

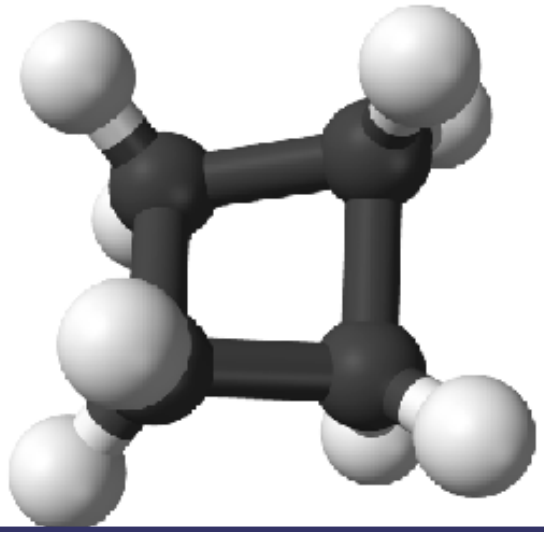
Sikloalkanlar. nomenklaturasi. Izomeriyasi. Olinishi

10-sinf Kimyo fani darsligi asosida 9-mavzu

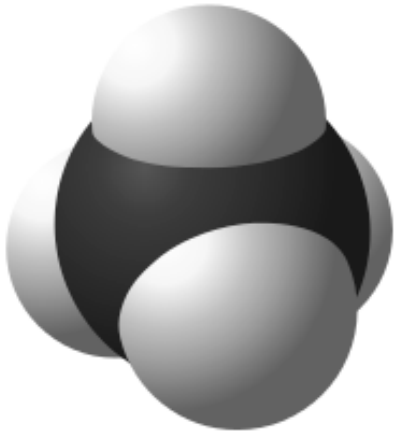
Reja:

1. *Sikloalkanlar.*
2. *Nomlanishi va izomeriyasi.*
3. *Sistematik nomenklatura*

Sikloalkanlar tegishli alkanlardan molekulasi tarkibida 2 ta vodorod atomi kamligi bilan farq qiladi.

