

Copy of a printed diagram referenced as "Heryberg figure 50" [possibly variation on Herzberg]

Contributors

Price, William Charles, 1909-1993

Publication/Creation

March 1952

Persistent URL

<https://wellcomecollection.org/works/sdz4pvdv>

License and attribution

You have permission to make copies of this work under a Creative Commons, Attribution, Non-commercial license.

Non-commercial use includes private study, academic research, teaching, and other activities that are not primarily intended for, or directed towards, commercial advantage or private monetary compensation. See the Legal Code for further information.

Image source should be attributed as specified in the full catalogue record. If no source is given the image should be attributed to Wellcome Collection.



Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
<https://wellcomecollection.org>

and " but by a subscript g or u depending on whether they are symmetric or anti-symmetric with respect to the center of symmetry. Table 23 gives the symmetry types and characters of D_{4h} and D_{6h} as obtained from those of D_4 and D_6 of Tables 18 and 19. Again the characters for i , σ_v , σ_d , S_4 , S_6 , S_3 are obtained in a way anal-

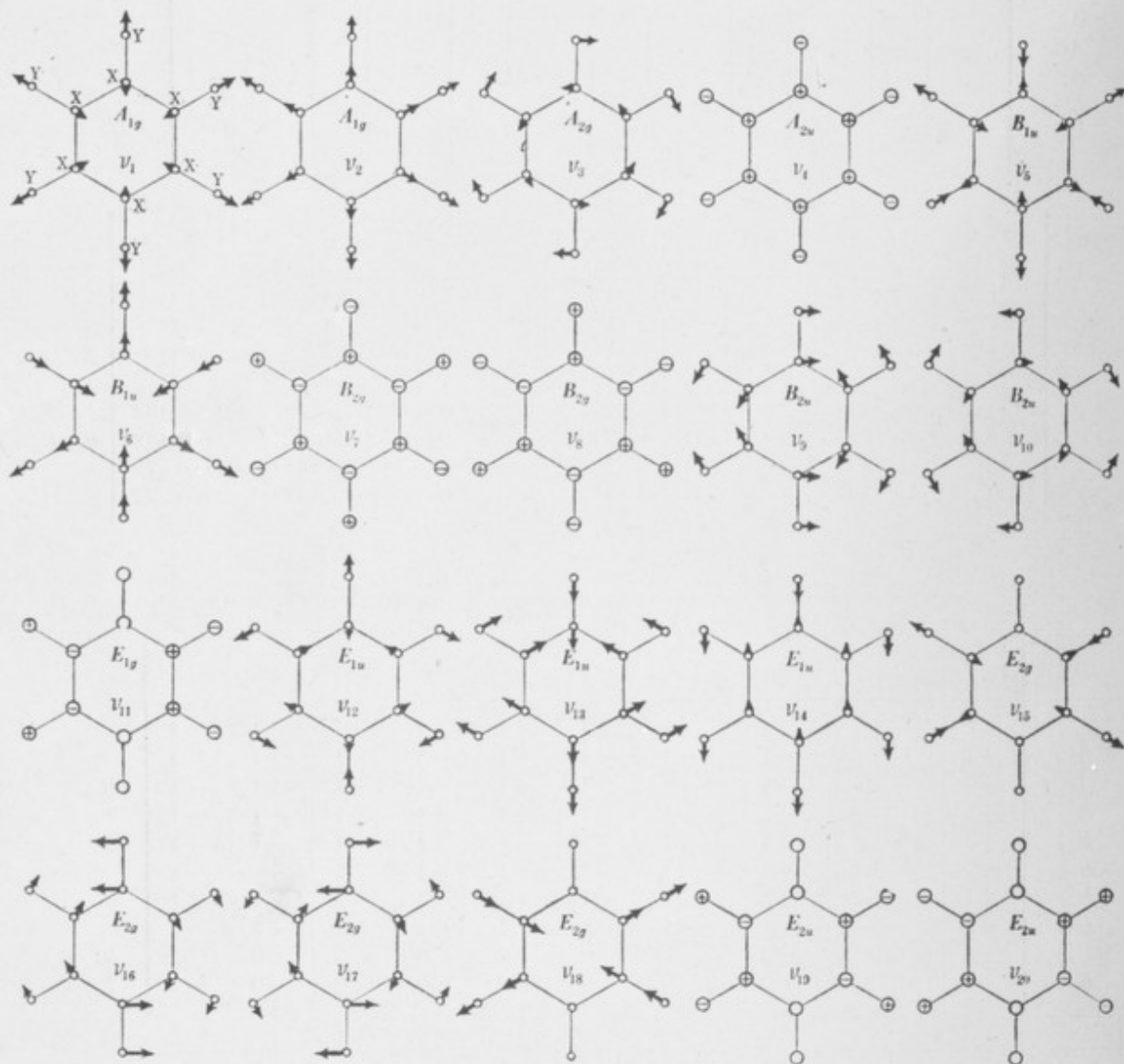


FIG. 50. Normal vibrations of an X_6Y_6 molecule (point group D_{6h}).—Only one component of each degenerate vibration is given. For the other components compare Fig. 40 and 38c.

ogous to the one indicated above for D_{3h} and D_{5h} . The normal vibrations of X_4 and X_6 given in Fig. 37 and Fig. 40 are examples for the symmetry types of D_{4h} and D_{6h} respectively. As a more complicated example, Fig. 50 gives the normal vibrations of a plane X_6Y_6 molecule (see C_6H_6 , Chapter III, p. 362).

Point group $D_{\infty h}$. Linear symmetric molecules belong to point group $D_{\infty h}$. The symmetry types of $D_{\infty h}$ are quite analogous to those of D_{ph} with odd p except that now an infinite number of degenerate species corresponding to $l = 1, 2, \dots$