

Theoretical problems

- 1 - Superacids
- 2 - Stabilization of high-valent transition metal ions
- 3 - Colemanite mineral as boron source
- 4 - Magnesium compounds
- 5 - Nitrogen oxides and oxoanions
- 6 - Ferrochrome
- 7 - Xenon compounds
- 8 - Structure of phosphorus compounds
- 9 - Arsenic in water
- 10 - Amphoteric lead oxide
- 11 - Analyzing a mixture of calcium salts
- 12 - Breath analysis
- 13 - Decomposition kinetics of sulfuryl dichloride
- 14 - Clock reaction
- 15 - Mixing ideal gases
- 16 - Kinetics in gas phase
- 17 - Chemical Equilibrium
- 18 - Iodine equilibrium
- 19 - Molecular weight determination by osmometry
- 20 - Allowed energy levels and requirements for absorption of light
- 21 - Rotational and vibrational energy levels of a diatomic molecule
- 22 - Particle in a box: Cyanine dyes and polyenes
- 23 - Radioactive decay
- 24 - Enzyme-substrate interaction
- 25 - Amides
- 26 - NMR Spectroscopy
- 27 - Cyclitols
- 28 - Antiviral antibiotic
- 29 - Acyclic β -amino acids
- 30 - Life of Ladybug

Practical Problems

- 31 - Preparation of trans-dichlorobis(ethylenediamine)-cobalt(III)chloride and kinetics of its acid hydrolysis
- 32 - Analysis of calcium salts
- 33 - Potassium bisoxalatocuprate(II) dihydrate: Preparation and analysis
- 34 - Synthesis and analysis of aspirin
- 35 - Determination of iron and copper by iodometric titration
- 36 - Phenol propargylation: Synthesis of 1-nitro-4-(prop-2-ynyloxy)benzene and (prop-2-ynyloxy)benzene
- 37 - Huisgen dipolar cycloaddition: Copper(I)-catalyzed triazole formation