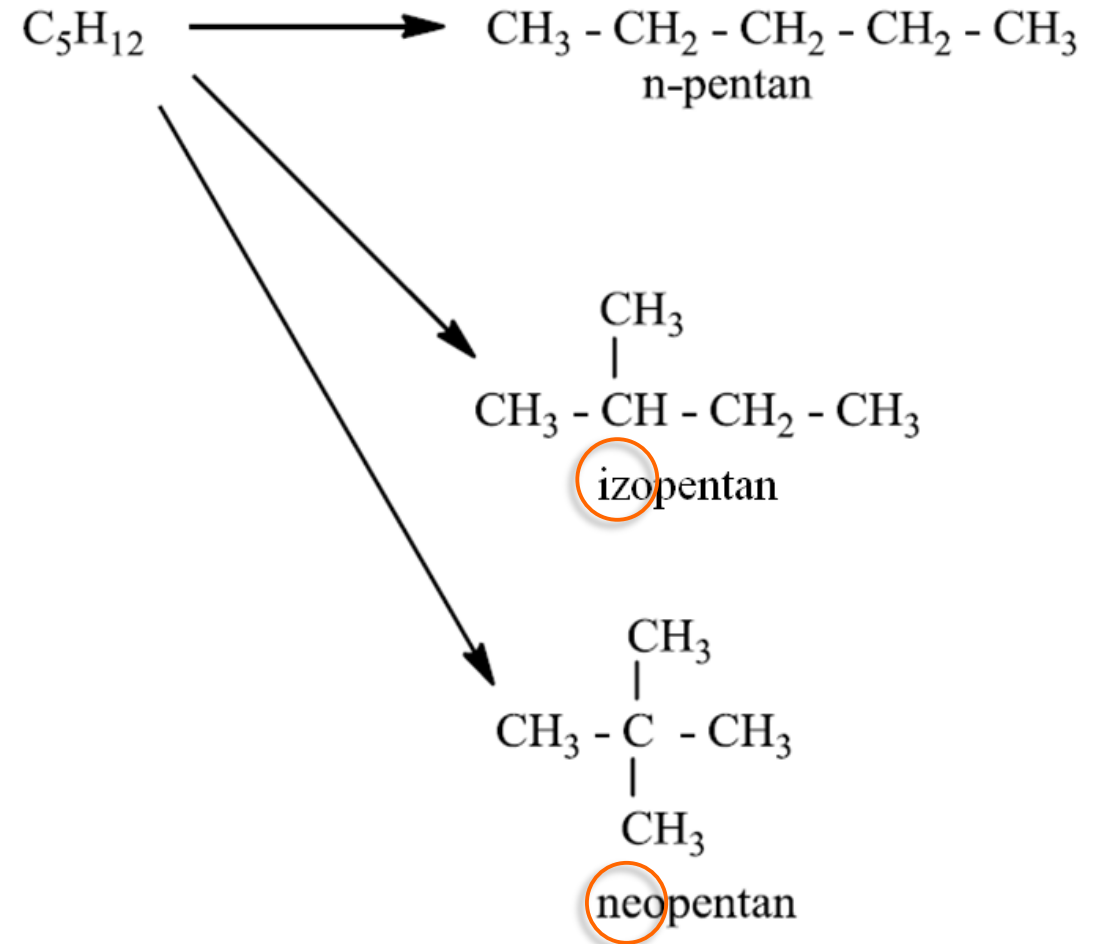
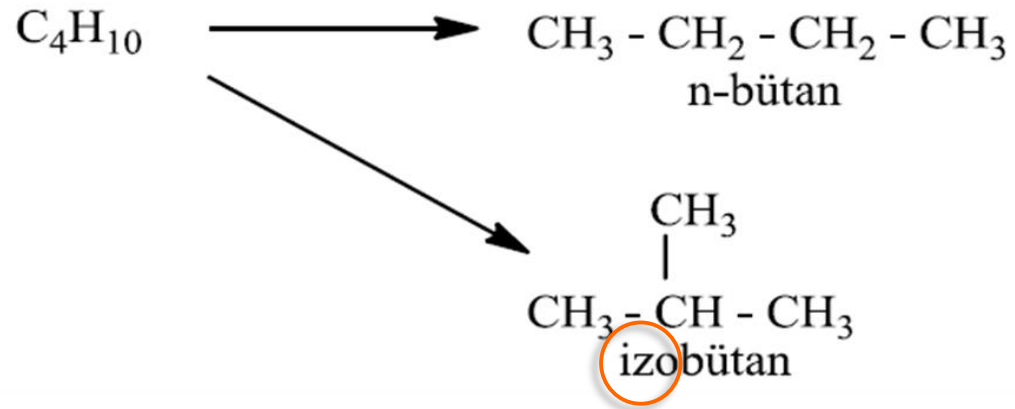


