



Curriculum Vitae

Personal data

First name: **GRZEGORZ**
Family name: **KARCZEWSKI**
Home address: 05-500 Piaseczno, ul .Magnolii 8/1
Phone (private): (++) 48 22 716 84 16
Office address: Institute of Physics, Polish Academy of Sciences,
02-668 Warszawa, Al. Lotników 32/46
Phone (office): (++) 48 22 843 13 31
e-mail: Grzegorz.Karczewski@ifpan.edu.pl
Date and Place of Birth: July 17, 1955, Warszawa, Poland
Marital Status: Married (Bozena)
Nationality: Polish
Languages: Polish, English, German, Russian

Education and scientific degrees

- **2000 - Title of the Professor** bestowed by the President of the Republic of Poland
- **1996 - Habilitation Thesis:** “*Deep electron states in ZnSe and CdTe layers grown by molecular beam epitaxy*”. Degree received in the Institute of Physics, Polish Academy of Sciences.
- **1986 - Ph. D. Theses:** “*Magneto-optics of PbMnS crystals on the basis of diode laser emission investigations*”. Degree received in the Institute of Physics, Polish Academy of Sciences.
- **1979 - M. Sc. Degree** in Physics (Nuclear Methods in Solid State Physics, Warsaw University, “*The Mossbauer effect study of thin permalloy films*”).
- **1974 - 1979** University studies, Department of Physics, Warsaw University, Warsaw, Poland: Specialization – Nuclear methods in Solid State Physics
- **1970 - 1974** J.W. Goethe High School in Warsaw.
- **1962 - 1970** Primary School in Warsaw.

Employment History

2001 - present Full Professor, Institute of Physics Polish Academy of Sciences
2007-2009 Humboldt Professor, University of Wurzburg
1997 - 2001 Associate Professor (Docent), Institute of Physics, Polish Academy of Sciences
1993 - 1996 Assistant Professor (Adjunct), Institute of Physics, Polish Academy of Sciences
1990 - 1993 Post-Doctoral Research Associate, Department of Physics, University of Notre Dame, Notre Dame, Indiana, USA

1986 - 1990 Assistant Professor (Adjunct), Institute of Physics, Polish Academy of Sciences
1979 - 1986 Research Assistant, Institute of Physics, Polish Academy of Sciences

International Experience and Awards

2007 Alexander von Humboldt Award
2001-2002 Visiting Professor at University of Wurzburg, Germany (15 months)
1999-2000 Fulbright Research Award, National High Magnetic Field Lab. Tallahassee, Florida (9 months)
1999-2001 Visiting Professor, Universites Paris 6 et 7, Paris, France (3 x 4 months)
1998 – Visiting professor, University Osaka, Osaka, Japan (1 month)
1990-1993 Post Doctoral Research Associate, University of Notre Dame, USA (3 years)
1986-1987 Post Doctoral Research Associate, Montan –Universitat Leoben, Leoben, Austria (2 x 3 months)
1982-1984 Visiting Research Associate, Max-Planck Institute, Grenoble, France (18 months)

Research Grants

- April 2007 Grand from Polish Ministry for Higher Education and Science, “Quantum transport in spin superlattices” (3 years)
- March 2007, Grand from Polish Ministry for Higher Education and Science, “Growth and properties of ZnO nanowires” (3 years)
- January 2004 – December 2006, 6th FP, “Novel Scalable Memory Concepts and Technologies”, Nosce Memorias
- January 2002- December 2004, 5th FP, “ Spin polarized injection in nanostructures and devices”, Spinosa
- November 2001 – December 2003 – Grant from Polish Committee for Scientific Research, “Technology od nitrogen plasma doping of epitaxila leyers of CdZnMnTe “
- January 1998 – December 1999 - Grant from Polish Committee for Scientific Research, “*Quantum phenomena in two-dimensional electron gas in the presence of exchange interactions*”.
- January 1996 – December 1997 – Grant from Polish Committee for Scientific Research, “ *Doping of II-VI semiconductors grown by molecular beam epitaxy in the aspect of applications for blue-light emitting diode lasers*”.

