

Alkanlarning umumiy formulasi va gomologik qatori. Ratsional nomenklatura

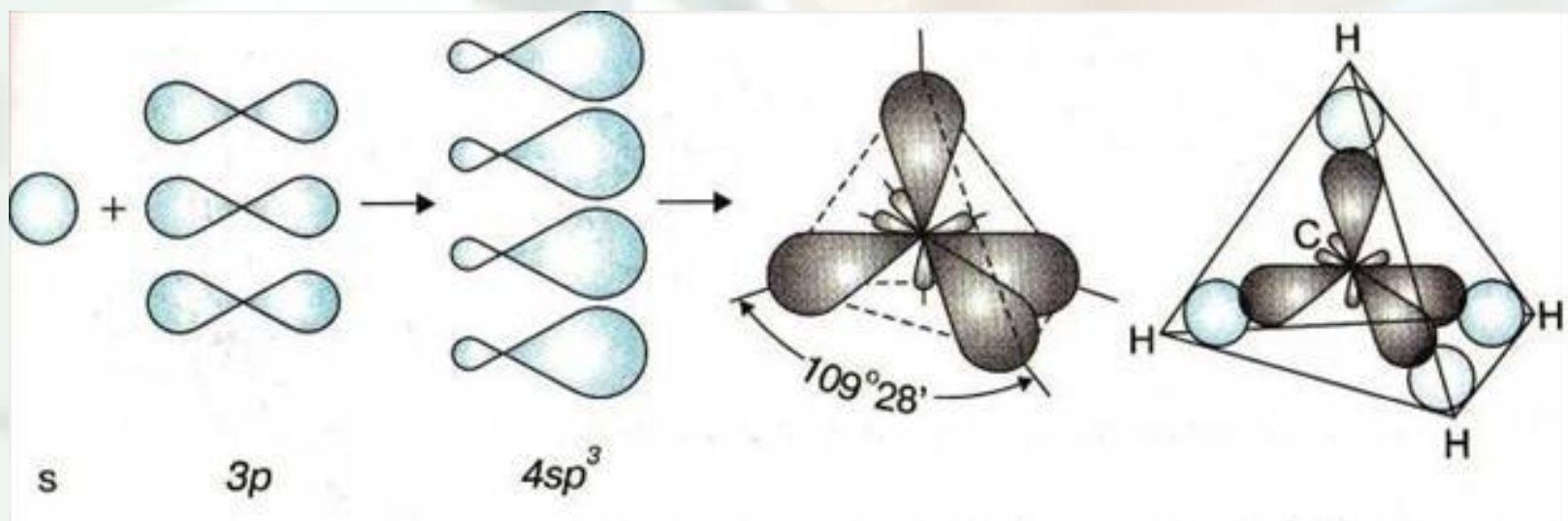


10-sinf Kimyo fani darsligi asosida 5-mavzu

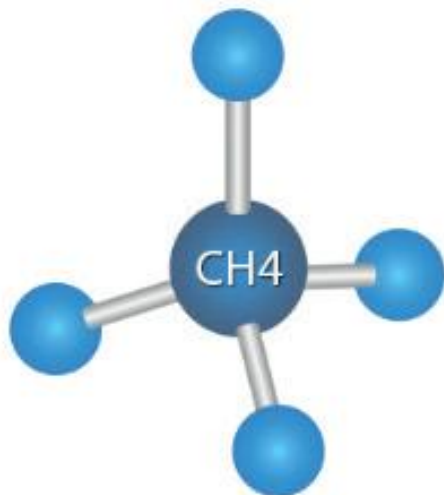
Reja:

- 1. Alkanlarning umumiy formulasi***
- 2. Tarixiy nomenklatura***
- 3. Ratsional nomenklatura***