Organik Bileşiklerin Adlandırılması - 2

ÖN EKLER



ÖN EKLER

Fonksiyonlu gruplar ya da ana iskelete bağlı alkil grupları birden fazla ise;

di-

tri-

tetra-

penta-

hekza-

ÖN EKLER

3-**metil** pentan

Me-

2-**metil** pentan

2,3-**dimetil** butan

2,2-**dimetil** butan

3-**Etil**-1,1-**dimetil** **siklo**heksan

- Ana iskelet en uzun C zinciridir.
- Ana iskelet rakamlarla numaralanır.
- Fonksiyonlu grupların ya da sübstitüentlerin yerleri numaralarla belirlenir.
- Fonksiyonlu grupların bulunduğu C en küçük sayıyı gösterecek şekilde numaralanır.



di-
tri-
tetra-

Alfabetik sıralamada ihmal edilir.

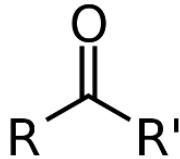
sec-
tert-

izo-
neo-
cyclo-

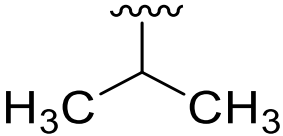
Alfabetik sıralamada dikkate alınır.

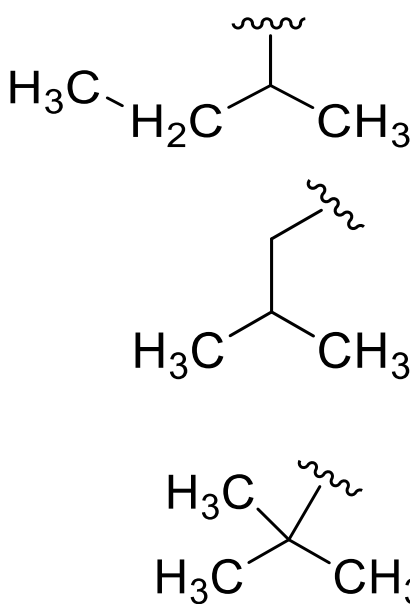


ÖN EKLER

ÖN EK	TANIMLADIĞI MADDE	
Hidroksi-	Alkol	-OH
Alkoksi-	Eter	-OR
Halo- (Fluoro-, Kloro-, Bromo-, İyodo-)	Halojenür	-X (-F, -Cl, -Br, -I)
Keto- / Okso-	Keton	
Amino-	Primer amin	-NH ₂
N-Alkilamino-	Sekonder amin	-NH-R
Nitro-		-NO ₂
Siyano-		-C≡N

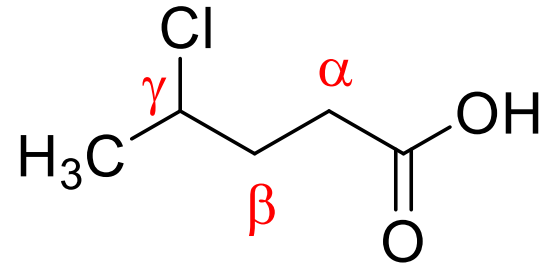
KÖK OLUŞTURMA

C1	CH_4	$-\text{CH}_3$	Metil kökü
C2	CH_3-CH_3	$-\text{CH}_2-\text{CH}_3$	Etil
C3	$\text{CH}_3-\text{CH}_2-\text{CH}_3$	$-\text{CH}_2-\text{CH}_2-\text{CH}_3$ 	<i>n</i>-propil izopropil (<i>i</i>-pr) (1-metil etil)