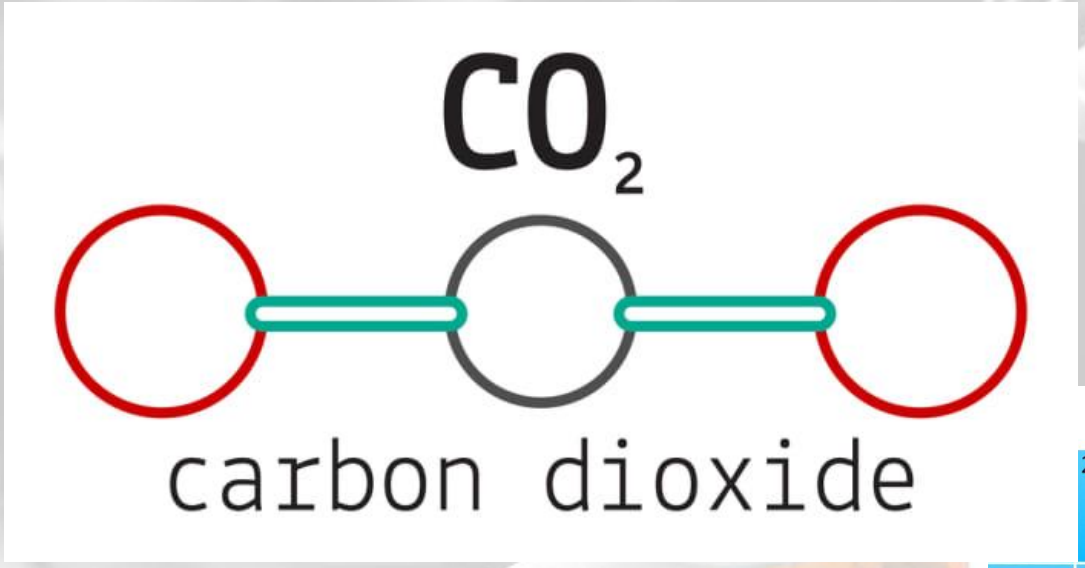


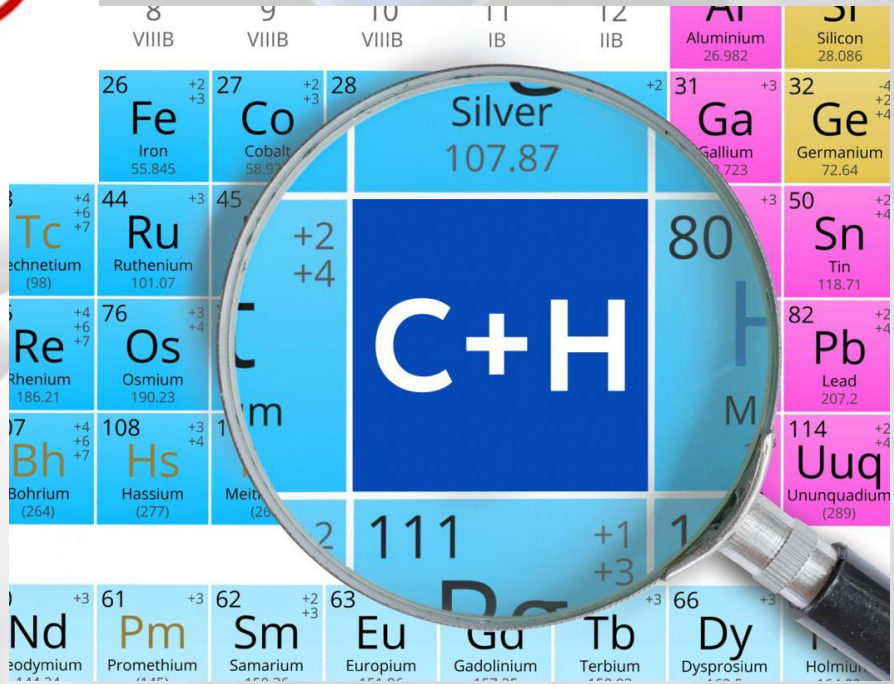
Sikloalkan



Alkan

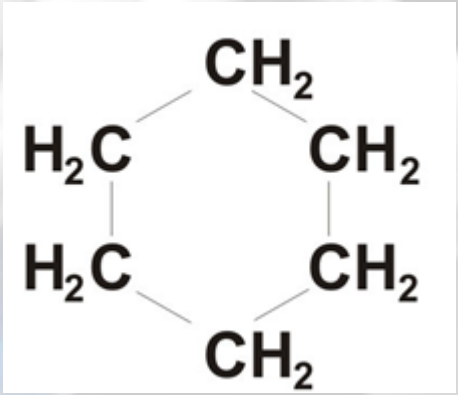