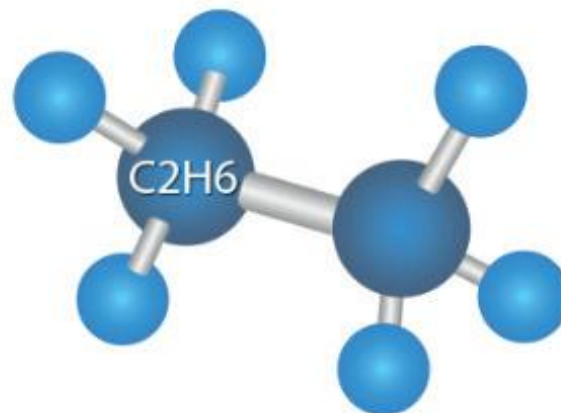
Alkanlar C_nH_{2n+2} umumiy formulaga ega bo'lib, ularni tarkibidagi barcha uglerod atomlari faqat σ (sigma) bog' orqaligina bog'langan bo'ladi.



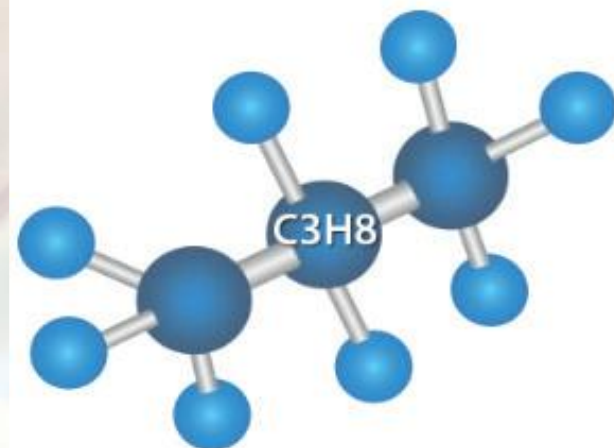
Metan



Etan



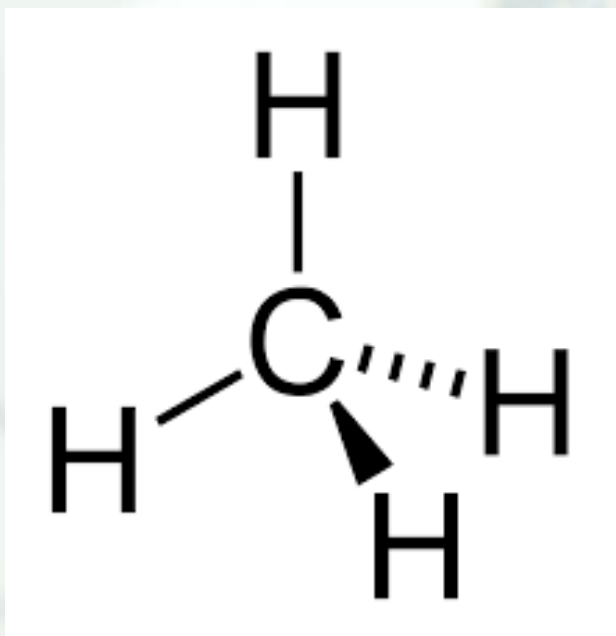
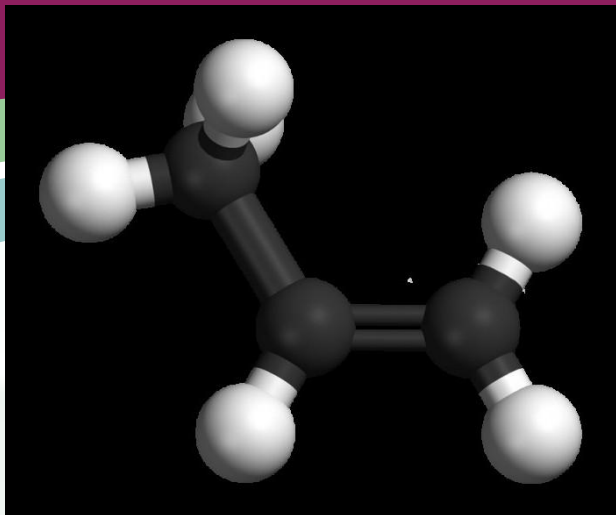
Propan



Bir sinfga kiruvchi xossalari o'xshash bo'lgan, tarkibi bir-biridan – CH₂– guruh bilan farq qiladigan birikmalar gomologlar deyiladi.