C4	$\text{CH}_3\text{-CH}_2\text{-CH}_2\text{-CH}_3$	<p>$-\text{CH}_2\text{-CH}_2\text{-CH}_2\text{-CH}_3$</p> 	<p><i>n</i>-butil</p> <p>sec-butil (sec-bu) (1-metil propil)</p> <p>izobutil (i-bu) (2-metil propil)</p> <p>tert-butil (t-bu) (1,1-dimetiletal)</p>
C5	$\text{CH}_3\text{-CH}_2\text{-CH}_2\text{-CH}_2\text{-CH}_3$	<p>$-\text{CH}_2\text{-CH}_2\text{-CH}_2\text{-CH}_2\text{-CH}_3$</p> <p>$-\text{CH}_2\text{-CH}_2\text{-CH}(\text{CH}_3)_2$</p> <p>$-\text{C}(\text{CH}_3)_2\text{CH}_2\text{-CH}_3$</p> <p>$-\text{CH}_2\text{-C}(\text{CH}_3)_3$</p>	<p><i>n</i>-pentil (n-amil)</p> <p>izopentil (izoamil)</p> <p>tert-pentil (tert-amil)</p> <p>neopentil</p>

$\text{CH}_2=\text{CH}_2$	$\text{CH}_2=\text{CH}-$	Etenil (Vinil)
$\text{CH}\equiv\text{CH}$	$\text{CH}\equiv\text{C}-$	Etinil
$\text{CH}\equiv\text{C}-\text{CH}_3$	$\text{CH}\equiv\text{C}-\text{CH}_2-$	2-Propinil (Proparjil)

Karbonilli türevlerde karbonil karbonunu takip eden karbonlar α , β , γ , δ , ω simgeleri ile belirtilir.



4-Kloro pentanoik asit

γ -Kloro pentanoik asit

SON EKLER

Bazı karboksilli asitler ve türevleri

Formik asit	HCOOH	Ester ya da tuzu	Form-at
Asetik asit	CH₃COOH	Amid türevi	Aset-amid
Propionik asit	CH₃CH₂COOH	Nitril türevi	Propio-nitril
Butirik asit	CH₃CH₂CH₂COOH	Aldehid türevi	Butir-aldehid

	IUPAC	Trivial
CH_3COOH	Etanoik asit	Asetik asit
$\text{CH}_3\text{COO}^- \text{Na}^+$	Sodyum etanoat	Sodyum asetat
$\text{CH}_3\text{COOCH}_3$	Metil etanoat	Metil asetat
CH_3CONH_2	Etanoik amid	Asetamid
$\text{CH}_3\text{C}\equiv\text{N}$	Etanonitril	Asetonitril
CH_3CHO	Etanal	Asetaldehid

Formik asit

Formaldehid

Metil format

Etil asetat

Propionik asit

Propionaldehid

Propionamid

Butirik asit

Butiraldehid

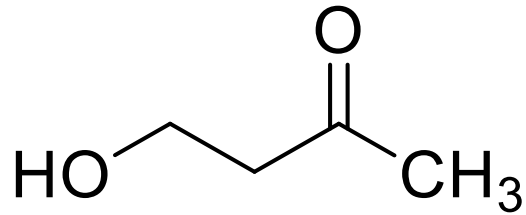
Butironitril



Polifonksiyonlu maddelerin adlandırılması

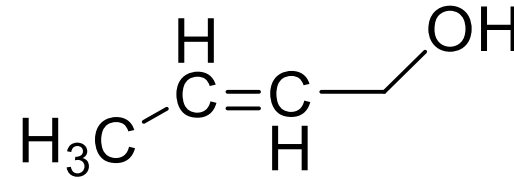
Bir molekülde birden çok fonksiyonlu grup varsa; sistematik adlandırmada sadece bir tanesini tanımlayan SON EK kullanılabilir.

Aynı molekül yapısında = bağ ve \equiv bağ bulunduğu durumlar hariç !!!