Mana shu atomlarning ajralib chiqishi hisobiga uglerod halqasi yopiladi.



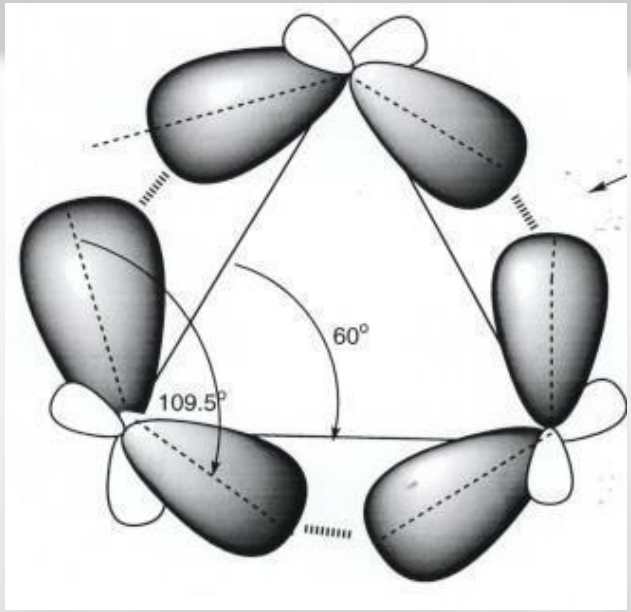


NOMLANISHI VA IZOMERIYASI.

