

Preface

This special Volume of World Scientific contains the Proceedings of the 6th Epioptics Workshop held in the Ettore Majorana Foundation and Centre for Scientific Culture, Erice, Sicily, from July 19 to 25, 2000. The Workshop was the 6th in Epioptics series and the 19th of the International School of Solid State Physics. Antonio Cricenti from CNR- Istituto di Struttura della Materia and Theo Rasing from University of Nijmegen, were the Directors of the Workshop. The Advisory Committee of the Workshop included Y. Borensztein from U. Paris VII, P. Chiaradia and R. Del Sole from U. of Roma II-Tor Vergata, O. Hunderi from U. of Trondheim, J. Mc Gilp from Trinity College of Dublin, W. Richter From TU Berlin and P. Weightman from U. of Liverpool. Fortyfive scientists from fourteen countries attended the Workshop.

The Workshop has brought together researchers from Universities and Research Institutes which work in the fields of (semiconductor) surface science, epitaxial growth, materials deposition and optical diagnostics relevant to (semiconductors) materials and structures of interest for present and anticipated (spin) electronic devices. The workshop was aimed at assessing the capabilities of state-of-the-art optical techniques in elucidating the fundamental electronic and structural properties of semiconductor and metal surfaces, interfaces, thin layers and layer structures, and assessing the usefulness of these techniques for optimization of high quality multilayer samples through feedback control during materials growth and processing. Materials of particular interest have been silicon, semiconductor-metal interfaces, semiconductor and magnetic multilayer and III-V compound semiconductors. The workshop as well as the notes collected in this Volume combined the tutorials aspect adequate to a School with some of the most advanced topics in the field, which better characterize the Workshop.

We wish to thank our sponsors, the Italian National research Council (CNR) and the Sicilian Regional Government for facilitating a most successful Workshop. We are grateful to the Director of the International School of Solid State Physics, Prof. G. Benedek and to the Director, Prof. A. Zichichi, and staff members of the Ettore Majorana Centre for the excellent support, organization and hospitality provided. Finally we would like to thank Dr. M. Girasole who assembled and kept track of the various proceedings, to Dr. V. Marocchi, Dr. V. Mussi, Dr. A. Sieni and to D. De Fazio for their timely and efficient assistance in the organization of the Workshop/School.

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