4-Hidroksi-2-Butan**on**

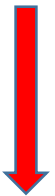
~~4-Butan**ol**-2-**on**~~



2-But**en**-1-**ol**

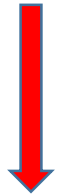
Fonksiyonlu gruplar ve öncelik sırası - 1

Madde sınıfı	Formül	Son ek	Ön ek
Karboksilik asitler	$\begin{array}{c} \text{O} \\ \parallel \\ -\text{C}-\text{OH} \end{array}$	-oik asit	karboksi
Karboksilik asit anhidriti	$\begin{array}{c} \text{O} \quad \text{O} \\ \parallel \quad \parallel \\ -\text{C}-\text{O}-\text{C}- \end{array}$	-oik anhidrit	-
Karboksilik asit esteri	$\begin{array}{c} \text{O} \\ \parallel \\ -\text{C}-\text{O}-\text{R} \end{array}$	<i>alkil</i> -oat	<i>alkoksi</i> karbonil
Karboksilik asit halojenür	$\begin{array}{c} \text{O} \\ \parallel \\ -\text{C}-\text{X} \end{array}$	-oik halojenür	
Karboksilik amid	$\begin{array}{c} \text{O} \\ \parallel \\ -\text{C}-\text{NH}_2 \end{array}$	-oik amid	karbamoil
Nitril türevleri	$-\text{C}\equiv\text{N}$	nitril, onitril	siyano



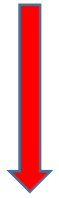
Fonksiyonlu gruplar ve öncelik sırası - 2

Madde sınıfı	Formül	Son ek	Ön ek
Aldehitler	$\begin{array}{c} \text{O} \\ \parallel \\ -\text{CH} \end{array}$	-al	formil/asetil....
Ketonlar	$\begin{array}{c} \text{O} \\ \parallel \\ -\text{C}-\text{R} \end{array}$	-on	okso
Alkoller	$\begin{array}{c} \\ -\text{C}-\text{OH} \\ \end{array}$	-ol	hidroksi
Merkaptanlar	$\begin{array}{c} \\ -\text{C}-\text{SH} \\ \end{array}$	-tiyol	merkaptto
Aminler	$\begin{array}{c} \diagup \\ -\text{N} \\ \diagdown \end{array}$	-amin	amino
Eterler	-O-	eter	alkoksi
Sülfürler	-S-	sülfür	alkiltiyo



Fonksiyonlu gruplar ve öncelik sırası - 3

Madde sınıfı	Formül	Son ek	Ön ek
Alkenler	$\begin{array}{c} \diagup \\ \text{C}=\text{C} \\ \diagdown \end{array}$	-en	<i>alkenil</i>
Alkinler	$\text{—C}\equiv\text{C—}$	-in	<i>alkinil</i>
Halojenli türevler	$\begin{array}{c} \\ \text{—C—X} \\ \end{array}$	halojenür	<i>halo</i>
Nitrolu türevler	—NO_2	-	nitro
Alkanlar	$\begin{array}{c} \quad \\ \text{—C—C—} \\ \quad \end{array}$	-an	<i>alkil</i>



Azalan sıra

'S' içeren moleküllerin adlandırılması

tiyo (tio, thio) → 'O' atomunun 'S' ile yer değiştirdiğini ifade eder.

tiya (tia, thia) → Bir zincir ya da halkada 'C' atomunun 'S' ile yer değiştirdiğini ifade eder.

'S' içeren moleküllerin adlandırılması

tiyo eki son ekin önüne getirilir.

C=O Karbonil

C=S **Tiyo**karbonil

	<i>Son Ek</i>
-OH	-ol
-SH	-tiyol (tiyo + ol)
-C=O	-on
-C=S	-tiyon (tiyo + on)
$\begin{array}{c} \text{O} \\ \parallel \\ \text{—C—} \\ \text{H} \end{array}$	karboksaldehid
$\begin{array}{c} \text{S} \\ \parallel \\ \text{—C—} \\ \text{H} \end{array}$	karbot ialdehid

	<i>Son Ek</i>
$\begin{array}{c} \text{O} \\ \parallel \\ \text{—C—} \\ \text{OH} \end{array}$	-oik asit
$\begin{array}{c} \text{S} \\ \parallel \\ \text{—C—} \\ \text{OH} \end{array}$	-tiyoik asit
$\begin{array}{c} \text{S} \\ \parallel \\ \text{—C—} \\ \text{SH} \end{array}$	-ditiyoik asit

