

Preface

This volume contains contributions to the bilingual Russian/English Eleventh Conference on “Imperfection interaction and anelastic phenomena in solids” (IIAPS-XI), held in Tula, Russia from 24 to 28 September 2007.

The Russian (former Soviet Union) school of anelastic behavior of metallic materials is closely linked with the research activity of Professor B.N. Finkelstein (Moscow), who made several important contributions in the field of the physics of metals. He organized the first three conferences in the Soviet Union on relaxation effects in solids: in Moscow in 1958, in Kharkov in 1960, and in Voronezh in 1962. Later the tradition of holding All-Soviet Union conferences in the field of anelasticity was kept in Voronezh (V.S. Postnikov, B.V. Darinski) and Tula (M.A. Krishtal, S.A. Golovin). This tradition is continued in the present conference.

The “Imperfection interaction and anelastic phenomena in solids” conference series in Tula was launched in 1969 at the department of Materials Science (now Physics of Metals and Materials Science), and was continued more recently in cooperation with the Physics Department. Professor G.V. Kurdjumov, especially well-known for his work in the field of martensitic transformation, played an important role in supporting these conferences in Tula. Several researchers from Poland, Czechoslovakia and Bulgaria regularly took part in these All-Russian conferences.

In 2001 the conferences in Voronezh and in Tula were combined to ensure regular meetings every three years in sequence, so that the present IIAPS-XI conference is a continuation not only of IIAPS-X (Tula 2001), but also of the last “Relaxation phenomena in solids” conference which took place in Voronezh in 2004. Since 2001, research papers from Argentina, Belgium, France, Germany, Japan, Italy, Netherlands, Norway, Poland, Spain, Switzerland, UK, USA and others were presented in Tula and in Voronezh in addition to our permanent contributors from former Soviet Union countries.

The main purpose of the conference series is to provide an International Meeting for researchers, scientists and engineers on defect interactions and related anelastic properties in solid materials. The Conference scope covers different aspects related to elastic energy dissipation in solids due to the presence and evolution of crystal defects, including fundamental aspects, experimental methods, technological applications, nondestructive testing and complementary techniques.

The title of the conference series in Tula was translated in 1997 literally from Russian as “Imperfection interaction and anelastic phenomena in solids” (IIAPS-IX), while it sounds better in English as “Interaction between defects and anelastic phenomena in solids”. This latter title is chosen as the title of the IIAPS-XI proceedings in this volume.

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