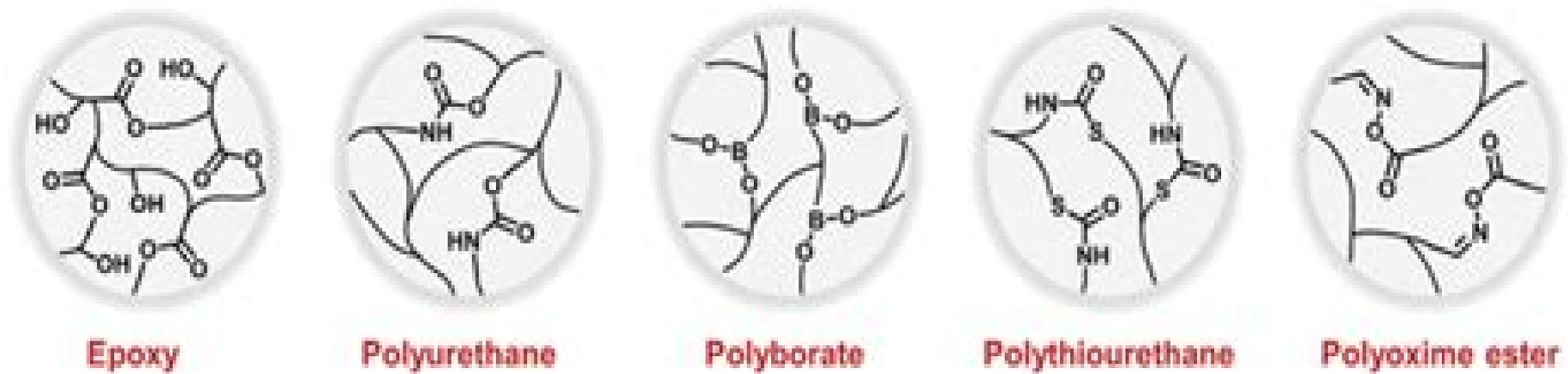


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Polymer Interfaces Richard P. Wool, 1995 Contents
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Amorphous Interfaces Strength of Incompatible Semicrystalline Interfaces Craze and Damage Healing Crack Healing

Polymers at Surfaces and Interfaces Richard A. L. Jones, Randal W. Richards, 1999-04-22 This text deals with the behavior of polymers at surfaces and interfaces Topics covered include the nature and properties of the surface of a polymer melt the structure of interfaces among different polymers and between polymers and nonpolymers the molecular basis of adhesion and the properties of polymers at liquid surfaces Emphasis is placed on the underlying physical principles It introduces statistical mechanics models of polymer behavior near interfaces emphasizing theory that is applicable to experimental situations Advanced undergraduates graduate students and research workers in physics chemistry and materials science with an interest in polymers will find this book of interest NMR Studies of Polymers at Interfaces, 1994 A review of NMR studies done in our laboratory on the dynamics of polymers adsorbed at interfaces is made Of specific interest is polymers adsorbed on solid substrates at the 1 solution 2 gas and 3 polymer interface In solution we have used deuterium NMR relaxation times to show the enhanced motional mobility of styrene segments of vinylpyridine styrene block copolymers adsorbed on silica and swollen with toluene At the gas interface we show how the presence of the interface can turn a rubbery polymer into a glassy one with carbon 13 studies of poly iso propyl acrylate At the polymer interface we show how the overpolymerization of bismaleimide slows the dynamics of the interfacial layer of silane coupling agent Polymers Interfaces NMR Surfaces **Conjugated Polymer Surfaces and Interfaces** W. R. Salaneck, S. Stafstrom, J. L. Brédas, 2003-10-30 Describes the basic physics and materials science of conjugated polymers and their interfaces

Polymer Interfaces and Emulsions Kunio Esumi, 1999-07-09 Presents the latest knowledge on a wide range of topics in polymer science including the dynamics preparation application and physicochemical properties of polymer solutions and colloids the adsorption characteristics at polymer surfaces and the adhesion properties including acid base of polymer surfaces Polymer Surfaces and Interfaces Irina A. Starostina, Oleg V. Stoyanov, Rustam Ya Deberdeev, 2014-05-20 This book presents the analysis of up to date techniques used for the determination of acid base properties in view of their applicability to examination of solid organic and inorganic surfaces The studies have been carried out by the authors since 1993 showing experimental data on surface properties of more than 150 polymers such as carbocatenas **Polymer Surfaces and Interfaces** Manfred Stamm, 2008-01-26 In what is an extremely practical and applicable new work experts provide concise explanations with examples and illustrations of the key techniques in this important field In each case after basic principles have been reviewed applications of the experimental techniques are discussed and illustrated with specific examples Scientists and engineers in research and development will benefit from an application oriented book that helps them to find solutions to both fundamental and applied problems They will know that the surfaces and interfaces of polymers play an important role in most of the application areas of polymers from moulds foils and composites to biomaterials and applications in micro and nanotechnology *Polymer Surfaces and Interfaces* W. J. Feast, 1987-04-28 A collection of review

papers which give an up to date interdisciplinary view of current technology and research on polymer surfaces Contributors are drawn from both academia and industry and represent a cross section of subject interests

