Free ebook Dynamic polymer solutions [PDF]

Static and Dynamic Properties of Polymer Solutions A Study of the Dynamic and Transient Properties of Polymer Solutions Polymer Solutions Polymer Solutions Static and Dynamic Light Scattering of Polymer Solutions Exhibiting Polymer-solvent and Polymer-polymer Interactions The Theory of Polymer Dynamics Helical Wormlike Chains in Polymer Solutions Dynamic Response of Dilute Polymer Solutions in a Shear Flow Phenomenology of Polymer Solution Dynamics Static and Dynamic Properties of Dilute Semiflexible Polymer Solutions at Equilibrium Structure-Property Relationships in Polymer Systems: From Functional Microgels to Dynamic Polymer Solutions and Melts Structure-Property Relationships in Polymer Systems: From Functional Microgels to Dynamic Polymer Solutions and Melts Microrheology and Dynamic Light Scattering Studies of Polymer Solutions Dynamic Strain Birefringence of Concentrated Polymer Solutions Dynamic Light Scattering of Associative Polymer Solutions Brownian Dynamic Simulations of Nanoparticle Dispersions in Polymer Solutions Dynamic Light Scattering in Semi-dilute Polymer Solutions Ternary Polymer Solutions Studied by Dynamic Light Scattering and Ultracentrifugation Polymer Solutions, Blends, and Interfaces Microdomains in Polymer Solutions Polymer/solvent Interactions as Revealed by Dynamic Viscoelastic and Oscillatory Flow Birefringence Properties for Polystyrene Solutions A Dynamic Light Scattering Study of Isorefractive Ternary Polymer Solutions Computerized Measurement of the Dynamic Viscoelastic Properties of Dilute Polymer Solutions Over an Extended Range of Solvent Viscosity Structure and Dynamics of Polymer Solutions Exact Relaxation Times and Dynamic Functions for Dilute Polymer Solutions from the Bead/spring Model of Rouse and Zimm Thermodynamics of Polymer Blends, Volume I The Mesoscopic Theory of Polymer Dynamics The Prediction and Correlation of Moduli of Polymer Solutions Subjected to Large Amplitude Shear Oscillations Dynamic Properties of Some Polymeric Systems Intrinsic Dynamic Viscoelastic Studies of the Relationship of Excluded Volume and Hydrodynamic Interaction in Polymer Solutions Structure Formation in Polymer Solutions Dynamic Simulations of Flexible Polymer Molecules Light Scattering from Polymer Solutions and Nanoparticle Dispersions A Dynamic Light Scattering Investigation Into the Dynamics of Non Ideal Ternary Polymer Solutions Polymer Physics Physicochemical Behavior and Supramolecular Organization of Polymers Fluid Mechanics of Surfactant and Polymer Solutions Dynamic Viscoelasticity of Branched Polymers in Dilute Solution Dynamic Behavior and Fractional Analysis of Dilute Rigid Polymers Using Packed Hydrodynamic Chromatography The Effect of Polymer/solvent Interactions on the Dynamic Viscoelasticity and the Oscillatory Flow Birefringence Properties for Polyisoprene Solutions

Static and Dynamic Properties of Polymer Solutions

1981

REMARKABLE PROGRESS HAS BEEN MADE IN THE LAST TWO DECADES IN THE STUDY OF CONCENTRATED POLYMER SOLUTIONS LEADING TO MANY NEW CONCEPTS THEORIES AND TECHNIQUES IN THE FIELD OF POLYMER SCIENCE ANY DESCRIPTION OF THE THEORY OF POLYMER SOLUTIONS IS NOW INSUFFICIENT UNLESS BOTH CONCENTRATED AND DILUTE SOLUTIONS ARE GIVEN EQUAL ATTENTION THIS BOOK REVIEWS RECENT DEVELOPMENTS IN THE STUDY OF DILUTE AND CONCENTRATED POLYMER SOLUTIONS EMPHASIZING MAINLY THE TYPICAL EQUILIBRIUM AND STEADY STATE DYNAMIC PROPERTIES OF LINEAR HOMOPOLYMERS THE AUTHOR STRIVES TO CLARIFY THE GAP WHICH STILL REMAINS OPEN BETWEEN CURRENT THEORIES AND WELL DOCUMENTED EXPERIMENTAL RESULTS THEREBY STIMULATING FURTHER EFFORTS TOWARD A MORE ACCURATE UNDERSTANDING OF POLYMER SOLUTIONS THE BOOK CONTAINS A COLLECTION OF TYPICAL EXPERIMENTAL DATA AND THEIR COMPARISON WITH CURRENT THEORIES MOLECULAR OR PHENOMENOLOGICAL A SUMMARY OF RECENT ADVANCES IN THE PHYSICS OF CONCENTRATED POLYMER SOLUTIONS AND MELTS AND AN ELEMENTARY ACCOUNT OF THE RENORMALIZATION GROUP THEORY AS APPLIED TO DILUTE SOLUTIONS POLYMER SOLUTIONS SHOULD PROVE INVALUABLE AS A REFERENCE WORK FOR GRADUATE STUDENTS AND SPECIALISTS IN THIS FIELD

