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NPTEL

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Courses » Symmetry and Structure in the Solid State

Announcements

Course

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Unit 5 - Basics of Symmetry 4: Space Group Description And Introduction to the International Tables of Crystallography(ITC- Vol. A).

Register for
Certification exam

Course outline

How to access
the portal

Basics of
Symmetry 1 :
Generation of
Point Groups

Basics of
Symmetry 2:
Detailed
Understanding
of 32 Point
Groups

Assignment of
Point Groups to
Crystal Systems
and Bravais
Lattice

Basics of
Symmetry 4:
Space Group
Description And
Introduction to
the International
Tables of
Crystallography(ITC-
Vol. A).

Week 4- Assignment 4

The due date for submitting this assignment has passed.

As per our records you have not submitted this **Due on 2019-02-27, 23:59 IST.**
assignment.

1) What is the equivalent point for the operation b glide normal to c axis?

2 points

- $x, y+1/2, -z$
- $x+1/2, y+1/2, z+1/2$
- $x+1/2, -y, -z$
- $x, -y, z$

No, the answer is incorrect.

Score: 0

Accepted Answers:

$x, y+1/2, -z$

2) Write down the equivalent point for the I centered?

2 points

- $-x, -y, -z$
- $x+1/2, y+1/2, z+1/2$
- $x, -y, -z$
- $x+1/2, -y, z+1/2$

No, the answer is incorrect.

Score: 0

Accepted Answers:

$x+1/2, y+1/2, z+1/2$

3) What is the equivalent point for the operation 2_1 screw along a axis?

2 points

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- Space Groups 1
- Space Groups 2
- Space Groups 3
- Quiz : Week 4-Assignment 4

Correlation Between Symmetry Diagrams and Equivalent Point Diagrams.

Special Positions and Introduction to Wyckoff Notations.

Interaction Session

Text Transcripts

Basics of X Ray Diffraction 1

Basics of X Ray Diffraction 2

Bragg's Law in Reciprocal Space

Structure Determination Methodologies 1

Structure Determination Methodologies 2

Powder Diffraction Method & Quantum Crystallography

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Accepted Answers:

$x+1/2, -y, -z$

4) What is the equivalent point for the operation n glide normal to a axis? **2 points**

- $x+1/2, -y, z+1/2$
- $x+1/2, -y, -z$
- $-x, y+1/2, z+1/2$
- $x, -y, z$

No, the answer is incorrect.

Score: 0

Accepted Answers:

$-x, y+1/2, z+1/2$

5) What is the equivalent point for the operation mirror normal to b axis? **2 points**

- $x, y, -z$
- $-x, y, z$
- $x, -y, z$
- $-x, -y, -z$

No, the answer is incorrect.

Score: 0

Accepted Answers:

$x, -y, z$

6) A compound crystallizes in a space group with equivalent points at $x, y, z; -x, -y, z; -x, y, z+1/2; x, -y, z+1/2$. Determine the Crystal system **2 points**

- Triclinic
- Monoclinic
- Orthorhombic
- Cubic

No, the answer is incorrect.

Score: 0

Accepted Answers:

Orthorhombic

7) A compound crystallizes in a space group with equivalent points at $x, y, z -x, -y, z -x, y, z+1/2 x, -y, z+1/2$. Determine the Space group? **2 points**

- Pmmm
- Pbca
- Pcc2
- P2/m

No, the answer is incorrect.

Score: 0

Accepted Answers:

Pcc2

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