Scientific Interest

- MBE growth of II-VI compounds
- Spintronics
- Spectroscopy and magneto-spectroscopy of r superlattices, quantum wells, and tin layers
- Optical, electrical, and magnetic properties of diluted magnetic semiconductors.
- Laser diodes and magnetic field tuning of the laser emission

Research experience

- MBE growth of wide-gap II-VI materials (CdTe, ZnSe, ZnTe, MnTe) and layered structures

- (multi quantum wells, super lattices, hetero-structures)
- Cryogenic techniques - use and development
 - Far and near infrared techniques, including generation, magneto-spectroscopy, and detection.
 - General preparation and characterization of semiconductor specimens, including polishing, etching, preparation of ultra thin samples, samples annealing, performing electrical contacts, etc.

Publications

- According to the database “Web of Sciences” coauthor of about 570 regular, original publications published in recognized international journals including:
 - 76 papers in Physical Review B
 - 36 papers in Applied Physics Letters
 - 16 papers Physical Review Letters
 - 13 papers in Journal of Applied Physics
 - 21 papers in Journal of Crystal Growth
 - 48 papers in physica status solidi
 - 12 papers in Solid State Communications
 - Etc.
- Coauthor of a number of papers presented at International Conferences and published only in the form of abstracts
- Current Hirsh Index – 27

Selected 10 papers published in 2010-2011

1. Title: [Midinfrared electroluminescence from PbTe/CdTe quantum dot light-emitting diodes](#)
Author(s): Hochreiner A, Schwarzl T, Eibelhuber M, et al.
Source: **APPLIED PHYSICS LETTERS** Volume: **98** Issue: **2** Article Number: **021106** Published: **JAN 10 2011**
2. Title: [Magnetic polaron formation and exciton spin relaxation in single Cd_{1-x}MnxTe quantum dots](#)
Author(s): Klopotoski L, Cywinski L, Wojnar P, et al.
Source: **PHYSICAL REVIEW B** Volume: **83** Issue: **8** Article Number: **081306** Published: **FEB 15 2011**
3. Title: [Quantum Hall states under conditions of vanishing Zeeman energy](#)
Author(s): Teran FJ, Potemski M, Maude DK, et al.
Source: **PHYSICAL REVIEW B** Volume: **82** Issue: **24** Article Number: **245120** Published: **DEC 21 2010**
4. Title: [Dynamical corrections to spin-wave excitations in quantum wells due to Coulomb interactions and magnetic ions](#)
Author(s): Aku-Leh C, Perez F, Jusserand B, et al.
Source: **PHYSICAL REVIEW B** Volume: **83** Issue: **3** Article Number: **035323** Published: **JAN 27 2011**
5. Title: [Spin polarized electric currents in semiconductor heterostructures induced by microwave radiation](#)
Author(s): Drexler C, Bel'kov VV, Ashkinadze B, et al.
Source: **APPLIED PHYSICS LETTERS** Volume: **97** Issue: **18** Article Number: **182107** Published: **NOV 1 2010**
6. Title: [Brightening of dark excitons in a single CdTe quantum dot containing a single Mn²⁺ ion](#)
Author(s): Goryca M, Plochocka P, Kazimierzczuk T, et al.
Source: **PHYSICAL REVIEW B** Volume: **82** Issue: **16** Article Number: **165323** Published: **OCT 20 2010**

7. Title: [Enhancement of the spin gap in fully occupied two-dimensional Landau levels](#)
Author(s): Kunc J, Kowalik K, Teran FJ, et al.
Source: **PHYSICAL REVIEW B** Volume: **82** Issue: **11** Article Number: **115438** Published: **SEP 21 2010**
8. Title: [Fractional quantum Hall effect in CdTe](#)
Author(s): Piot BA, Kunc J, Potemski M, et al.
Source: **PHYSICAL REVIEW B** Volume: **82** Issue: **8** Article Number: **081307** Published: **AUG 12 2010**
9. Title: [Spin diffusion in the Mn²⁺ ion system of II-VI diluted magnetic semiconductor heterostructures](#)
Author(s): Maksimov AA, Yakovlev DR, Debus J, et al.
Source: **PHYSICAL REVIEW B** Volume: **82** Issue: **3** Article Number: **035211** Published: **JUL 23 2010**
10. Title: [Intrinsic damping of spin waves by spin current in conducting two-dimensional systems](#)
Author(s): Gomez J, Perez F, Hankiewicz EM, et al.
Source: **PHYSICAL REVIEW B** Volume: **81** Issue: **10** Article Number: **100403** Published: **MAR 2010**