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Titolo	Glass : selected properties and crystallization // edited by Jurn W.P. Schmelzer
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Nota di contenuto	Influence of thermal prehistory on crystal nucleation and growth in polymers / Christoph Schick, Evgeny Zhuravlev, Rene Androsch, Andreas Wurm, and Jurn W.P. Schmelzer -- Early stages of crystal formation in glass-forming metallic alloys / Gerhard Wilde -- Crystalline and amorphous modifications of silica / Ivan Gutzow, Radost Pascova, Nikolai Jordanov, Stoyan Gutzov, Ivan Penkov, Irena Markovska, Jurn W.P. Schmelzer, and Frank-Peter Ludwig -- The main silica phases and some of their properties / Irina G. Polyakova -- Chemical structure of oxide glasses / Natalia M. Vedishcheva and Adrian C. Wright -- Bubbles in silica melts: formation, evolution, and methods of removal / Boris Z. Pevzner and Sergey V. Tarakanov -- Regularities and peculiarities in the crystallization kinetics of silica glass / Victor K. Leko -- Stress-induced pore formation and phase selection in a crystallizing stretched glass / Vladimir M. Fokin, Alexander Karamanov, Alexander S. Abyzov, Jurn W.P. Schmelzer, and Edgar D. Zanotto -- Crystallization of undercooled liquids: results of molecular dynamics simulations / Vladimir G. Baidakov -- Crystal nucleation and growth in glass-forming systems / Gyan P. Johari and Jurn W.P. Schmelzer.

Sommario/riassunto

“This book contains overviews on technologically important classes of glasses, their treatment to achieve desired properties, theoretical approaches for the description of structure-property relationships, and new concepts in the theoretical treatment of crystallization in glass-forming systems. It contains overviews about the state of the art and about specific features for the analysis and application of important classes of glass-forming systems, and describes new developments in theoretical interpretation by well-known glass scientists. Thus, the book offers comprehensive and abundant information that is difficult to come by or has not yet been made public.” Edgar Dutra Zanotto (Center for Research, Technology and Education in Vitreous Materials, Brazil)

Glass, written by a team of renowned researchers and experienced book authors in the field, presents general features of glasses and glass transitions. Different classes of glassforming systems, such as silicate glasses, metallic glasses, and polymers, are exemplified. In addition, the wide field of phase formation processes and their effect on glasses and their properties is studied both from a theoretical and experimental point of view.
