

Participation in conferences:

1. 15th European Molecular Beam Epitaxy Workshop, Zakopane, Poland, March 2009., W. Pacuski, poster presentation: *Monolithic distributed Bragg reflectors and microcavities lattice matched to ZnTe*
2. 14th International Conference on II-VI compounds, Saint-Petersburg, August 2009, W. Pacuski, poster presentation: "High-reflectivity distributed Bragg reflectors lattice-matched to ZnTe",
3. Deutsche Physikalische Gesellschaft Frühjahrstagung, Dresden, Germany, March 2009, W. Pacuski, oral presentation: "Monolithic distributed Bragg reflectors and microcavities lattice matched to ZnTe"
4. Workshop on Optics of Nanostructures, Torun, 11 October 2008, A. Babiński: oral presentation: *Exciton localization in the InAs/GaAs wetting layer - a case study*,
5. Semiconductor and carbon based nanostructures in magnetic fields, Grenoble, 24 November 2008, A. Babiński, oral presentation: *Magneto spectroscopy of charged excitons and multiexcitons in single InAs/GaAs quantum dots*,
6. Semiconductor and carbon based nanostructures in magnetic fields, Grenoble, 24 November 2008, P. Kossacki, oral presentation: *Spin manipulation of Mn ions in a CdTe- based quantum dots*,

Presentations at local seminars:

1. Zbig Wasilewski, 3 October 2008, *GaAs/AlGaAs Multiple Quantum Well Terahertz Emitters and Detectors*
2. Karla Kuldova, 19 May 2009: "1.55 μm PHOTOLUMINESCENCE OF MOVPE GROWN InAs/GaAs QUANTUM DOTS"

Publications in international journals:

1. S. M. Vachon, S. Raymond, A. Babinski, J. Lapointe, Z. Wasilewski, and M. Potemski, "Energy shell structure of a single InAs/GaAs quantum dot with a spin-orbit interaction" Phys. Rev. B 79, 165427 (2009)
2. A. Babinski, A. Golnik, J. Borysiuk, S. Kret, P. Kossacki, J. A. Gaj, S. Raymond, M. Potemski, Z. R. Wasilewski, "Three-dimensional localization of excitons in the InAs/GaAs wetting layer - magnetospectroscopic study", phys. stat. sol. (b) 246, 850 (2009)
3. S. Awirothananon, S. Raymond, S. Studenikin, M. Vachon, W. Render, A. Sachrajda, X. Wu, A. Babinski, M. Potemski, S. Fafard, S. J. Cheng, M. Korkusinski, and P. Hawrylak, *Single-exciton energy shell structure in InAs/GaAs quantum dots*, Phys. Rev. B 78, 235313 (2008)
4. A. Babinski, M. Czyż, J. Borysiuk, S. Kret, A. Golnik, S. Raymond, J. Lapointe, and Z. R. Wasilewski, *Neutral and charged excitons localized in the InAs/GaAs wetting layer*, Acta Physica Polonica A, 114, 1055 (2008),
5. W. Pacuski C. Kruse, S. Figge, and D. Hommel, *High-reflectivity broadband distributed Bragg reflector lattice matched to ZnTe*, Appl. Phys. Lett. 94, 191108 (2009)
6. K. P. Korona, A. Drabińska, K. Surowiecka, L. Wołowicz, J. Borysiuk, P. Caban, W. Strupiński, *InGaN QW in external electric field controlled by pumping of 2D-electron gas*, Acta Phys. Pol. A 114, 1179 (2008),
7. K. P. Korona, A. Drabińska, P. Caban, W. Strupiński, *Tunable GaN/AlGaN UV Detectors with Built-in Electric Field*, J. Appl. Phys. 105, 083712 (2009),
8. B. Jouault, M. Gryglas, M. Baj, A. Cavanna, U. Gennser, G. Faini, and D. K. Maude, *Spin filtering through a single impurity in a GaAs/AlAs/GaAs resonant tunneling device*, Phys. Rev. B 79, 041307(R) (2009),