'S' içeren moleküllerin adlandırılması

$\text{CH}_3\text{-OH}$ metanol
metil alkol

$\text{CH}_3\text{-SH}$ metantiyol
metantiol
tiyometil alkol
metil merkaptan
merkaptometan

$\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{-SH}$ butan-1-tiyol
1-tiyohidroksi butan
1-merkaptobutan

'S' içeren moleküllerin adlandırılması

$\text{CH}_3\text{-O-CH}_3$ Dimetil eter

$\text{CH}_3\text{-S-CH}_3$ Dimetil sülfür

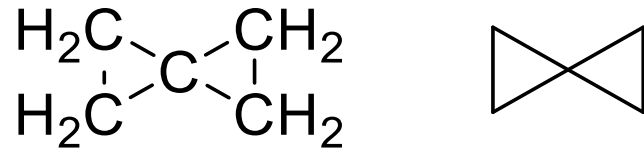
$\text{CH}_3\text{-S-S-CH}_3$ Dimetil disülfür

$(\text{CH}_3)_2\text{-S=O}$ DiMetilSülfOksit (DMSO)

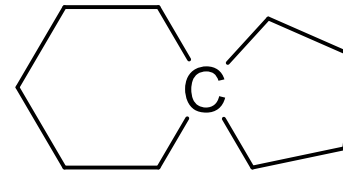
$(\text{CH}_3)_2\text{-SO}_2$ Dimetil sülfon (DMSO_2)

