

Name and title:

Leszek ADAMOWICZ, PhD, DSc, Professor (adamo@if.pw.edu.pl).

In academic staff of Warsaw University of Technology (WUT) since 1961. He published over 70 papers (mainly in ISI journals) and one book on Quantum Mechanics. He promoted 10 doctors of physics and 15 students to MSc degree. As a researcher or visiting professor he spent 6 years abroad (US, France, Algeria).

Curriculum Vitae:

1961 MSc Degree in Solid State Physics from A. Mickiewicz University, Poznań, Poland

1961 Teaching assignment on a post of assistant at Warsaw University of Technology

1969 PhD in Solid State Physics

1978 Research Associate in Research Group of Professor Joseph Callaway, LSU, USA

1979 DSc (habilitation)

1980 - 1985 Position of Professor at the University of Constantine, Algeria

1990 - 1993 Dean of the Faculty of Applied Physics and Mathematics, WUT

1994 - 1997 Principal coordinator of two *Joint European TEMPUS Projects*:

- JEP-7917-94 (Implementation of engineering physics in advanced semiconductor materials as a new development of applied physics study with engineering interface - TROPOUS)

- JEP-8051-94 (Restructuring of the higher education system in optoelectronics emphasising advanced optoelectronic technologies and applications - TOSCA)

2009 – retired from Warsaw University of Technology

Organisation activity: Initiator and coorganiser of eight international seminars with participation of specialists from all over Europe in collaboration with Nicolas Copernicus University (Toruń, Poland) „Nanostructures: Research, Technology and Applications” in

Bachotek near Brodnica, Poland (<http://www.phys.uni.torun.pl/ZMIKRO/Bachotek2004>);

Faculty contact person for international projects (SOCRATES-ERASMUS, European Framework Programs FP5 and FP6); Head of Condensed Matter Structure Research Division at the Faculty of Physics, WUT; Contributed to the high quality equipment of Raman Spectroscopy Laboratory; Coorganiser of activities of Regional Epitaxy Laboratory of Nanostructures, created in 2004 by the Faculty of Physics, WUT, and the Institute of Electron Technology in Warsaw.

Research activity: Solid state magnetism, spin waves, large scale computing of magnetic dynamic susceptibility within LDA, DFT band structure calculations, surface of semiconductors, photonic crystals, Monte Carlo modelling of charge transport in III-V semiconductors quantum cascade laser structures, carbon nanotubes, silicon nanowires assembly by travelling dielectrophoresis.

Scientific collaboration: Faculty of Chemistry and Faculty of Materials Engineering, WUT, Institute of Physics Polish Academy of Sciences and Institute of Electron Technology, Warsaw, Saint Petersburg University, Université des Sciences et de Technologies de Lille (IEMN), Institut Català de Nanotecnologia (ICN), Barcelona, Spain.

Member of Advisory Board of the FP5 Centre of Excellence “CEPHOMA”

(<http://www.cephoma.if.pw.edu.pl/wpl.html>)

President of the Chapter for Distinguished Young Scientist’s Medal, founded by WUT in 2008.

Referee of international journals, mainly of IOP (UK).

Evaluator of «Agence d’Evaluation de la Recherche et de l’Enseignement Supérieur» (AERES, France).

Director or participant of many research projects supported by State Committee for Scientific Research (Poland), like “Technology and characterisation of magnetic group III metallic nitrides” (Grant 7 T08A 00719 – finished in 2001), “New materials for spintronics – III-V semiconductors with transition metals” (PBZ/KBN/0444/P03/2001 – finished in 2005), “New materials for spintronics – III-V semiconductors with transition metals” (PBZ/KBN/0444/P03/2001 – finished in 2005), „Advanced technologies for infrared semiconducting optoelectronics” - task: Modelling of superlattice electronic structure and charge transport in quantum cascade lasers (PBZ – MNiSW 02/I/2007 – not yet finished) and “Fabrication technology of composite materials with the use of modified carbon nanotubes (Grant nr 15-0011-04/2008 – not yet finished).

Teaching: Quantum Physics, Quantum mechanics I and II, Elements of modern physics, Electrodynamics, Thermodynamics.

Family status: Sharing my life with Ewa who is my wife since 1969. We have three daughters and two grandsons.

Activities for pleasure: Fun farm activities, animals, swimming, sea sailing, ski.



