

Advances in Solid State Physics
Volume 46

Advances in Solid State Physics

Advances in Solid State Physics is a book series with a history of about 50 years. It contains the invited lectures presented at the Spring Meetings of the “Arbeitskreis Festkörperphysik” of the “Deutsche Physikalische Gesellschaft”, held in March of each year. The invited talks are intended to reflect the most recent achievements of researchers working in the field both in Germany and worldwide. Thus the volume of the series represents a continuous documentation of most recent developments in what can be considered as one of the most important and active fields of modern physics. Since the majority of invited talks are usually given by young researchers at the start of their career, the articles can also be considered as indicating important future developments.

The speakers of the invited lectures and of the symposia are asked to contribute to the yearly volumes with the written version of their lecture at the forthcoming Spring Meeting of the Deutsche Physikalische Gesellschaft by the Series Editor. Colored figures are available in the online version for some of the articles.

Advances in Solid State Physics is addressed to all scientists at universities and in industry who wish to obtain an overview and to keep informed on the latest developments in solid state physics. The language of publication is English.

Series Editor

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Rolf Haug (Ed.)

Advances in Solid State Physics

46

With 171 Figures and 4 Tables

 Springer

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Preface

The 2006 Spring meeting of the Arbeitskreis Festkörperphysik of the Deutsche Physikalische Gesellschaft was held in Dresden between March 27 and March 31, 2006 in conjunction with the 21st General Conference of the European Physical Society, Condensed Matter Division. The number of participants reached 4500 with 3808 scientific contributions. These impressive numbers made it the largest solid-state physics meeting of the year in Europe and clearly show that this meeting was attractive to a large number of scientists from Germany and from all over Europe.

The present volume of the Advances in Solid State Physics contains the written version of a large number of the invited talks and gives a nice overview of the status of solid-state physics and of the most interesting subjects within it. Low-dimensional physics dominates the contributions. The themes ranged from zero-dimensional physics in quantum dots, molecules and nanoparticles through one-dimensional physics in nanowires and 1d systems to more applied subjects like optoelectronics and materials science in thin films. The contributions span the whole breadth of solid-state physics ranging from truly basic science to applications.

Rolf J. Haug

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