Spiro halkalarda adlandırma

1 C atomu ortak olan halkalar → Spiro halkalar

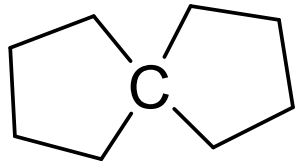


spiropentan



Sikloheksan **spiro** siklopentan

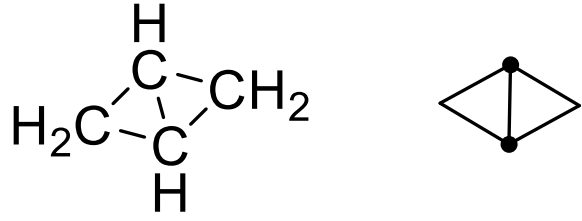
Spiro [4.5] dekan



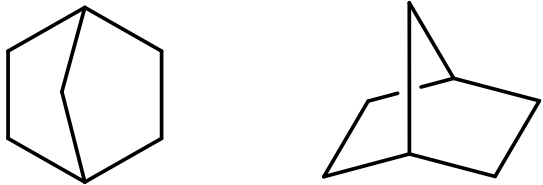
Spiro bi siklopentan

Spiro [4.4] nonan

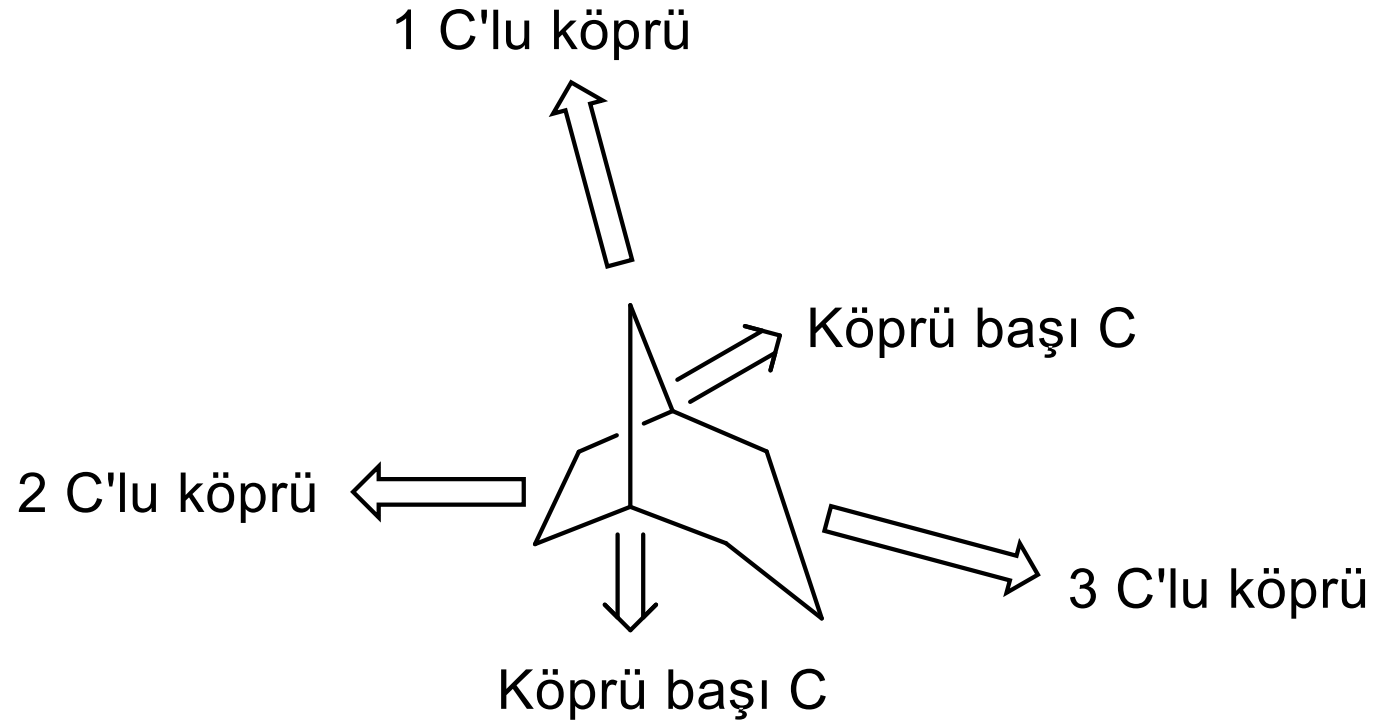
Köprülü halkalarda adlandırma



Bisiklo butan



Bisiklo [2.2.1] heptan
Norbornan



1 C'lu köprü

2 C'lu köprü

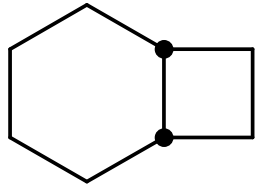
Köprü başı C

Köprü başı C

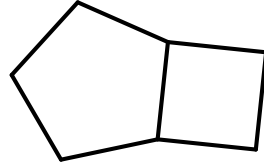
3 C'lu köprü

Bisiklo [3.2.1] oktan

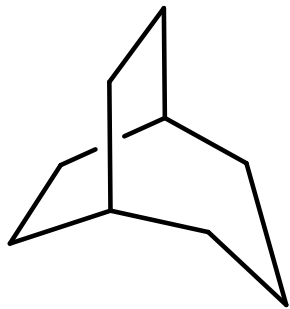
Köprülü halkalarda adlandırma



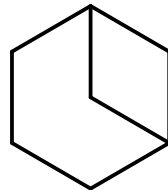
Bisiklo [4.2.0] oktan



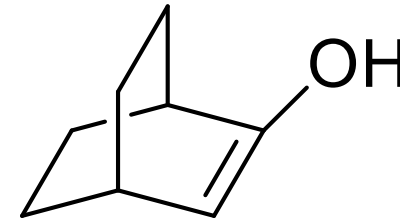
Bisiklo [3.2.0] heptan



Bisiklo [3.2.2] nonan

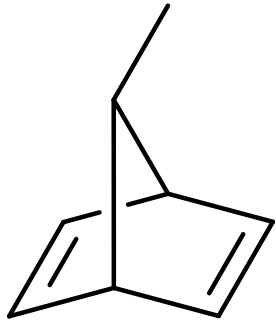


Bisiklo [3.1.1] heptan

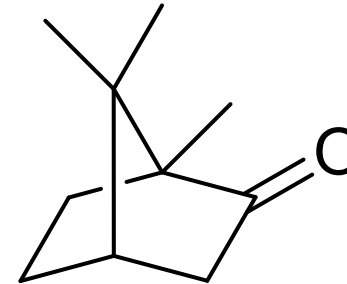


2-Hidroksi bisiklo [2.2.2] okt-2-en
2-okten

Köprülü halkalarda adlandırma



7-metil bisiklo [2.2.1] hepta-2,5-dien



1,7,7-trimetil bisiklo [2.2.1] heptan-2-on

Kafur