1. Record Nr. UNINA9910787848503321 Autore Kozlov G. V. **Titolo** Fractal mechanics of polymers: chemistry and physics of complex polymeric materials / / G.V. Kozlov, DSc, Yu. G. Yanovskii, DSc; Gennady E. Zaikov, DSc, A.K. Haghi, PhD, reviewers and advisory board members Pubbl/distr/stampa Waretown, NJ:,: Apple Academic Press Boca Raton, FL:,: CRC Press,, 2015 ©2015 **ISBN** 1-77463-357-4 0-429-16271-5 1-77188-041-4 Edizione [First edition.] Descrizione fisica 1 online resource (377 p.) Disciplina 620.1/920426 Soggetti Polymers - Fracture Fracture mechanics Fractal analysis Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Includes bibliographical references. Nota di bibliografia Nota di contenuto FRONT COVER; ABOUT THE AUTHORS; REVIEWERS AND ADVISORY BOARD MEMBERS; CONTENTS; LIST OF ABBREVIATIONS; PREFACE; CHAPTER 1 - THE INTERCOMMUNICATION OF FRACTAL ANALYSIS AND POLYMERIC CLUSTER MEDIUM MODEL; CHAPTER 2 - MOLECULAR MOBILITY; CHAPTER 3 - ELASTIC PROPERTIES; CHAPTER 4 - YIELDING PROCESS: CHAPTER 5 - LOCAL PLASTICITY: CHAPTER 6 - COLD FLOW (FORCED HIGH-ELASTICITY); CHAPTER 7 - FRACTURE; CHAPTER 8 -FRACTAL CRACKS; CHAPTER 9 - CRAZING; CHAPTER 10 - IMPACT TOUGHNESS; CHAPTER 11 - CREEP; CHAPTER 12 - MICROHARDNESS; CHAPTER 13 - THE POLYMERS STRUCTURE AND MECHANICAL PROPERTIES PREDICTION CHAPTER 14 - FRACTAL MECHANICS OF ORIENTED POLYMERSCHAPTER

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DEFORMATION; BACK COVER

Sommario/riassunto

This new book explores the consideration of relationships that connect the structural and basic mechanical properties of polymeric mediums within the frameworks of fractal analysis with cluster model representations attraction. Incidentally, the choice of any structural model of medium or their combinations is defined by expediency and further usage convenience only. This book presents leading-edge research in this rapidly changing and evolving field. The book presents descriptions of the main reactions of high-molecular substances within the frameworks of fractal analysis and irreversible agg