

SOLID STATE CHEMISTRY	
Excercise 3: Open symmetry	
Faculty: CHEMICAL TECHNOLOGY Speciality: Chemical technology	Year: II Sem: IV
Teacher:	Date of excercise:
Students:	
Passed:	

Aim of the exercise:

theoretical – learning the elements of open symmetry, classes of symmetry, space groups and Bravais lattices;

practical – mastering the skills of recognizing spatial groups and assigning them to Bravais lattice groups.

Study issues:

closed and open symmetry elements (axis of symmetry, plane, center of symmetry, glide plane, screw axis), rules for combining symmetry elements, degrees of symmetry, symmetry classes, maximum and minimum symmetry elements, tetrahedron, elementary cell, crystal definition, crystallographic systems, Bravais lattices.

Literature:

1. „Introduction to physical polymer science”, L. H. Sperling, Wiley, John & Sons, New York 2005
2. „Solid State Chemistry” R. C. Ropp, Elsevier Science, 2003
3. Zarys krystalochemii T.1 Krystalochemia ogólna”, T. Penkala, PWN, Warszawa

Exercise performance:

1. Entrance test.
2. Work with the computer programs – elements of open symmetry.
3. Recognizing symmetry classes.
4. Assigning Bravais lattice groups to individual systems crystallographic.