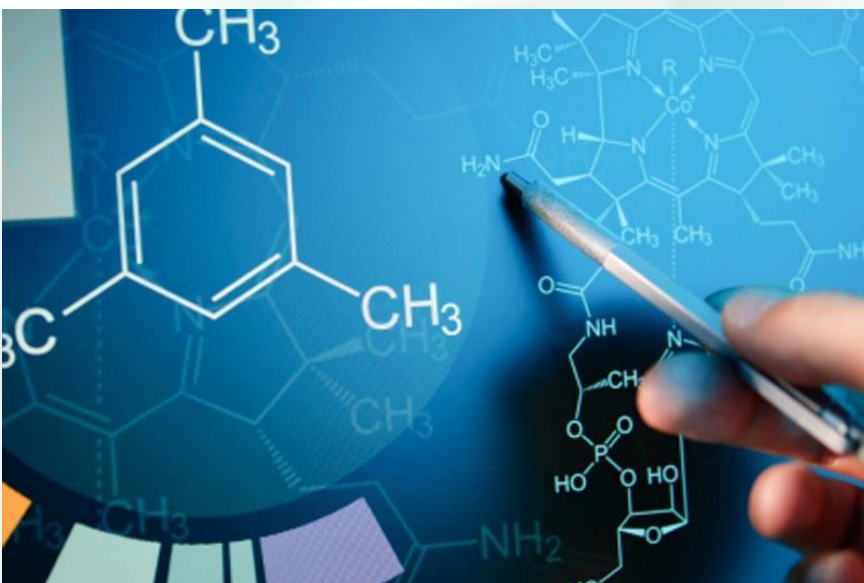
$$a_i = \frac{1}{i^m}$$

Gomologlar keltirilgan qatorni *gomologik qator* deyiladi.



*To'yingan
uglevodorodlar
molekulasidan bitta
vodorod atomi tortib
olinsa, tegishli
uglevodordlarning
radikallari hosil bo'ladi.*

TARIXIY NOMENKLATURA.

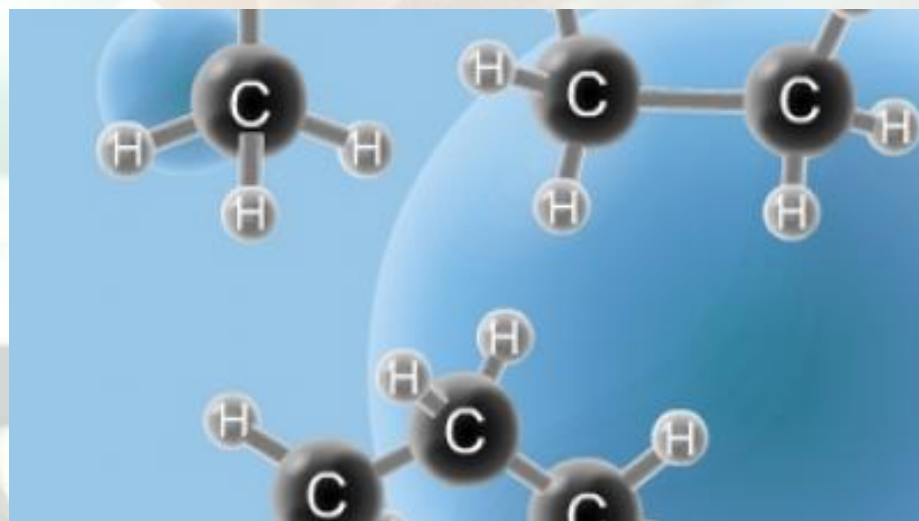
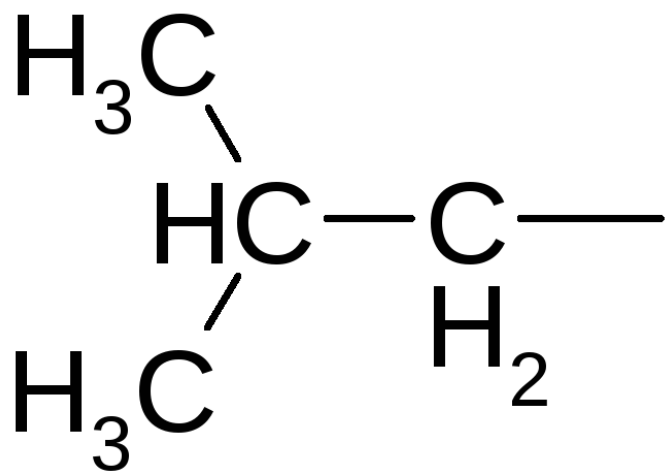


