

## Preface

The problem of interrelation between diffusion and stresses is almost as old as the investigation of diffusion itself. Nowadays the study of different diffusion and solid state reaction processes in thin films and multilayers represent a very vital area of research activity in which inevitably the diffusion induced or thermal stresses are primary importance. Furthermore the results should depend on the density and distribution of sources and sinks of diffusion vehicles (vacancies) and on the boundary conditions. The stress relaxation effects are also very important: in diffusion on nanoscale (e.g. in coherent, structural defect free films and multilayers) the stress relaxation can be much more sluggish and can lead to time dependent effects as well. The further peculiarity of the problem is that atomic currents are local laws, while elastic interactions have long-range character.

The workshop covered all aspects of interrelation of stresses and diffusion phenomena in solid bulk, thin film and multilayer materials and also at surfaces and interfaces. The meeting followed the traditions of its two predecessors: *1<sup>st</sup> International Workshop on Diffusion and Stresses* (Balatonfüred, Hungary, 1995: Defect and Diffusion Forum Vol. 129-130), and *International Conference on Diffusion, Segregation and Stresses in Materials* (Moscow, Russia, 2002: Defect and Diffusion Forum Vol. 216-217).

33 participants, coming from 11 countries, presented invited and oral lectures as well as presented posters. These are collected in this Proceeding, which, we hope, makes available the results to all scientists interested and will contribute to the development of the field.

We express special thanks to our PhD. student András Bükki-Deme, for his hard work in arranging and technically polishing this volume before the final editing.

Debrecen, March 2007

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