

Preface

Solid state transformations, as a branch of solid state physics, are an extensively broad field of interest common for metallurgists, geologists, chemists, ceramists and other people interested in phase changes occurring in the matter. Description, interpretation and prediction of phase changes are constantly the focus of interest of both materials science and engineering. Behavior of structural and function materials exposed to various external conditions is connected with a number of open issues solved by many research groups. Phenomena observed in advanced materials are especially challenging.

This topical volume includes a set of invited contributions, which can by no means cover the whole scope of problems, aspects, new experimental techniques and new types of transformation processes in the field. The contemporary studies presented in the volume are grouped into five chapters. The first one deals with diffusion processes that control the kinetics of diffusive transformations in the bulk and close to interfaces. The second one describes the transformation process itself, followed with a chapter on non-diffusion transformations. Thermodynamics of solid state transformations is the theme of the next chapter. A short part dealing with constrained atomic structures closes the volume.

Editors