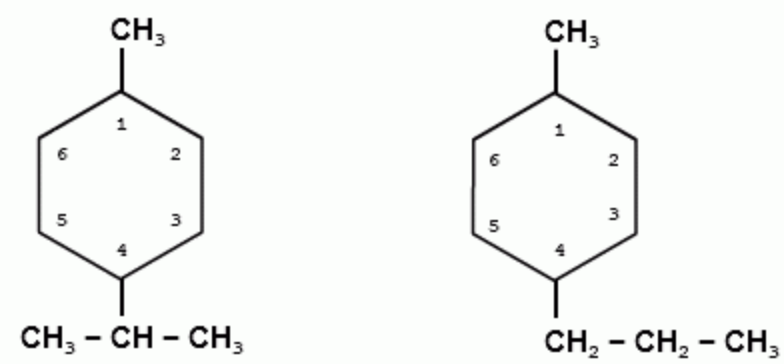
Sikloalkanlarning nomi sistematik nomenklatura bo‘yicha tegishli to‘yingan uglevodorodlarning nomi oldiga «siklo» so‘zini qo‘shib o‘qishdan hosil bo‘ladi.







Sistematik nomenklatura



Sikloalkanlarni nomlashda quyidagi qoidalarga amal qilinadi:

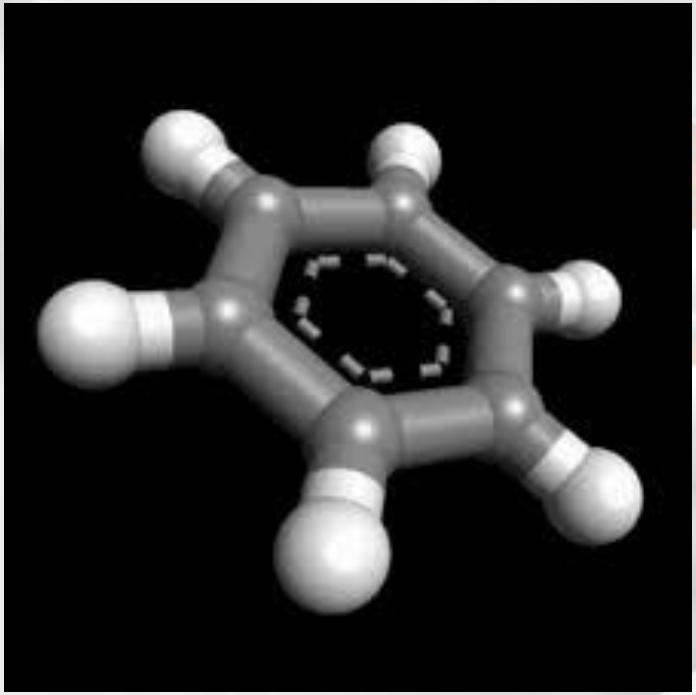
1. Asosiy zanjir sifatida halqa olinadi.

2. Halqadagi uglerod atomlari raqamlanadi.

3. Yonaki zanjirdagi radikallar joylashgan o`rni raqam bilan ko`rsatiladi.

4. Avval halqadagi nechinchi uglerod bilan bog‘langanligi ko‘rsatilgan holda radikallar nomi aytiladi va asosiy zanjir (uglevodorod halqasi) nomini aytish bilan modda nomlanadi.

