
Preface

The 2008 spring meeting of the *Arbeitskreis Festkörperphysik* was held in Berlin between February 24 and 29, 2008 in conjunction with the 72. Annual Meeting of the *Deutsche Physikalische Gesellschaft*. It was the last spring meeting of the *Arbeitskreis Festkörperphysik* because in the meantime it changed its name to *Sektion kondensierte Materie* which better shows that it also includes soft materials and biological systems. Therefore, the next spring meeting in Dresden will be organized by the *Sektion kondensierte Materie* of the *Deutsche Physikalische Gesellschaft*. The number of participants of this year's meeting in Berlin exceeded 5600 and there were more than 4600 scientific contributions. With these numbers this meeting was the largest physics meeting in Europe and among the largest physics meetings in the world in 2008.

The present volume, 48 of the *Advances in Solid State Physics* contains the written version of a large number of the invited talks in Berlin and gives a nice overview of the present status of condensed matter physics. Low-dimensional systems are dominating the field and especially nanowires and quantum dots. In recent years one learned how to produce nanowires directly during a growth process. Therefore, a number of articles is related to such nanowires. In nanoparticles and quantum dots the dimensionality is further reduced and we learn more and more how to produce such systems and what effects result from the confinement in all three dimensions. Spin effects and magnetism is another important field of present day research in solid state physics. The third chapter covers this physics including an article about *graphene*. The growing interest into organic materials and biological systems is reflected in a large chapter of this book with the title *Organic Materials and Water*. The last chapters of this book cover aspects which range from dynamical effects to device physics and characterization tools.

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