

## FOREWORD

In textured polycrystalline materials, the single crystal anisotropy of properties spreads to some extent to the whole material as statistical anisotropy. Controlling the texture one can change physical, mechanical and technological properties of materials in the desirable direction.

The importance of texture science is not limited by its practical significance. The texture, together with other structure characteristics, influences many physical processes in the material. Also, the texture, being very sensitive to external actions, is a good tool for studying phenomena in condensed materials. Although texture science is close to its century anniversary, it is still developing rapidly nowadays.

The purpose of the conference *Texture and Properties of Materials* held in Ekaterinburg from September 28 to October 5, 1997 was to bring together materials scientists dealing with applied and theoretical texture researches in order to consider the present state of knowledge, to determine actual directions of science and possibilities for collaborations. Participants from Russia, Germany, USA, France, Canada, Korea, Japan and Spain took part in the conference. The distinction of this conference from great international events such as ICOTOM was that scientists from practically all Russian texture research centers could take part in the meeting with leading foreign scientists.

Eighty papers were presented at the conference. They considered experimental studies of texture formation, the role of grain boundaries in texture formation, texture measurements and analysis, mathematical modelling of structure and texture formation and, finally, the influence of texture on magnetic and mechanical properties of materials. The conference has shown that structure inhomogeneities in deformed materials on meso-level play a principal role in texture development. This could be a basis for a new approach in the general theory of texture formation.

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