A Study of the Dynamic and Transient Properties of Polymer Solutions

1981

A BROAD EXAMINATION OF THE PHYSICAL PROPERTIES OF SOLUTIONS POLYMER SOLUTIONS AN INTRODUCTION TO PHYSICAL PROPERTIES OFFERS A FRESH INCLUSIVE APPROACH TO TEACHING THE FUNDAMENTALS OF PHYSICAL POLYMER SCIENCE STUDENTS INSTRUCTORS AND PROFESSIONALS IN POLYMER CHEMISTRY ANALYTICAL CHEMISTRY ORGANIC CHEMISTRY ENGINEERING MATERIALS AND TEXTILES WILL FIND IWAO TERAOKA S TEXT AT ONCE ACCESSIBLE AND HIGHLY DETAILED IN ITS TREATMENT OF THE PROPERTIES OF POLYMERS IN THE SOLUTION PHASE TERAOKA S PURPOSE IN WRITING POLYMER SOLUTIONS IS TWOFOLD TO FAMILIARIZE THE ADVANCED UNDERGRADUATE AND BEGINNING GRADUATE STUDENT WITH BASIC CONCEPTS THEORIES MODELS AND EXPERIMENTAL TECHNIQUES FOR POLYMER SOLUTIONS AND TO PROVIDE A REFERENCE FOR RESEARCHERS WORKING IN THE AREA OF POLYMER SOLUTIONS AS WELL AS THOSE IN CHARGE OF CHROMATOGRAPHIC CHARACTERIZATION OF POLYMERS THE AUTHOR S INCORPORATION OF RECENT ADVANCES IN THE INSTRUMENTATION OF SIZE EXCLUSION CHROMATOGRAPHY THE METHOD BY WHICH POLYMERS ARE ANALYZED RENDERS THE TEXT PARTICULARLY TOPICAL SUBJECTS DISCUSSED INCLUDE REAL IDEAL GAUSSIAN SEMIRIGID AND BRANCHED POLYMER CHAINS POLYMER SOLUTIONS AND THERMODYNAMICS STATIC LIGHT SCATTERING OF A POLYMER SOLUTION DYNAMIC LIGHT SCATTERING AND DIFFUSION OF POLYMERS DYNAMICS OF DILUTE AND SEMIDILUTE POLYMER SOLUTIONS STUDY QUESTIONS AT THE END OF EACH CHAPTER NOT ONLY PROVIDE STUDENTS WITH THE OPPORTUNITY TO TEST THEIR UNDERSTANDING BUT ALSO INTRODUCE TOPICS RELEVANT TO POLYMER SOLUTIONS NOT INCLUDED IN THE MAIN TEXT WITH OVER 250 GEOMETRICAL MODEL DIAGRAMS POLYMER SOLUTIONS IS A NECESSARY REFERENCE FOR STUDENTS AND FOR SCIENTISTS PURSUING A BROADER UNDERSTANDING OF POLYMERS

Polymer Solutions

2012-12-02

THIS BOOK PROVIDES A COMPREHENSIVE ACCOUNT OF THE MODERN THEORY FOR THE DYNAMICAL PROPERTIES OF POLYMER SOLUTIONS THE THEORY HAS UNDERGONE DRAMATIC EVOLUTION OVER THE LAST TWO DECADES DUE TO THE INTRODUCTION OF NEW METHODS AND CONCEPTS THAT HAVE EXTENDED THE FRONTIER OF THEORY FROM DILUTE SOLUTIONS IN WHICH POLYMERS MOVE INDEPENDENTLY TO CONCENTRATED SOLUTIONS WHERE MANY POLYMERS CONVERGE AMONG THE PROPERTIES EXAMINED ARE VISCOELASTICITY DIFFUSION DYNAMIC LIGHT SCATTERING AND ELECTRIC BIREFRINGENCE NONLINEAR VISCOELASTICITY IS DISCUSSED IN DETAIL ON THE BASIS OF MOLECULAR DYNAMICAL MODELS THE BOOK BRIDGES THE GAP BETWEEN CLASSICAL THEORY AND NEW DEVELOPMENTS CREATING A CONSISTENT PICTURE OF POLYMER SOLUTION DYNAMICS OVER THE ENTIRE CONCENTRATION RANGE