**Organik
birikmalarning ko‘plab
kashf etilishi
natijasida ko‘pchilik
organik moddalarga
trivial(empirik, tarixiy,
tasodifiy)nomlar
berilgan.**

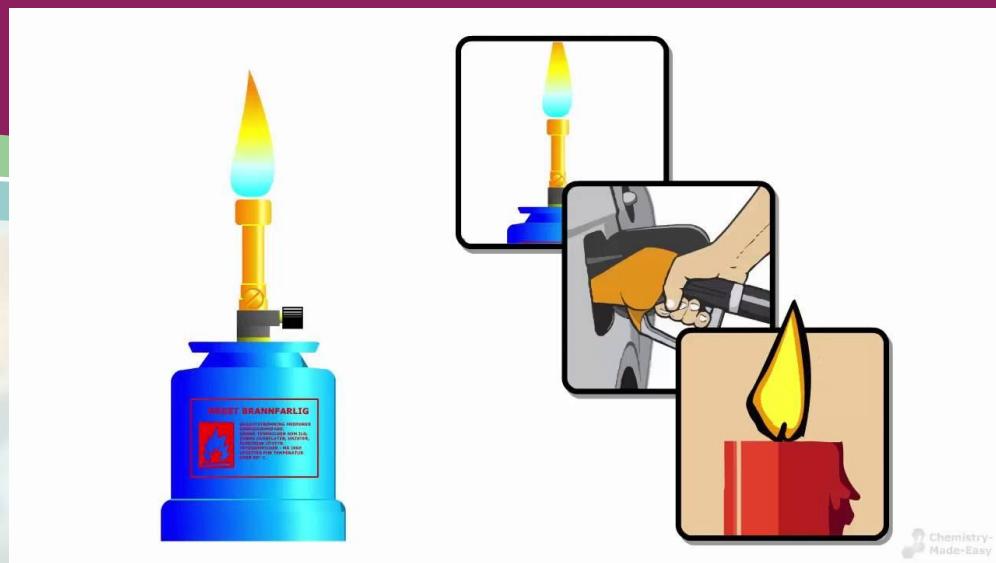
Masalan, to'yingan uglevodorodlarning birinchi to'rtta vakiliga metan, etan, propan va butan deb, tasodifiy nom berilgan.