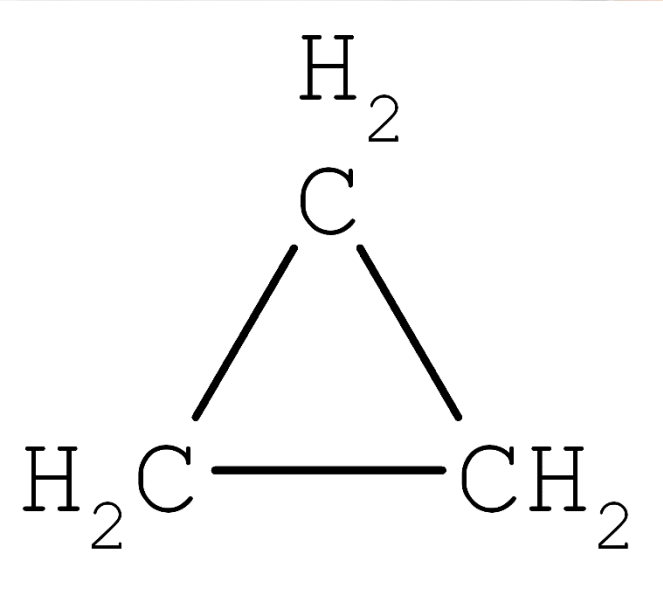
Izomeriyasi – halqadagi uglerod soni va radikallar joylashgan o‘rniga ko‘ra hosil bo‘ladi. Sikloalkanlarda izomeriya siklobutandan boshlanadi.

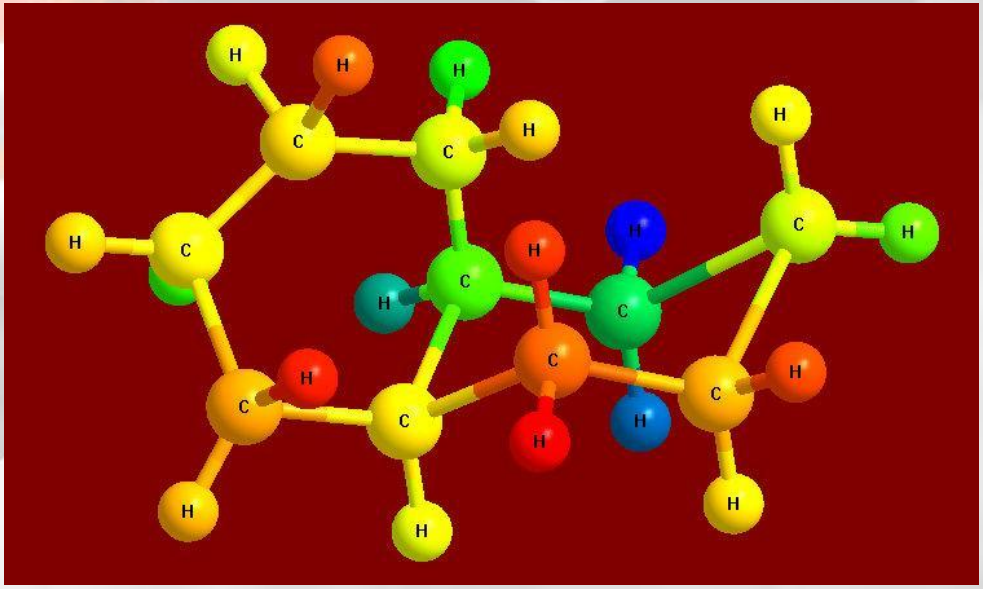




OLINISHI.

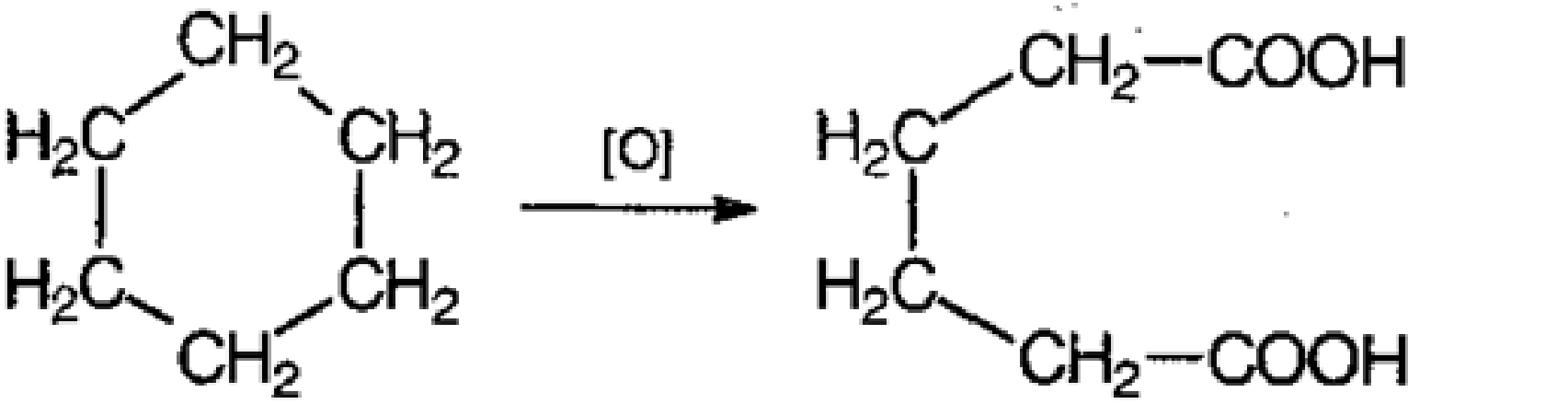
1 ***Sikloalkanlar laboratoriyada to‘yingan uglevodorodlarning digalogenli hosilalariga metallar ta’sir ettirib olinadi.***