Polymer Solutions

2002-03-07

THIS BOOK PRESENTS THE HELICAL WORMLIKE CHAIN MODEL A GENERAL MODEL FOR BOTH FLEXIBLE AND SEMIFLEXIBLE POLYMER CHAINS IT EXPLAINS HOW STATISTICAL MECHANICAL HYDRODYNAMIC AND DYNAMIC THEORIES OF THEIR SOLUTION PROPERTIES CAN BE DEVELOPED ON THE BASIS OF THIS MODEL THIS NEW SECOND EDITION HAS BEEN CAREFULLY UPDATED AND THOROUGHLY REVISED IT INCLUDES A NEW CHAPTER COVERING SIMULATION AND MORE ON EXCLUDED VOLUME EFFECTS AS WELL AS THE DISCUSSION OF NEW EXPERIMENTAL DATA AND THE APPLICATION OF THE THEORY TO RING POLYMERS THE AUTHORS PROVIDE ANALYSIS OF IMPORTANT RECENT EXPERIMENTAL DATA BY THE USE OF THEIR THEORIES FOR FLEXIBLE POLYMERS OVER A WIDE RANGE OF MOLECULAR WEIGHTS INCLUDING THE OLIGOMER REGION AND FOR SEMIFLEXIBLE POLYMERS INCLUDING BIOLOGICAL MACROMOLECULES SUCH AS DNA THIS IS ALL CLEARLY ILLUSTRATED USING A REASONABLE NUMBER OF THEORETICAL EQUATIONS TABLES FIGURES AND COMPUTER AIDED FORMS WHICH SUPPORT THE UNDERSTANDING OF THE BASIC THEORY AND HELP TO FACILITATE ITS APPLICATION TO EXPERIMENTAL DATA FOR THE POLYMER MOLECULAR CHARACTERIZATION

Static and Dynamic Light Scattering of Polymer Solutions Exhibiting Polymer-solvent and Polymer-polymer Interactions

1991

PRESENTING A COMPLETELY NEW APPROACH TO EXAMINING HOW POLYMERS MOVE IN NON DILUTE SOLUTION THIS BOOK FOCUSES ON EXPERIMENTAL FACTS NOT THEORETICAL SPECULATIONS AND CONCENTRATES ON POLYMER SOLUTIONS NOT DILUTE SOLUTIONS OR POLYMER MELTS FROM CENTRIFUGATION AND SOLVENT DYNAMICS TO VISCOSITY AND DIFFUSION EXPERIMENTAL MEASUREMENTS AND THEIR QUANTITATIVE REPRESENTATIONS ARE THE CORE OF THE DISCUSSION THE BOOK REVEALS SEVERAL EXPERIMENTS NEVER BEFORE RECOGNIZED AS REVEALING POLYMER SOLUTION PROPERTIES A NOVEL APPROACH TO RELAXATION PHENOMENA ACCURATELY DESCRIBES VISCOELASTICITY AND DIELECTRIC RELAXATION AND HOW THEY DEPEND ON POLYMER SIZE AND CONCENTRATION IDEAL FOR GRADUATE STUDENTS AND RESEARCHERS INTERESTED IN THE PROPERTIES OF POLYMER SOLUTIONS THE BOOK COVERS REAL MEASUREMENTS ON PRACTICAL SYSTEMS INCLUDING THE VERY LATEST RESULTS EVERY SIGNIFICANT EXPERIMENTAL METHOD IS PRESENTED IN CONSIDERABLE DETAIL GIVING UNPRECEDENTED COVERAGE OF POLYMERS IN SOLUTION