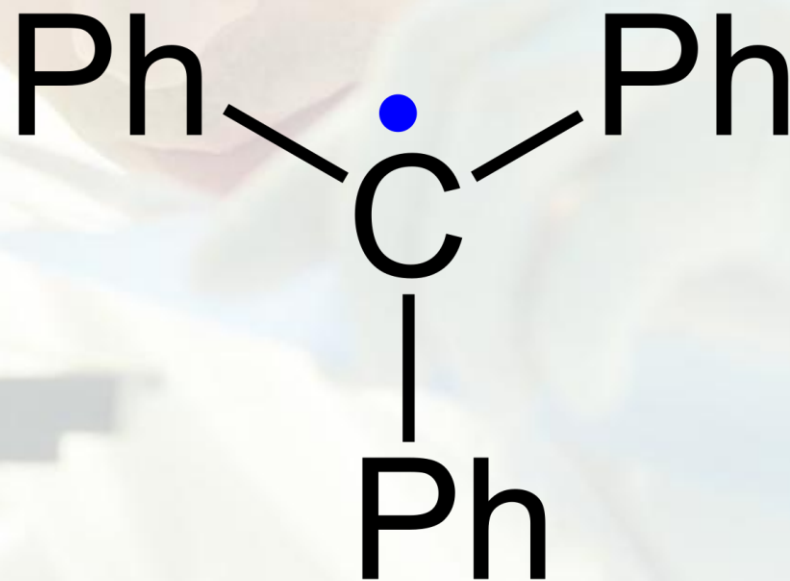
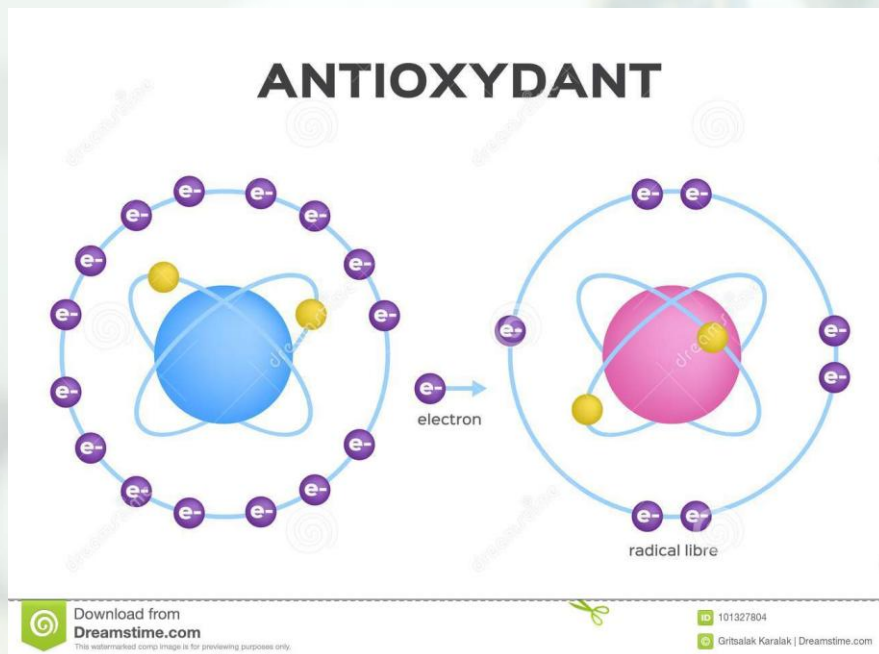
Pentandan boshlab alkanlarning nomiga molekula tarkibidagi uglerod atomi sonining grekcha nomiga (“penta”- 5, “geksa”- 6, “gepta”- 7, “okta”- 8, “nona”- 9, “deka”- 10) «an» qo‘shimchasini qo‘shib hosil qilinadi.



