chemsitry, i.e., molecular symmetry, coordination chemistry, organometallic chemistry, cluster chemistry, supramolecular chemistry, solid inorganic chemistry and bioinorganic chemistry and to train skills for analyzing, understanding and solving

General Syllabus:

1. Introduction (2 hour)

Introduction of the history, current status, frontier and characteristics of inorganic chemistry;

ganic chemistry journals, and the teaching arrangements and the specific

Recommend the related inorg

requirements.

nt groups (6 hour)

ds of independent symmetry operations and elements; The concepts of

nd their basic properties; Introduction of the simple application of group

.

ours)

tion bonds, stereoisomerism, reaction mechanism and kinetics

n compounds; Some new functional coordination compounds.

hours)

pes and bonding method of organometallic compounds; Effective atomic

ules) and applications; The structure, chemistry properties and

ganometallic compounds.

ures of atomic cluster compounds; Polyhedral skeletal electron-pair

ypes and characteristics of metal-metal bonds; Structure theory of the

es and applications of various kinds of atomic cluster compounds.

hours)

olecular chemistry, molecular recognition, molecular assembly and

es and properties of the three generations of organic host compounds;

ed on inorganic host compounds and typical molecular devices system.

istry (4 hours)

t, chemical equilibrium of defect, non-stoichiometric compound and

ns; Classification and features of point defect and basic types of the

stics and mechanism of solid phase reaction.

ours)

nade remarkable progress in recent years. On the basis of introducing

f biological macromolecules and studying the physical and chemical

molecules, this chapter focuses on the metal enzymes and protein

-copper, molybdenum and nickel and their simulation studies.

work 30%; Final exam 50%.

2. Molecular symmetry and poi

Description of the five kin

the point group and group, a

theory in inorganic chemistry

3. Coordination Chemistry (4 h

The basic theory of coordina

characteristics of coordinatio

4. Organometallic Chemistry (8

The basic concept, ligand typ

number rules(18 electronic r

applications of the typical or

5. Cluster chemistry (4 hours)

Definition and structure feat

theory of borane structure; T

metal atom clusters; Properti

6. Supramolecular chemistry (8

Basic concepts of supram

molecular devices; Structure

Supramolecular systems base

7. Inorganic Solid State Chem

Basic concepts of point defe

solid phase chemical reaction

crystalline defect; Characteri

8. Bioinorganic chemistry (8 ho

Bioinorganic chemistry has m

the structure and properties o

methods of biological macro

systems containing iron, zinc,

Grading: Project 20%; Home

- 视频　　Video