FIZIK XOSSALARI.

Sikloalkanlar amalda suvda erimaydi. Ularning xossalari alkanlar xossasiga o‘xshash bo‘lib, dastlabki ikki vakili gaz, qolganlari suyuqlik va yuqori molekulyar birikmalari qattiq moddalardir.



Molekulyar massasining ortishi bilan qaynash harorati va zichligi oshib boradi.

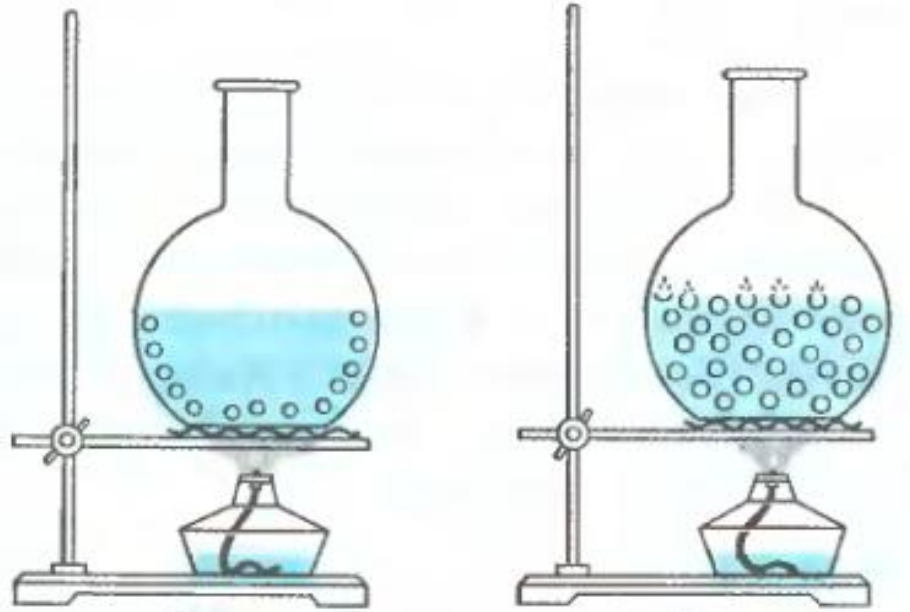
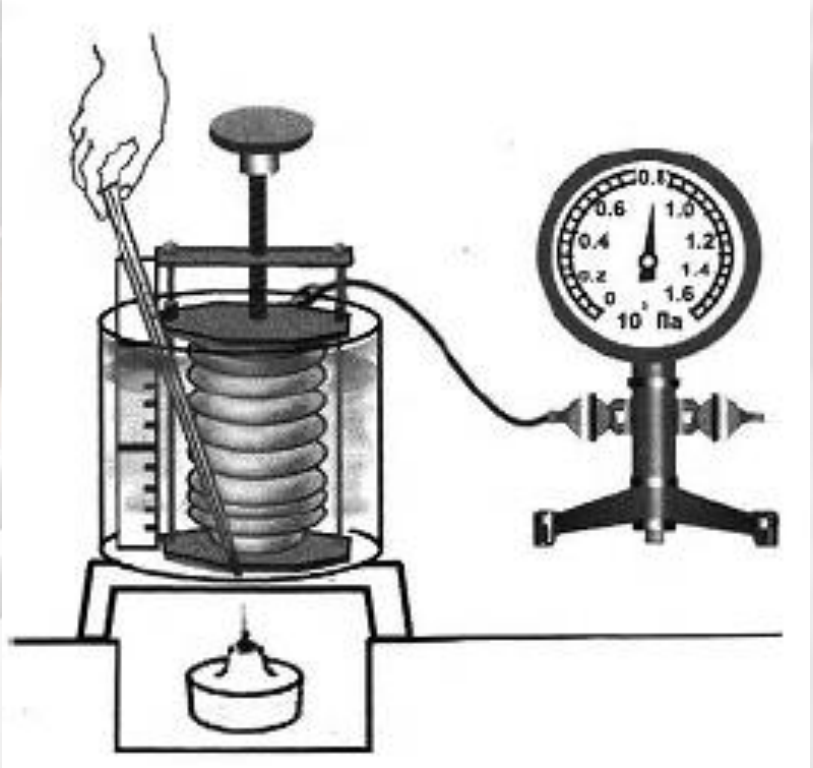
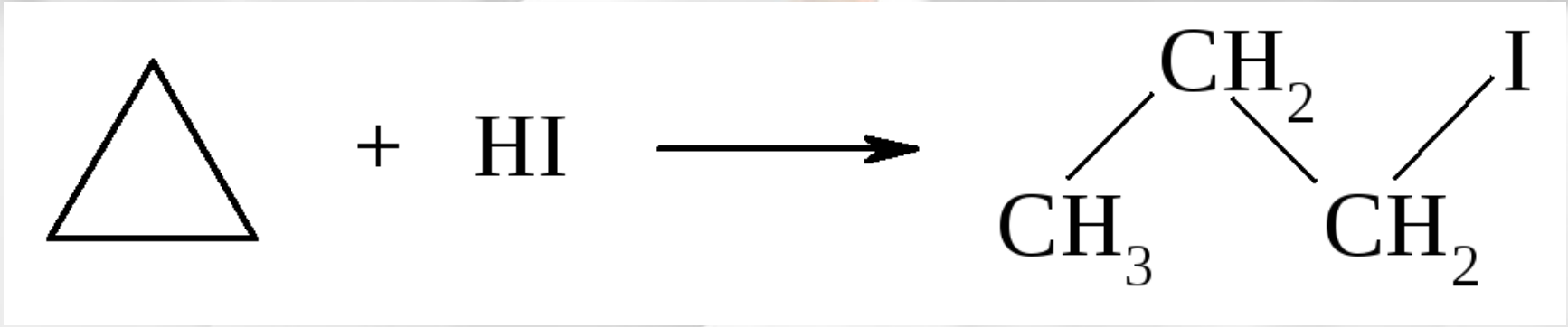


Рис. 82

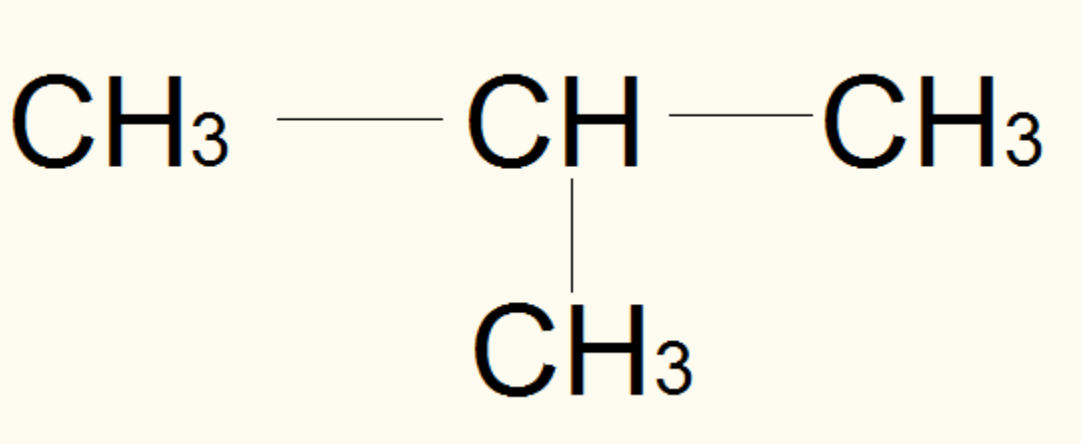


KIMYOVIY XOSSALARI

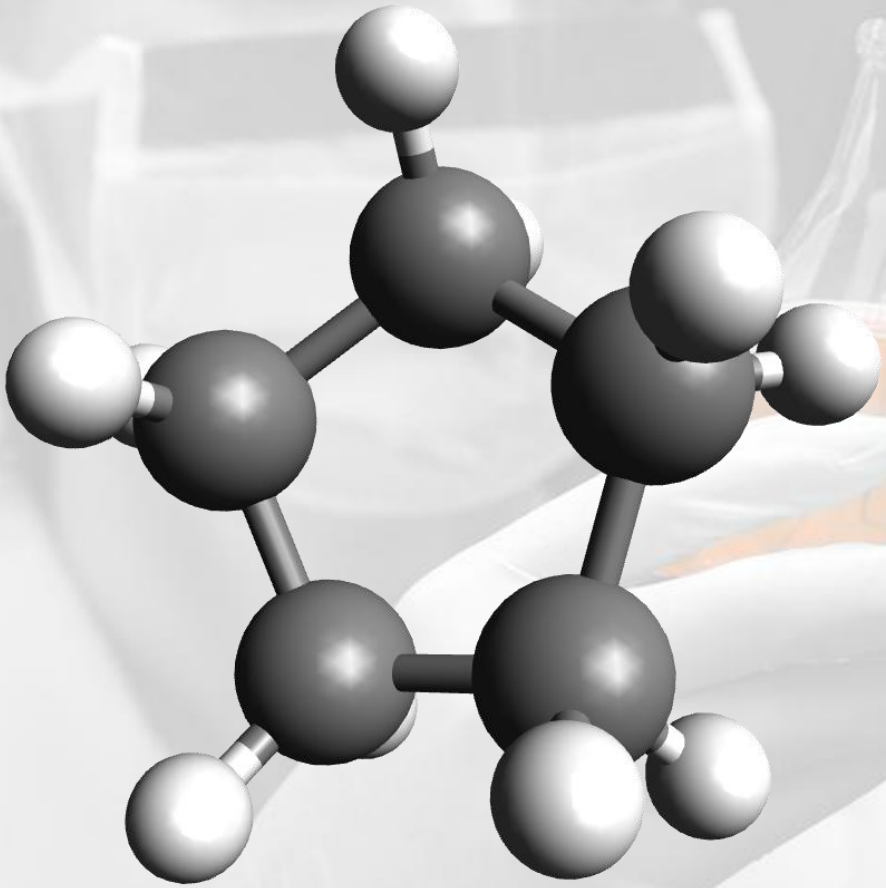
Sikloalkanlarda ham xuddi alkanlarga o‘xshab, hamma bog‘lari to‘yingan, lekin ular birikish reaksiyasiga kirishish xususiyati bilan alkanlardan farq qiladi.



Bog‘ning uzilishi natijasida uglerod atomlarida bo‘sh valentliklar paydo bo‘ladi



vodorodni va galogenlarni biriktirib oladi birikish reaksiyalariga kirishadi.



Kichik halqali (siklopropan va siklobutan) birikmalar, ularning katta halqali gomologlariga (siklopentan va siklogeksan) nisbatan birikish reaksiyasiga oson kirishadi.

Sababi kichik xalqalarni katta xalqalarga nisbatan beqarorligidadir. Masalan, gidrogenlash (vodorod biriktirish) reaksiyasi har xil sikloalkanlarda turlicha temperaturada boradi





ISHLATILISHI.

Siklogeksanning xlorli birikmasi geksaxlorsiklogeksan - $C_6H_6Cl_6$ qishloq xo‘jaligida insektitsid (zararkunandalarga qarshi) vosita sifatida ishlatiladi.