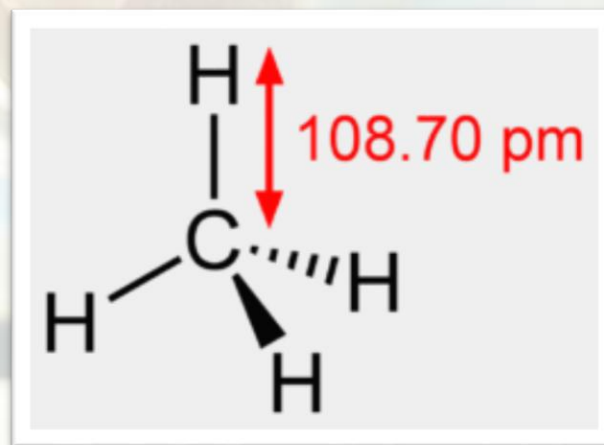
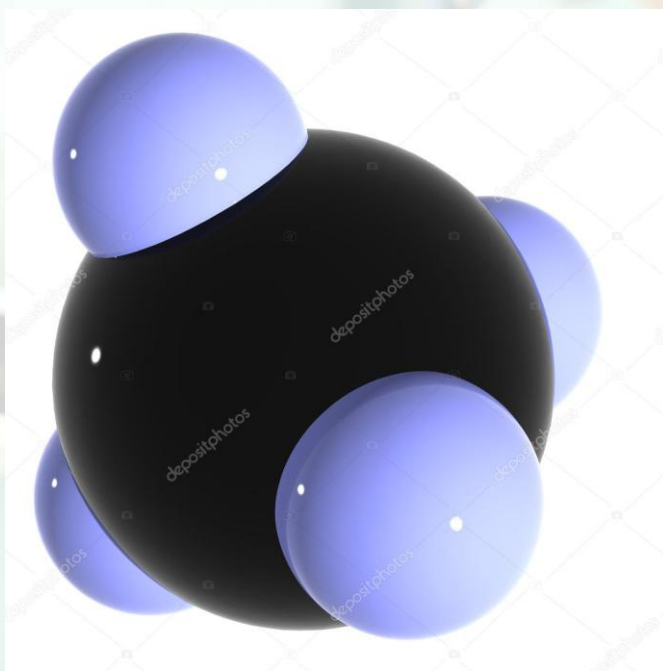
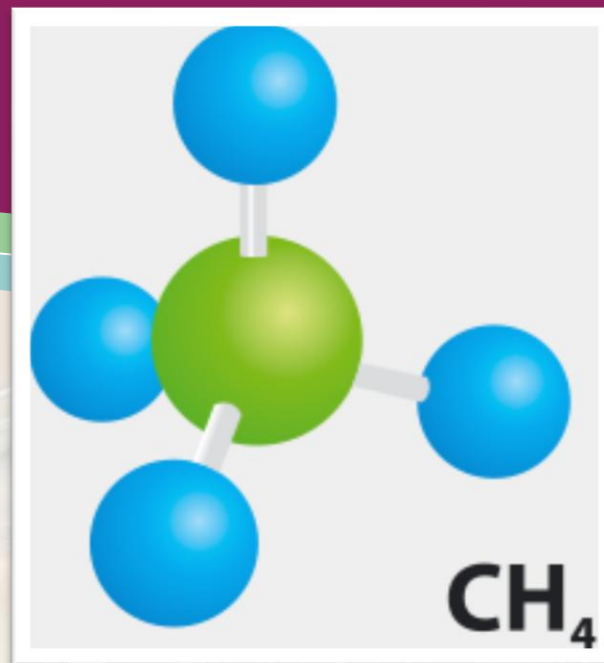
*To'yingan uglevodorodlar
molekulasidan bitta
vodorod atomi tortib
olinsa, tegishli
uglevodordlarning
radikallari hosil bo'ladi.*



Radikallarning umumiy formulasi C_nH_{2n+1} bo'lib, radikal nomi to'yingan uglevodorod nomidagi «an» qo'shimchasi o'rniga «il» qo'shimchasi qo'shish bilan hosil bo'ladi.