The Theory of Polymer Dynamics

1988

THE BEHAVIOUR OF POLYMERS IN MULTI COMPONENT AND MULTIPHASE SYSTEMS SUCH AS SOLUTIONS BLENDS AND INTERFACES DERIVED FROM BOTH NATURAL AND SYNTHETIC SOURCES AND THE SUBSEQUENT INFLUENCE OF THIS ON THEIR PHYSICAL PROPERTIES IS THE THEME OF THIS BOOK IMPORTANT NEW MATERIAL ON MULTIPHASE POLYMER SYSTEMS SUCH AS BLOCK COPOLYMERS AND LIQUID CRYSTALLINE POLYMERS IS PROVIDED AND THE SOLUTION AND SURFACE PROPERTIES OF ENZYMES AND SURFACE ACTIVE POLYMERS IS DESCRIBED BOTH THEORETICALLY AND EXPERIMENTALLY THE APPLICATION OF THEORY TO THE DEVELOPMENT OF NEW CELLULOSIC MATERIALS IS PARTICULARLY NOTEWORTHY THE RELATIONSHIP BETWEEN END USE PROPERTIES SUCH AS ADHESION WETTING AND COLLOIDAL STABILITY AND MOLECULAR STRUCTURE AT THE INTERFACE IS ADDRESSED EXAMPLES INCLUDE THE CAPILLARY PRESSURE OF NYLON MICROPOROUS MEMBRANES A NEW TECHNIQUE FOR CHARACTERIZING THE ADHESION BETWEEN INCOMPATIBLE POLYMERS AND THE INFLUENCE OF THE GLASS TRANSITION TEMPERATURE AT THE FIBER MATRIX INTERFACE ON INTERFACIAL SHEAR STRENGTH CHARACTERIZATION OF POLYMER FILMS BOTH ELECTROCHEMICALLY AND VIA OPTICAL TECHNIQUES IS COVERED AND THE INTERACTIONS OF AMPHIPHILIC IONS WITH POLYACRYLATE POLYMER ARE DESCRIBED THE FINAL TWO CHAPTERS INTRODUCE THE TOPIC OF ENZYME MOBILITY AT AN INTERFACE AND SHOW HOW THIS MAY AFFECT THEIR ROLE AS BIOLOGICAL CATALYSTS

Helical Wormlike Chains in Polymer Solutions

2016-02-22

IN THE FIRST HALF OF THIS CENTURY GREAT STRIDES WERE MADE IN UNDER STANDING THE BEHAVIOR OF POLYMERS IN DILUTE SOLUTIONS OR IN THE SOLID STATE CONCENTRATED SOLUTIONS ON THE OTHER HAND WERE COMMONLY REGARDED AS MAINLY OF INTEREST TO PRACTITIONERS BEING TOO COMPLEX FOR THE RIGOROUS APPLICATION OF STATISTICAL THEORY GIVEN THE PREOCCUPATION WITH THE ISOLATED POLYMER MOLECULE AND THE ATTENDANT FOCUS ON THE STATE OF INFINITE DILUTION IT IS NOT SURPRISING THAT AGGREGATION AND INTER POLYMER ASSOCI ATION IN GENERAL WAS THE BUGABOO OF EXPERIMENTALISTS THESE ATTITUDES HAVE CHANGED REMARKABLY OVER THE LAST FEW DECADES THE APPLICATION OF SEALING THEORY TO POLYMER SOLUTIONS HAS STIMULATED INVESTIGATION OF THE SEMI DILUTE STATE AND THE REGION BETWEEN INFINITE DILUTION AND SWOLLEN GEL IS NO LONGER PERCEIVED AS TERRA INCOGNITA NEW TECHNIQUES SUCH AS DYNAMIC LIGHT SCATTERING HAVE PROVEN TO BE OF MUCH VALUE IN SUCH INVESTIGATIONS AT THE SAME TIME IT HAS BECOME CLEAR THAT CONSIDERATION OF STRONG INTER AND INTRA POLYMER FORCES SUPERIMPOSED ON THE FAMILIAR DESCRIPTION OF THE STATISTICAL CHAIN IS PREREQUISITE TO THE APPLICATION OF POLYMER SCIENCE TO NUMEROUS SYSTEMS OF INTEREST PARA MOUNT AMONG THESE OF COURSE ARE BIOPOLYMERS THEIR COMPLEXES AND ASSEMBLIES THE ISOLATED RANDOM COIL MUST BE VIEWED AS TL RARITY IN NATURE

