Industrial Inorganic Chemistry 2

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Objectives:

Improve their knowledge of the basic information of Silicate products, Glass, alkali silicates, zeolites, properties, applications, construction materials: lime, cement, raw materials, composition, manufacture, alumina cement, asbestos cement, gypsum, plaster, expanded products, foam glass, applications, ceramics, classification, manufacture of ceramics, clay ceramic products, forming, casting processes, pressing, drying, firing, physical-chemical processes, specialty ceramic products. Improve their knowledge of oxide ceramics, aluminum oxide, zirconium oxide, beryllium oxide, uranium oxide, thorium oxide, electro- and magneto-ceramics, refractory ceramics, silicon carbide, nitride ceramic, metallic hard materials, carbides of the subgroups of the IVth, Vth and VIth group, inorganic pigments, white pigments, titanium dioxide pigments, zinc sulfide pigments, colored pigments, magnetic pigments, glazes. Improve their knowledge of the properties and applications, fine earthenware, stoneware, porcelain, rapidly fired porcelain.

Syllabus:

Silicate Products: Glass, alkali silicates, zeolites, structure, composition, manufacture, raw materials, melting process, forming, properties, applications and economic importance.
Ceramics: General information, classification of ceramic products, manufacture of ceramics, clay ceramic products, composition and raw materials, oxide ceramics, aluminum oxide, zirconium oxide, beryllium oxide, uranium oxide and thorium oxide, other oxide ceramics, electro- and magneto-ceramics.
Metallic Hard Materials: General manufacturing processes, carbides of the subgroup of the IVth group, carbides of the subgroup of the Vth Group, carbides of the subgroup of the VIth group.
Inorganic Pigments: white pigments, titanium dioxide pigments, zinc sulfide pigments, colored pigments.
Glazes: Properties and applications of clay ceramic products, fine earthenware, stoneware, porcelain, rapidly fired porcelain

Text Book:


References: