

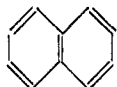
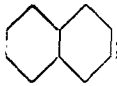




NOTE.

Modified Graphic Formulas for Organic Cyclic Compounds.—Readers on topics pertaining to organic chemistry and students of organic chemistry are very often in doubt as to the position and existence of the double bonds in the graphic representation of organic cyclic compounds. In too many cases the configuration is left to the imagination of the reader. Often the double bonds are indicated but in the majority of cases only the simplified cyclic structures are represented. Text-books of organic chemistry do not show the double bonds in the graphic structure of cyclic compounds. The same identical compound is represented by more than one graphic formula.

Let us consider a few examples. Benzene is represented as  and is simplified to ; naphthalene as  and simplified to ; *p*-benzoquinone as  and simplified to , etc.

The object in view is to improve the graphic representation of the simplified forms of cyclic compounds.

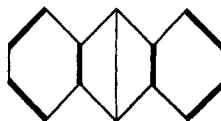
In order that single lines still may be used and at the same time convey the visual meaning and idea of both single and double bonds the following scheme is proposed: Double bonds should be indicated by heavy lines, while single bonds are indicated by light lines. According to this proposed scheme the graphic structure of a few cyclic compounds would be represented as follows:



Benzene.



Naphthalene.



Anthracene.



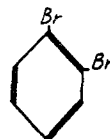
Hexahydro-benzene.



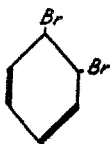
Tetrahydro-benzene.



Dihydro-benzene.



Dibromo-benzene.



Benzene-dibromide.

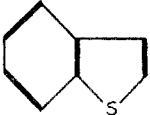
*p*-Benzoquinone.

Pyridine.

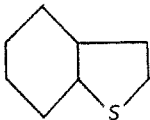


Thiophene.

It is evident that the structure of cyclic compounds written or printed

in the following type  would convey the idea of double

and single linkages far more clearly and more emphatically than the

simplified type  as used in journals and text-books.

This suggestion, of course, refers to the innumerable cases where both the double and single bonds of cyclic compounds are indicated by using single lines, and in no way refers to cases where the double bonds are clearly shown in the graphic formulas (Kekulé's formulas).

I would recommend the advisability of writing or printing the double bonds in cyclic compounds by heavy lines and the single bonds by light lines as indicated above in all publications pertaining to organic chemistry as well as in organic chemistry text-books, thereby aiding the visual perception of the reader and trusting less to his imagination.

ALEXANDER LOWY.