Symmetry and Point Group

Talk to a Teacher
http://spoken-tutorial.org
National Mission on Education through ICT
http://sakshat.ac.in

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22 January 2015

Learning Objectives

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- **Draw line (axis) through atoms in a molecule**

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- **Spin and rotate the molecule along the axis**

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- Draw line (axis) through atoms in a molecule
- Spin and rotate the molecule along the axis
- Draw plane through atoms in a molecule

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- **Demonstrate point group classification**

Pre-requisites

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- **Mozilla Firefox Browser 35.0**

Symmetry Elements

- *Axis of Symmetry*
- *Plane of Symmetry*
- *Center of Symmetry*

Jmol Script Commands

www.chemapps.stolaf.edu/jmol/docs/

Assignment

- **Draw line representing C_3 axis of symmetry in a model of ethane**
- **Spin the model along C_3 axis**

Summary

- Draw lines (C_2 and C_3 rotational axes) through atoms in methane molecule
- Spin and rotate the molecule along the axis
- Draw reflection plane through atoms in methane molecule

Summary

- **Demonstrate point group classification using examples of methane and allene**

Assignment

- Draw reflection plane in a model of dichloromethane
- Find out the point group classification for ammonia and benzene

About the Spoken Tutorial Project

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Spoken Tutorial Workshops

The Spoken Tutorial Project Team

- **Conducts workshops using spoken tutorials**
- **Gives certificates to those who pass an online test**
- **For more details, please write to contact@spoken-tutorial.org**

Acknowledgements

- Spoken Tutorial Project is a part of the Talk to a Teacher project
- It is supported by the National Mission on Education through ICT, MHRD, Government of India
- More information on this Mission is available at http://spoken-tutorial.org/NMEICT-Intro