9. J. Szczytko, P. Juszynski, L. Teliga, A. Stonert, R. Ratajczak, A. Korman and A. Twardowski: *On the Question of Ferromagnetism in Proton and He-Irradiated Carbon* ACTA PHYSICA POLONICA A 114, 1387 (2008)
10. J. Szczytko, P. Budzowski, H. Turski, B. Witek, A. Glebowska, A. Krowczynski, D. Pociecha, J. Szydlowska, E. Gorecka and A. Twardowski "Magnetic Liquid Crystals for Molecular Spintronics" ACTA PHYSICA POLONICA A 114, 1383 (2008)
11. A. Drabinska, J.M. Baranowski, K.Pakula, P.Caban, W. Strupinski, Electoreflectance spectroscopy on III-N quantum wells, physica status solidi (a) 206, 816-820 (2009)
12. A. Wysmolek, R. Stepniewski, K. Wardak, J. M. Baranowski, M. Potemski, E. Tymicki, K. Grasza, *1.4 eV - luminescence band in 6H-SiC: symmetry of the associated defect*, International Journal of Modern Physics B 23, 3019 - 3023 (2009)
13. J. Borysiuk, R. Bozek, W. Strupinski, A. Wysmolek, K. Grodecki, R. Stepniewski, and J. M. Baranowski *Transmission electron microscopy and scanning tunneling microscopy investigations of graphene on 4H-SiC(0001)*, Journal of Applied Physics 105, 023503 (2009)
14. K. Surowiecka, A. Wysmolek, R. Stepniewski, M. Potemski and M. Henini, *Time Resolved Magnetophotoluminescence of Biased GaAs/AlGaAs Double Quantum Well Structure*, ACTA PHYSICA POLONICA A 114, 1369 (2008)
15. M. Sakowicz, J. Łusakowski, K. Karpierz, M. Grynberg, W. Gwarek, W. Knap, and S. Boubanga, *Mechanism of radiation coupling to plasma wave field effect transistor sub-THz detectors*, ACTA PHYSICA POLONICA A 114, 1337 (2008),
16. M. Sakowicz, J. Łusakowski, K. Karpierz, W. Knap, M. Grynberg, K. Kohler, G. Valusis, K. Gołaszewska, E. Kamińska, A. Piotrowska, *Terahertz detection by the entire channel of field effect transistors*, ACTA PHYSICA POLONICA A 114, 1343 (2008)
17. R. Buczko, J. Łusakowski, K.-J. Friedland, R. Hey, K. Ploog, *Optical $\Gamma_6 \rightarrow \Gamma_8$ free-to-bound transitions in acceptor δ -doped single heterostructure - theoretical analysis*, ACTA PHYSICA POLONICA A 114, 1079 (2008),
18. K. Nogajewski, K. Karpierz, J. Łusakowski, M. Grynberg, and J. Kossut, *Local electric in-plane potential fluctuations in the CdTe/CdMgTe based multiple quantum wells*, ACTA PHYSICA POLONICA A 114, 1259 (2008),
19. M. Goryca, D. Ferrand, P. Kossacki, M. Nawrocki, W. Pacuski, W. Maslana, J. A. Gaj, S. Latarenko, J. Cibert, T. Wojtowicz, and G. Karczewski, *Magnetization Dynamics Down to a Zero Field in Dilute (Cd,Mn)Te Quantum Well*, Phys. Rev. Lett. 102, 046408 (2009),
20. T. Kazimierczuk, J. Suffczyński, A. Golnik, J. A. Gaj, P. Kossacki and P. Wojnar, *Optically induced energy and spin transfer in nonresonantly coupled pairs of self-assembled CdTe/ZnTe quantum dots*, Phys. Rev. B 79, 153301 (2009)
21. A. A. Toropov, Ya. V. Terent'ev, P. S. Kop'ev, S. V. Ivanom, T. Koyama, K. Nishibayashi, A. Murayama, Y. Oka, A. Golnik, and J. A. Gaj *Exciton broadening and spin dynamics in III-V/II-VI:Mn heterovalent double quantum wells*, Phys. Rev. B 77, 235310 (2008),
22. A. Trajnerowicz, A. Golnik, P. Kossacki, W. Bardyszewski, M. Wiater, G. Karczewski, and T. Wojtowicz, *Excitonic Energy Shifts in CdMnTe/CdMgTe Quantum Wells under Resonant Excitation in Presence of 2D Carrier Gas* ACTA PHYSICA POLONICA A 114, 1403 (2008),
23. S. Nowak, J. Suffczynski, M. Goryca, P. Kossacki, J.A. Gaj, S. Lee, J.K. Furdyna, *Influence of Growth Break before Capping on Photoluminescence Dynamics of CdSe/ZnSe Self-Assembled Quantum Dots* ACTA PHYSICA POLONICA A 114, 1267 (2008),

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25. A. Kwiatkowski , D. Wasik, P. Dłuzewski , J. Borysiuk, M. Kaminska, A. Twardowski , J. Sadowski, Magnetic properties of MnAs nanocrystals embedded in GaAs, Journal of Magnetism and Magnetic Materials 321 (2009) 2788–2791,
26. A. Trajnerowicz, A. Golnik, P. Kossacki, W. Pacuski, W. Bardyszewski, M. Wiater, G. Karczewski and T. Wojtowicz *Changes of the Light-Hole Exciton Line in CdMnTe/CdMgTe Quantum Wells Under Resonant Excitation of the Heavy-Hole Exciton*, J. Korean Phys. Soc. 53, 2981 (2008),
27. A. Golnik, A. Trajnerowicz, T. Kazimierczuk and P. Kossacki, *Picosecond scale dynamics of excitons in CdTe-based quantum wells and quantum dots*, Proceedings of SPIE The International Society for Optical Engineering, Vol. 7214, 721414 (2009),
28. W. Knap, F. Teppe, N. Dyakonova, D. Coquillat, J. Łusakowski, Plasma wave oscillations in nanometer field-effect transistors for terahertz detection and emission, J. Phys: Cond. Matt. 20, 384205 (2008),

Patents:

European Patent Nr. 09151148.5-2222 filed on 22.01.2009; Title: "**Tellurium-based monolithic distributed Bragg reflectors**"