

Proceedings of the  
XIX International Scientific Conference  
“New Technologies and Achievements  
in Metallurgy, Material Engineering,  
Production Engineering and Physics”

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*Editors of the Proceedings:*

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## Preface

The International Scientific Conference "New Technologies and Achievements in Metallurgy, Material Engineering, Production Engineering and Physics" was XIX-th conference organized by Faculty of Production Engineering and Materials Technology, Czestochowa University of Technology every year since almost two decades. From the early beginning, the conferences concerned mainly metallurgy and materials engineering and over the years, the topics were broadened to include Production Engineering, Chemistry and Physics.

Like the previous conferences, this one was held on June 7–8 in the building of Faculty of Production Engineering and Materials Technology, Czestochowa University of Technology. The Institute of Physics Czestochowa University of Technology organized for the first time this conference and it was our honor to do it as well as it was possible.

The conference was divided into two plenary sessions and several thematic sessions. During plenary sessions, the invited speakers gave several speeches concerning mainly solid state physics (theoretical and experimental).

The invited talks were given by distinguished physicists from West and Central Europe. The invited speakers were:

- Prof. Victorino Franco — University of Seville, Spain
- Prof. Wiesław Leoński — Zielona Góra University, Poland
- Prof. Adriana Zelenakova — P.J. Safarik University in Kosice, Slovakia
- Dr. Jiayan Law — University of Seville, Spain
- Dr. Jozef Kovac — Institute of Experimental Physics, Slovak Academy of Sciences, Slovakia
- Dr. Tomas Samuely — P.J. Safarik University in Kosice, Slovakia
- Dr. Przemysław Tarasewicz — Nicolaus Copernicus University in Toruń, Poland

During conference, 100 contributions were presented in oral or poster form. The participants represented 16 different countries from Europe and Asia. The papers, submitted to Publication Committee, were subjected the review process and, after acceptance, are now published in conference proceedings. The Guest Editors would like to thank the Editorial Staff of *Acta Physica Polonica A* for their effort and help, during preparation this volume.

Piotr Gębara,  
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*Editors*

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