Recent selected publications:

1. P. Borowik, L. Adamowicz, *Improved algorithm for Monte Carlo studies of electron transport in degenerate semiconductors*, Physica B **365** (2005) 235-239.
2. K. Osuch, E.B. Lombardi, L. Adamowicz, *Palladium In GaN: A 4d metal ordering ferromagnetically in a semiconductor*, Phys. Rev. B **71** (2005) 165213.
3. M. Zdrojek, T. Melin, C. Boyaval, D. Stievenard, B. Jouault, M. Wozniak, A. Huczko W. Gębicki and L. Adamowicz, *Charging and Emission Properties of Multiwalled Carbon Nanotubes Probed by Electric Force Microscopy*, Applied Physics Letters **86** (2005) 213114.
4. L. Adamowicz, T. Abraham, *Modelling of light propagation in photonic fibres*, SPIE International Congress on Optics and Optoelectronics, Proc. of SPIE, Vol. **5950**, 59501N-1(8), 28 August - 2 September 2005, Warsaw Univ. of Technology, Warsaw, Poland
5. M. Zdrojek, T. Melin, H. Diesinger, D. Stievenard, W. Gębicki and L. Adamowicz, *Comment on "Electrostatics of Individual Single-Walled Carbon Nanotubes Investigated by Electrostatic Force Microscopy"*, Phys. Rev. Lett. **96** (2006) 039703.
6. L. Adamowicz, R. Świrkowicz, J. Jankowska-Kisielińska and K. Mikke, *Some past and present problems of spin magnetism*, Acta Physicae Superficierum **IX**, 71-107 (2006).
7. M. Zdrojek, T. Melin, H. Diesinger, D. Stievenard, W. Gębicki and L. Adamowicz, *Charging and discharging processes of carbon nanotubes probed by electrostatic force microscopy*, Applied Physics Letters **100** (2006) 114326-1(10).
8. K. Zberecki, L. Adamowicz and M. Wierzbicki, *Ab initio prediction of half-metallic ferromagnetic metamaterials composed of alkali metals with nitrogen*, Phys. Status Solidi B **246**, 2270-2278 (2009) / DOI 10.1002/pssb.200945121 (most accessed Early View article in August 2009).
9. J. Judek, D. Brunel, T. Mélin, M. Marczak, M. Zdrojek, W. Gębicki and L. Adamowicz, *Light polarized resonant Raman spectra from individual single and double-wall carbon nanotubes*, Phys. Status Solidi C 6, No. 9, 2056– 2059 (2009) / DOI 10.1002/pssc.200881757.
10. L. Adamowicz, M. Wierzbicki, *Symmetry Induced Half-Metallic Alkaline Earth Ferromagnets*, Acta Phys. Polonica A **115**, 217 (2009).
11. M. Marczak, J. Judek, A. Kozak, W. Gębicki, C. Jastrzębski, L. Adamowicz, D. Luxembourg, D. Hourlier and T. Mélin, *The individual core/shell silicon nanowire structure probed by Raman spectroscopy*, Phys. Status Solidi C, 1– 3 (2009) / DOI 10.1002/pssc.200881758.
12. Piotr Borowik, Jean-Luc Thobel, Maciej Bugajski, Leszek Adamowicz, *Monte Carlo Studies of Quantum Cascade Lasers*, Acta Phys. Polonica A **116**, S-49 (2009).
13. Marcin Marczak, Djamil Hourlier, Thierry Mélin, Leszek Adamowicz, and Heinrich Diesinger, *Frequency dependent rotation and translation of nanowires in liquid environment*, Appl. Phys. Lett. **96**, 233502 (2010).
14. Piotr Borowik, Jean-Luc Thobel, and Leszek Adamowicz, *Monte Carlo based microscopic description of electron transport in GaAs/Al_{0.45}Ga_{0.55}As quantum-cascade laser structure*, J. Appl. Phys. **108**, 073106 (2010).
15. Jan Konupek, Piotr Borowik, Jean-Luc Thobel and Leszek Adamowicz, *Monte Carlo studies of the band-bending in GaAs/Al_{0.45}Ga_{0.55}As quantum-cascade laser*, Photonics Letters of Poland **3** (2), 49-51 (2011).
16. Maciej Bugajski, Kamil Kosiel, Anna Szerling, Piotr Borowik, Leszek Adamowicz, Grzegorz Hałdaś, Andrzej Kolek, *Quantum Cascade Lasers*, "Jaszowiec" International School and Conference on the Physics of Semiconductors, Krynica-Zdrój, June (2011).
17. Piotr Borowik, Jean-Luc Thobel, and Leszek Adamowicz, *Combined rate equation and Monte Carlo studies of electron transport in a GaAs/Al_{0.45}Ga_{0.55}As quantum-cascade laser*, Semicond. Sci. Technol. **27**, 115005 (2012).