1. Record Nr. UNINA9910257446903321

Titolo	Molecular Dynamics and Relaxation Phenomena in Glasses [[electronic resource]] : Proceedings of a Workshop Held at the Zentrum für Interdisziplinäre Forschung, Universität Bielefeld, Bielefeld, FRG, November 11-13, 1985 / / edited by Thomas Dorfmüller, Graham Williams
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 1987
ISBN	3-540-47838-8
Edizione	[1st ed. 1987.]
Collana	Lecture Notes in Physics, , 0075-8450 ; ; 277
Disciplina	541
Soggetti	Physical chemistry Phase transitions (Statistical physics) Physical Chemistry Phase Transitions and Multiphase Systems
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di contenuto	Models for dynamics of relaxation in glasses -- Sub-Tg relaxations in heavy metal fluoride glasses -- Mechanical relaxation in solid polymers: Proposal for a new approach and a solution of Heijboer's problem -- Dynamic mechanical and creep studies of PMMA in the ?- and ?-relaxation regions. Physical ageing effects and non-linear behaviour -- Relaxation processes in glassy ionic solids -- Secondary relaxations and the properties of glasses and liquids -- Developments in the non-newtonian rheology of glass forming systems -- 13C NMR investigation of local motions involved in secondary relaxation of polymers -- 2H NMR investigations on glass forming systems -- Phenyl-ring mobility in bulk polystyrene -- Correlation between changes in molecular mobility and volume in glass-forming materials -- Thermal cycling of glasses: A theoretical and experimental approach -- Application of Adam-Gibbs' theory to thermodynamic recovery and structural relaxation -- Photon correlation spectroscopy to study the dynamics of ?- and ?-relaxation in amorphous poly(Alkylmethacrylates) above Tg.

Sommario/riassunto

This book presents the proceedings of a workshop on glass-forming liquids held at the University of Bielefeld in 1985. The aim of the meeting was to seek unifying interpretations which may apply to all glass-forming materials like inorganic and polymer glasses. Also, new data was presented and modern interpretations were applied which represent the state-of-the-art knowledge about the unusual physical properties of these chemically-diverse glass-forming materials. The book should be of interest to specialists in the subject, to polymer scientists, glass technologists and materials scientists, but also - and most importantly - to researchers and teachers who wish to become informed on some of the most recent fundamental research in the fields.