Dynamic Response of Dilute Polymer Solutions in a Shear Flow

1971

THERMODYNAMICS IS AN INDISPENSABLE TOOL FOR DEVELOPING A LARGE AND GROWING FRACTION OF NEW POLYMERS AND POLYMER BLENDS THESE TWO VOLUMES SHOW THE RESEARCHER HOW THERMODYNAMICS CAN BE USED TO RANK POLYMER PAIRS IN ORDER OF IMMISCIBILITY INCLUDING THE SEARCH FOR SUITABLE CHEMICAL STRUCTURE OF COMPATIBILIZERS BECAUSE OF THE GREAT CURRENT COMMERCIAL INTEREST IN THIS MOST DYNAMIC SECTOR OF THE POLYMER INDUSTRY THERE IS HIGH INTEREST IN STUDYING THEIR PHYSICAL AND MECHANICAL PROPERTIES THEIR STRUCTURES AND THE PROCESSES OF THEIR FORMATION AND MANUFACTURE THESE BOOKS ARE DEDICATED TO ANALYSIS OF THE THERMODYNAMICS OF POLYMER BLENDS THERMODYNAMIC BEHAVIOR OF BLENDS DETERMINES THE COMPATIBILITY OF THE COMPONENTS THEIR MORPHOLOGICAL FEATURES RHEOLOGICAL BEHAVIOR AND MICROPHASE STRUCTURES AS A RESULT THE MOST IMPORTANT PHYSICAL AND MECHANICAL CHARACTERISTICS OF BLENDS CAN BE IDENTIFIED THE INFORMATION IN THESE TWO VOLUMES WILL BE USEFUL TO ALL THOSE INVOLVED IN POLYMER RESEARCH DEVELOPMENT ANALYSIS AND ADVANCED PROCESS ENGINEERING

Phenomenology of Polymer Solution Dynamics

2011-10-06

OUR BRUTAL CENTURY OF ATOM BOMBS AND SPACESHIPS CAN ALSO BE CALLED THE CENTURY OF POLYMERS IN ANY CASE THE BROAD SPREADING OF SYNTHETIC POLYMER MATERIALS IS ONE OF THE SIGNS OF OUR TIME A LOOK AT THE VARIOUS ASPECTS OF OUR LIFE IS ENOUGH TO CONVINCE US THAT POLYMERIC MATERIALS TEXTILES PL TICS RUBBERS ARE AS WIDELY SPREAD AND IMPORTANT IN OUR LIFE AS ARE OTHER MATERIALS METALS AND NON METALS DERIVED FROM SMALL MOLECULES POLYMERS HAVE ENTERED THE LIFE OF THE TWENTIETH CENTURY AS IRREPLACEABLE CONSTRUCTION MATERIALS POLYMERS DIFFER FROM OTHER SUBSTANCES BY THE SIZE OF THEIR MOLECULES WHICH APPROPRIATELY ENOUGH ARE REFERRED TO AS MACROMOLECULES SINCE THEY CONSIST OF THOUSANDS OR TENS OF THOUSANDS OF ATOMS MOLECULAR WEIGHT UP TO 4 6 10 ORMORE ANDHAVE A MACROSCOPIC RECTILINEAR LENGTH UPTO 10 CM THE ATOMS OFA MACROMOLECULE ARE FIRMLY HELD TOGETHER BY VALENCE BONDS FO ING A SINGLE ENTITY IN POLYMERIC SUBSTANCES THE WEAKER VAN DER WAALS FORCES HAVE AN EFFECT ON THE COMPONENTS OF THE MACROMOLECULES WHICH FORM THE SYSTEM THE STRUCTURE OF POLYMERIC SYSTEMS IS MORE COMPLICATED THAN THAT OFLOW MOLECULAR SOLIDS OR LIQUIDS BUT THERE ARE SOME COMMON FEATURES THE ATOMS WITHIN A GIVEN MACROMOLECULE ARE ORDERED BUT THE CENTRES OFMASS OF THE INDIVIDUAL MACROMOLECULES AND PARTS OF THEM ARE DISTRIBUTED RANDOMLY REMARKABLY THE MECHANICAL RESPONSE OF POLYMERIC SYSTEMS COMBINES THE ELASTICITY OF A SOLID WITH THE FLUIDITY OF A LIQUID

Static and Dynamic Properties of Dilute Semiflexible Polymer Solutions at Equilibrium

