

Announcement

Polymer Conference Series

Four programs on various aspects of polymer chemistry will be held at the University of Utah, June 10-July 12, 1974. These programs are as follows:

1. Polymer characterization

The purpose of this program is to present to scientific personnel a comprehensive review of the latest theory, instrumentation, and techniques used to characterize and evaluate the chemical properties of polymers.

Special emphasis will be given to the following subjects:

Molecular weight and molecular weight distribution

Viscosity-molecular weight relationships

Elution and gel permeation chromatography

Light-scattering

X-Ray analysis

Electron microscopy

Infrared analysis

Nuclear magnetic resonance

Mass spectroscopy

Thermal analysis

Pyrolysis techniques

Surface characterization

2. Mechanical properties of polymers

The purpose of this program is to provide scientific personnel with knowledge of the fundamentals governing the properties of polymeric materials. The relationship between molecular structure and morphology to physical properties will be reviewed in depth.

Special emphasis will be given to the following subjects:

Morphology in bulk polymers at the molecular level

Relaxations in hydrocarbon crystals and polymers

Theoretical models for relaxations in polymers

Strain hardening and prediction of tensile strength

Impact characteristics

Plastic deformation of fiber structure

Reinforcement characteristics of fillers
Multi-finite deformations
Sliding friction
Fracture phenomena
Composite structure

3. Adhesion

The purpose of this program is to provide a comprehensive treatment of parameters pertaining to adhesion. Consideration will be given to the function of polymer structure on adhesion properties. The role of molecular forces, electrostatics, surface phenomena, interfacial processes, and failure mechanism will be covered in detail.

Special emphasis will be given to the following subjects:

Relationship of viscoelasticity to peel strength
Surface preparations and their effects on bonding
Mechanical behavior of bonded joints
Filler matrix interactions
Adhesion of composites and composite structures
Sealants
Evaluation of adhesives

4. Flammability of materials

This program has been designed to provide a basic insight and in-depth understanding of flammability as it pertains to the built environment. A critical review of government, industry, and university programs will be presented.

Special emphasis will be directed toward the following areas of interest:

Modeling of fire
Scaling analysis of flammability tests
Smoke movement and spread
Measurement and quantification of smoke
Effects of fire retardants on the nature of smoke
Analysis of smoke
Physiological response to smoke and combustion products
Toxicological aspects of combustion

Personnel of the University of Utah's Flammability Research Center will provide demonstrations pertaining to their extensive research programs.

For further information contact:

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