

Chemistry SUB. CODE- BSCC2402

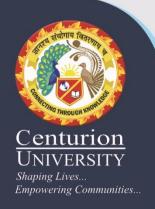
For B.Sc. 4th Semester

(*Polynuclear Hydrocarbons*)

Module-V

Anthracene: Reactions

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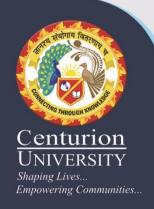


Chemical reactions

Attack at C-1 Anthracene H E

Attack at C-2

Leaves naphthalene intact Loss of RE=84-61=23 kcal

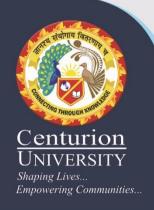


Chemical reactions

Attack at C-9

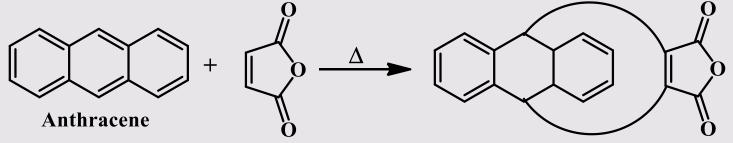
Leaves two benzene intact Loss of RE=84-72 =12 kcal **Addition product**

Reactions preferentially occur at C-9 & C-10



Chemical reactions

Diels Alder reaction

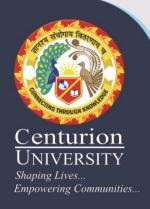


Maleic anhydride

Endo- anthracene- maleic anhydride adduct

Addition of one molecule of O₂

$$+ o_2 \longrightarrow 0$$
Anthracene epoxide



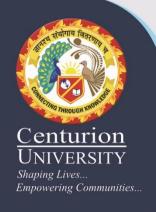
Halogenation of anthracene

$$\frac{X_2}{X = \text{Cl or Br}}$$
Anthracene

Oxidation of anthracene

Anthracene

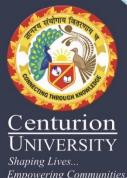
9, 10- Anthraquinone



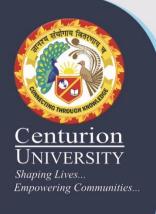
Reduction of anthracene

Anthracene

9, 10- Dihydroanthracene



Shaping Lives... Empowering Communities...



References

- K.D Sharma and Y. R. Sharma, Kalyani Publishers, Unit-II page-233;
- 2. University Chemistry, Vol-IV, Dr. U. N. Dash, Dr. KK. Ojha, Himalaya Publishing house, Unit III, page-304