2000

LIGHT SCATTERING IS A VERY POWERFUL METHOD FOR CHARACTERIZING THE STRUCTURE OF POLYMERS AND NANOPARTICLES IN SOLUTION AS PART OF THE SPRINGER LABORATORY SERIES THIS BOOK PROVIDES A SIMPLE TO READ AND ILLUSTRATIVE TEXTBOOK PROBING THE SEEMINGLY VERY COMPLICATED TOPIC OF LIGHT SCATTERING FROM POLYMERS AND NANOPARTICLES IN DILUTE SOLUTION AND GOES FURTHER TO COVER SOME OF THE LATEST TECHNICAL DEVELOPMENTS IN EXPERIMENTAL LIGHT SCATTERING

Structure-Property Relationships in Polymer Systems: From Functional Microgels to Dynamic Polymer Solutions and Melts

2020

A MOLECULAR VIEW ON THE FUNDAMENTAL ISSUES IN POLYMER PHYSICS IS PROVIDED WITH AN AIM AT STUDENTS IN CHEMISTRY CHEMICAL ENGINEERING CONDENSED MATTER PHYSICS AND MATERIAL SCIENCE COURSES AN UPDATED TRANSLATION BY THE AUTHOR A RENOWNED CHINESE CHEMIST IT HAS BEEN PROVEN TO BE AN EFFECTIVE SOURCE OF LEARNING FOR MANY YEARS UP TO DATE DEVELOPMENTS ARE REFLECTED THROUGHOUT THE WORK IN THIS CONCISE PRESENTATION OF THE TOPIC THE AUTHOR AIMS AT PRESENTING THE SUBJECT IN AN EFFICIENT MANNER WHICH MAKES THIS PARTICULARLY SUITABLE FOR TEACHING POLYMER PHYSICS IN SETTINGS WHERE TIME IS LIMITED WITHOUT HAVING TO SACRIFICE THE EXTENSIVE SCOPE THAT THIS TOPIC DEMANDS

Structure-Property Relationships in Polymer Systems: From Functional Microgels to Dynamic Polymer Solutions and Melts

2020

AS THE TITLE SUGGESTS THIS MONOGRAPH FEATURES THE PHYSICOCHEMICAL BEHAVIOR AND SUPRAMOLECULAR ORGANIZATION OF POLYMERS THE BOOK CONSISTS OF FOUR CHAPTERS DEALING WITH SOLUTION PROPERTIES VISCOELASTIC BEHAVIOR PHYSICOCHEMICAL ASPECTS AT INTERFACES AND SUPRAMOLECULAR STRUCTURES OF POLYMERIC SYSTEMS THE CLASSICAL TREATMENT OF THE PHYSICOCHEMICAL BEHAVIOR OF POLYMERS IS PRESENTED IN SUCH A WAY THAT THE BOOK WILL MEET THE REQUIREMENTS OF A BEGINNER IN THE STUDY OF POLYMERIC SYSTEMS IN SOLUTION AND IN SOME ASPECTS OF THE SOLID STATE AS WELL AS THOSE OF THE EXPERIENCED RESEARCHER IN OTHER TYPES OF MATERIALS PHYSICOCHEMICAL BEHAVIOR AND SUPRAMOLECULAR ORGANIZATION OF POLYMERS IS ULTIMATELY A CONTRIBUTION TO THE CHEMISTRY OF MATERIALS IT IS A POWERFUL REFERENCE TOOL FOR STUDENTS AND SCIENTISTS WORKING BOTH IN POLYMER CHEMISTRY POLYMER PHYSICS AND MATERIALS SCIENCE

Microrheology and Dynamic Light Scattering Studies of Polymer Solutions

2004

COLLOIDAL SYSTEMS AND DISPERSIONS ARE OF GREAT IMPORTANCE IN OIL RECOVERY WAIST WATER TREATMENT COATING FOOD AND BEVERAGE INDUSTRY PHARMACEUTICAL INDUSTRY MEDICINE ENVIRONMENTAL PROTECTION ETC COLLOIDAL SYSTEMS AND DISPERSIONS ARE ALWAYS MULTI COMPONENT AND MULTIPHASE SYSTEMS IN THESE SYSTEMS AT LEAST ONE DIMENSION IS IN A RANGE OF COLLOIDAL FORCES ACTION COLLOIDAL DISPERSIONS EMULSIONS ARE EXAMPLES OF THREE DIMENSIONAL COLLOIDAL SYSTEMS WHILE THIN LIQUID FILMS ARE