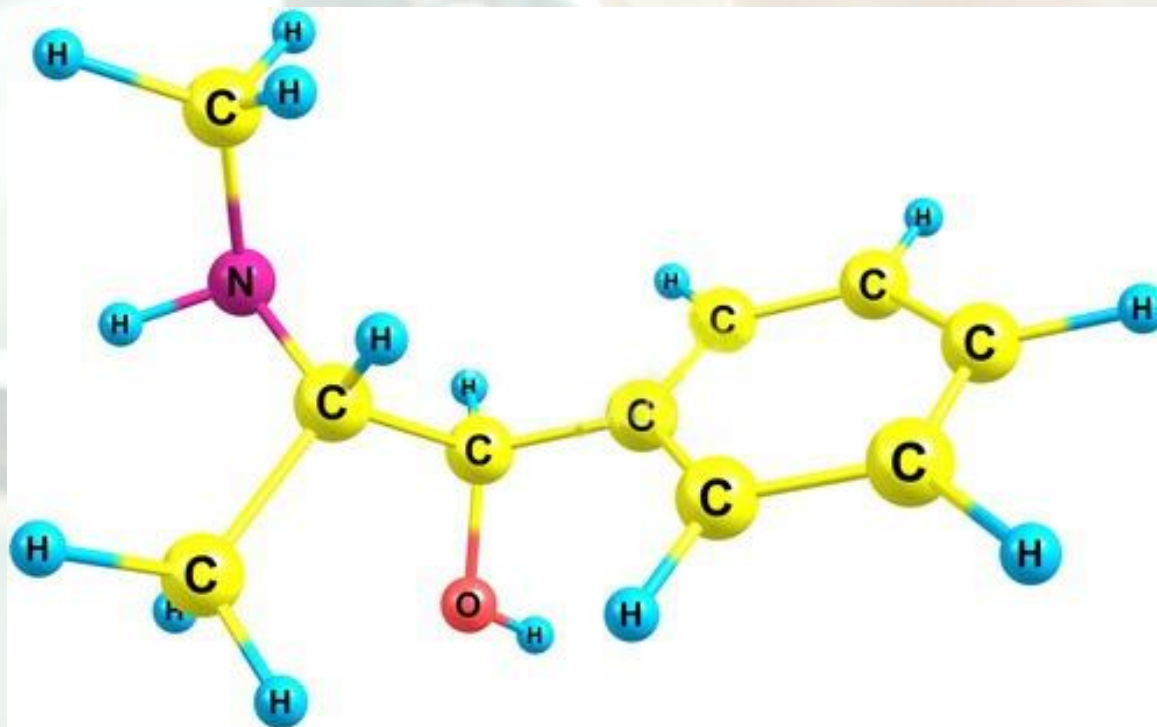


Masalan:
CH₄-metan
CH₃- metil
C₂H₆-etan
C₂H₅- etil

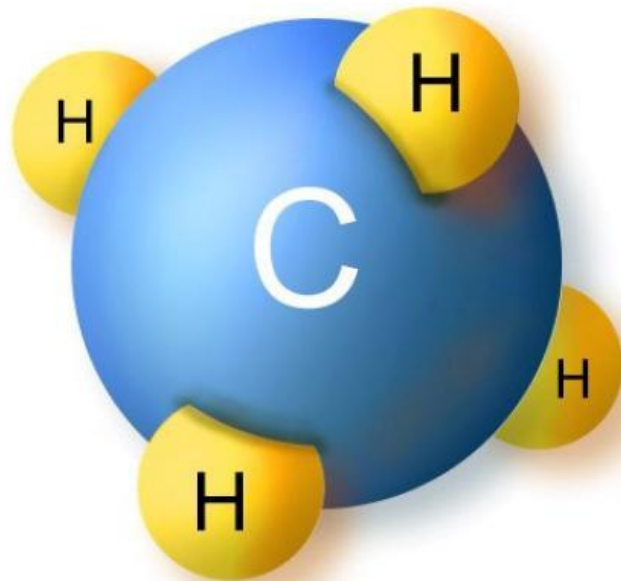


Ratsional nomenklatura

XIX asrdan boshlab organik moddalarni nomlashda ratsional (lotincha «ratio» fikrlash, idrok demakdir) nomenklatura qoʻllanildi.



***Metan tarkibidagi
vodorodlar o'rniga
radikallarning
almashinishidan
alkanlar hosil bo'ladi***



Ratsional nomenklatura bo'yicha alkanlarni nomlashda eng ko'p tarmoqlangan uglerodni metan markazi sifatida qaraladi va shu uglerodga bog'langan radikallarning nomi va oxirida metan so'zini aytish bilan modda nomi tugallanadi.

