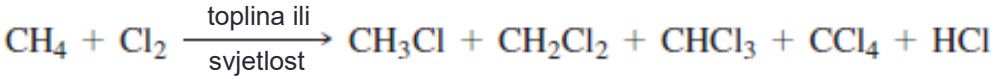
Katalitičko hidrokrekiranje



Katalitičko krekiranje

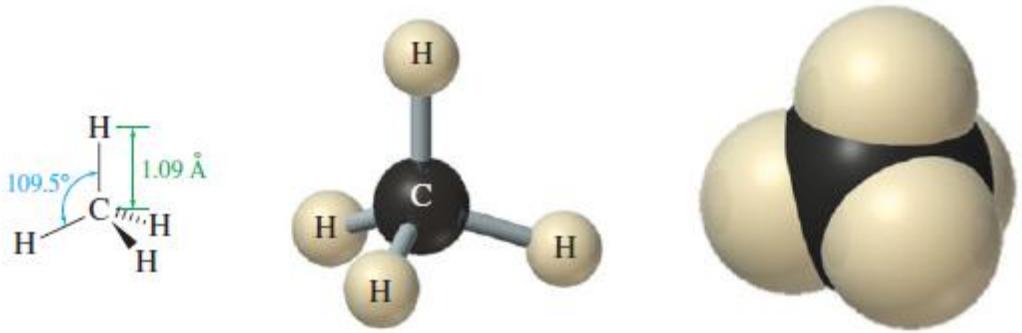


Halogeniranje



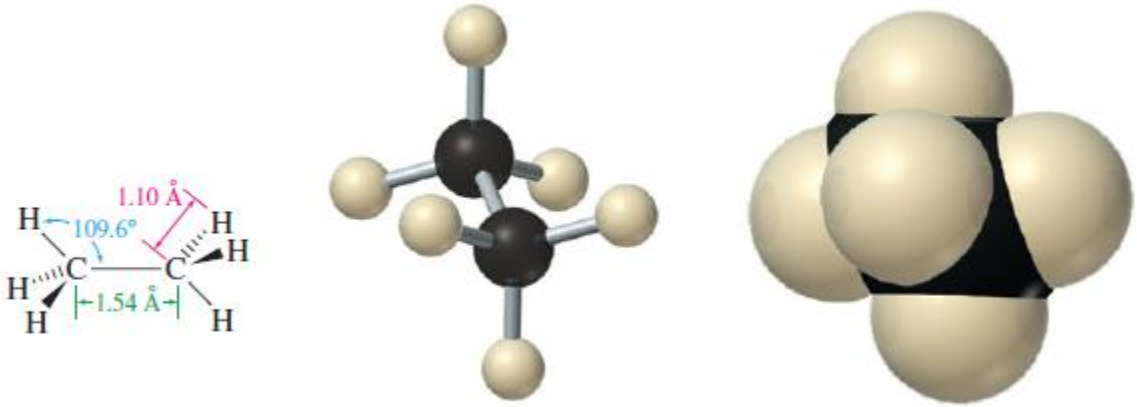
Struktura alkana

Struktura metana



Tetraedarska struktura (sp^3-hibridiziran ugljikov atom)

Struktura etana



sp^3-hibridizirani ugljikovi atomi