Polymer Surfaces and Interfaces: Characterization, Modification and Application, 2023 Polymeric materials are used for a legion of applications in a wide array of technological areas and their proper surface interface characteristics are of cardinal importance for their applications Therefore the need to characterize polymer surfaces interfaces and their suitable modification to impart desired characteristics is quite patent This book chronicles the proceedings of the Symposium on Polymer Surfaces and Interfaces Characterization Modification and Application held as a part of the Society of Plastics Engineers Annual Technical Conference Boston May 7 11 1995 The articles in this book address many aspects of polymer surfaces and interfaces Topics covered include various ways chemical photochemical laser flame corona to modify polymer surfaces modification of contact lens surfaces various ways to analyze characterize polymer surfaces metal polymer interfaces metal polyimide adhesion metal self assembled organic monolayer interfaces polymer alignment layers for liquid crystals alignment of liquid crystal surfaces polyimide alignment layers molecular re orientation of polymer surfaces plasma polymerized organic coatings epoxy fiber interphase epoxy underfill materials for packaging integrated circuits transport in polymers polymer miscibility and cell adhesion

[Polymers at Interfaces](#) Brian David Edgecombe, 1997

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Models of Polymers, Interfaces, and Clusters: Scaling and Finite-Size Properties Vladimir Privman, Nenad M. Svrakic, 1989-08-23 This monograph gives a detailed introductory exposition of research results for various models mostly two dimensional of directed walks interfaces wetting surface adsorption of polymers stacks compact clusters lattice animals etc The unifying feature of these models is that in most cases they can be solved analytically The methods used include transfer matrices generating functions recurrence relations and difference equations and in some cases involve utilization of less familiar mathematical techniques such as continued fractions and q series The authors emphasize an overall view of what can be learned generally of the statistical mechanics of anisotropic systems including phenomena near surfaces by studying the solvable models Thus the concept of scaling and where known finite size scaling properties are elucidated Scaling and statistical mechanics of anisotropic systems in general are active research topics The volume provides a comprehensive survey of exact model results in this field

Polymer Surfaces, Interfaces And Thin Films Alamgir Karim, Sanat Kumar, 2000-04-19 The theoretical and experimental study of polymers polymer surfaces and thin films has undergone a revolution in the last 25 years This book captures recent advances in this field It covers equilibrium aspects kinetics and reactions at interfaces It is aimed not only at a research audience but also at beginners

Polymer/Inorganic Interfaces II: Volume 385 Materials Research Society. Meeting, 1995 Polymer inorganic interfaces play a fundamental role in a wide range of applications yet understanding of the fundamental interactions between polymers and inorganic phases and how they affect the strength and durability of the interface is still in its infancy This proceedings volume addresses various aspects of polymer inorganic interfaces including surface preparation and treatment characterization and interface performance In addition applications where the interface and its properties play a significant role such as in biointerfaces microelectronics polymer composites and interpenetrating polymer networks are discussed Contributions to the volume examine various inorganic material polymer interfaces with an emphasis on composites epoxy resins polyurethanes poly methyl methacrylate polysiloxanes and various hydrophilic polymers These are arranged in seven units that identify major research efforts in specific fields They include experimental probes of interfaces biointeractions and biointerfaces adhesion and interface durability interface characterization primers for interface preparation interfaces and composites and surface preparation

Conjugated Polymer And Molecular Interfaces William R. Salaneck, Kazuhiko Seki, Antoine Kahn, Jean-Jacques Pireaux, 2001-10-18 Defines the state of the art in interface science for electronic applications of organic materials Updates understanding of the foundation of interfacial properties Describes novel electronic devices created from conjugated polymers and organic molecular solids

Polymer Surfaces and Interfaces II W. J. Feast, H. S. Munro, R. W. Richards, 1993-04-28 A collection of review papers which give an up to date interdisciplinary view of current technology and research on polymer surfaces Contributors are drawn from both academia and industry and represent a cross section of subject interests

Polymer Surfaces and Interfaces K. L. Mittal, K. W. Lee, 1997-04 Polymeric materials are used for a

legion of applications in a wide array of technological areas and their proper surface interface characteristics are of cardinal importance for their applications. Therefore the need to characterize polymer surfaces, interfaces, and their suitable modification to impart desired characteristics is quite patent. This book chronicles the proceedings of the Symposium on Polymer Surfaces and Interfaces: Characterization, Modification, and Application, held as a part of the Society of Plastics Engineers Annual Technical Conference in Boston, May 7-11, 1995. The articles in this book address many aspects of polymer surfaces and interfaces. Topics covered include various ways to chemically, photochemically, laser, flame, or corona modify polymer surfaces; modification of contact lens surfaces; various ways to analyze and characterize polymer surfaces; metal-polymer interfaces; metal-polyimide adhesion; metal self-assembled organic monolayer interfaces; polymer alignment layers for liquid crystals; alignment of liquid crystal surfaces; polyimide alignment layers; molecular re-orientation of polymer surfaces; plasma-polymerized organic coatings; epoxy fiber interphase; epoxy underfill materials for packaging integrated circuits; transport in polymers; polymer miscibility; and cell adhesion.

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