EXAMPLES OF ONE DIMENSIONAL COLLOIDAL SYSTEMS THE CONTRIBUTION PRESENTED IN THIS ISSUE DEALS WITH FLOW DISTRIBUTION AND REDISTRIBUTION COATING AND DEPOSITION OF SURFACTANT AND POLYMER MOLECULES IN COLLOIDAL SYSTEMS THE BOOK PRESENTS REVIEWS OF RECENT ADVANCES AND TRENDS BY WELL KNOW SCIENTISTS AND ENGINEERS IN THIS AREA

Dynamic Strain Birefringence of Concentrated Polymer Solutions

1962

POROUS MEDIA FLOW HAS ATTRACTED IMPORTANT ATTENTION BECAUSE IN WHICH CONFINED GEOMETRIES HAVE A GREAT INFLUENCE ON DYNAMIC OF POLYMER MOLECULES ALTHOUGH CONSIDERABLE WORK HAS BEEN DEVOTED TO HYDRODYNAMIC CHROMATOGRAPHY HDC ANALYSIS THE CLEAR UNDERSTANDING ON THE TRANSPORT BEHAVIOR OF POLYMER SOLUTIONS IN POROUS MEDIA HAS NOT BEEN ACHIEVED YET IN THIS STUDY THE FLOW AND DYNAMIC BEHAVIOR OF RIGID RODLIKE POLYMERS IN A PACKED HDC COLUMN IS FULLY ANALYZED BY EXTENDING THE MOLECULAR THEORY OF DILUTE POLYMER SOLUTION IN A CONFINED GEOTMETRY IN ORDER TO ELUCIDATE QUANTITATIVELY THE EFFECTS OF ARBITRARY PARTICLE SIZES AS WELL AS OF FLOW STRENGTH ON THE DIMENSIONLESS SEPARATION PARAMETER NAMELY RETENTION FACTOR RF RF EQUATION OF RODLIKE POLYMER WAS DEVELOPED AND THEN NUMERICAL SIMULATIONS WERE WORKED OUT

Dynamic Light Scattering of Associative Polymer Solutions

1999

Brownian Dynamic Simulations of Nanoparticle Dispersions in Polymer Solutions

2009

Dynamic Light Scattering in Semi-dilute Polymer Solutions

1986

Ternary Polymer Solutions Studied by Dynamic Light Scattering and Ultracentrifugation

1996

Polymer Solutions, Blends, and Interfaces

2012-12-02

Microdomains in Polymer Solutions

2013-03-09

Polymer/solvent Interactions as Revealed by Dynamic Viscoelastic and Oscillatory Flow Birefringence Properties for Polystyrene Solutions

1991

A Dynamic Light Scattering Study of Isorefractive Ternary Polymer Solutions

1991

Computerized Measurement of the Dynamic Viscoelastic Properties of Dilute Polymer Solutions Over an Extended Range of Solvent Viscosity

1970

Structure and Dynamics of Polymer Solutions

2000

Exact Relaxation Times and Dynamic Functions for Dilute Polymer Solutions from the Bead/spring Model of Rouse and Zimm

1972

Thermodynamics of Polymer Blends, Volume I

2020-02-03

The Mesoscopic Theory of Polymer Dynamics

2007-05-08

The Prediction and Correlation of Moduli of Polymer Solutions Subjected to Large Amplitude Shear Oscillations

1979

Dynamic Properties of Some Polymeric Systems

1967

Intrinsic Dynamic Viscoelastic Studies of the Relationship of Excluded Volume and Hydrodynamic Interaction in Polymer Solutions

1990

Structure Formation in Polymer Solutions

1989

Dynamic Simulations of Flexible Polymer Molecules

1997

Light Scattering from Polymer Solutions and Nanoparticle Dispersions

2007-08-13

A Dynamic Light Scattering Investigation Into the Dynamics of Non Ideal Ternary Polymer Solutions

2004

Polymer Physics

2012-11-05

Physicochemical Behavior and Supramolecular Organization of Polymers

2009-02-18

Fluid Mechanics of Surfactant and Polymer Solutions

2014-05-04

Dynamic Viscoelasticity of Branched Polymers in Dilute Solution

1973

Dynamic Behavior and Fractional Analysis of Dilute Rigid Polymers Using Packed Hydrodynamic Chromatography

1990

The Effect of Polymer/solvent Interactions on the Dynamic Viscoelasticity and the Oscillatory Flow Birefringence Properties for Polyisoprene Solutions

1987