



ACADEMIC TEACHER PROFESSIONAL EXPERIENCE

DOCTORAL SCHOOL OF WROCLAW UNIVERSITY OF SCIENCE AND TECHNOLOGY

1. Basic information

Name, surname:	Regina Paszkiewicz
Grade / Title:	Prof. dr hab. inż. (Prof. PhD habilitation engineer)
Scientific discipline	Automation, Electronics, Electrical Engineering and Space Technologies
Faculty:	Faculty of Electronics, Photonics and Microsystems
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Link to home page and/or research profiles (Google Scholar, ResearchGate, etc.)	https://k70.pwr.edu.pl

2. Publication record

Up to 10 most important papers published over the period of previous 10 years.

No.	Description (authors, publication title, journal / conference, DOI)	Publication year
1.	Stepniak M., Wośko M., Stafiniak A., Prażmowska–Czajka J., Paszkiewicz R. Parasitic masking effect in GaN SA-MOVPE using SiO ₂ masks deposited by the PECVD technique, <i>Materials Science in Semiconductor Processing</i> 160 (2023) 107394, https://doi.org/10.1016/j.mssp.2023.107394	2023
2.	Stępniać M., Wośko M., Paszkiewicz R., The influence of GaN growth temperature on parasitic masking in SA-MOVPE using PECVD SiO ₂ mask <i>Materials Science in Semiconductor Processing</i> , 168, (2023), 107857, https://doi.org/10.1016/j.mssp.2023.107857	2023
3.	Stępniać M., Owczarek S., Szyszka A, Wosko M., Paszkiewicz R., Characterization of the parasitic masking layer formed during GaN SA-MOVPE using PECVD SiO ₂ masks, <i>Applied Surface Science</i> , 640, (2023), 158325, https://doi.org/10.1016/j.apsusc.2023.158325	2023
4.	Kijaszek W., Wiatrowski A., Mazur M., Wojcieszak D, Paszkiewicz R., Kováč J. Jr., Study on properties of diamond-like carbon films deposited by RF ICP PECVD method for micro- and optoelectronic applications, <i>Materials Science and Engineering. B, Advanced Functional Solid-State Materials</i> . 296, (2023), 116691, https://doi.org/10.1016/j.mseb.2023.116691	2023
5.	Stafiniak A., Prażmowska-Czajka J., Kutrowska-Girzycka J., Korbutowicz R., Pawlaczyk Ł, Jadczyk J.N., Serafińczuk J., Paszkiewicz R., Thermal synthesis of Ga ₂ O ₃ /SnO ₂ core-shell nanowires and their structural characterization, <i>Materials Science and Engineering. B, Advanced Functional Solid-State Materials</i> . 2022, vol. 282, art. 115743, s. 1-6. 10.1016/j.mseb.2022.115743	2022
6.	Szyszka A., Wośko M., Stafiniak A., Prażmowska J., Paszkiewicz R., Scanning probe microscopy nanoscale electrical characterization of AlGaIn/ GaN grown on structured GaN templates, <i>Solid-State Electronics</i> . 2022, vol. 193, art. 108288, s. 1-6, 10.1016/j.sse.2022.108288 ,	2022



7.	Szyska A., Wośko M., Paszkiewicz R., Light-assisted scanning probe microscopy characterization of the electrical properties of AlGaIn/GaN/Si heterostructures, Applied Surface Science, 538, (2021), 148189, doi.org/10.1016/j.apsusc.2020.148189	2021
8.	Wośko M., Paszkiewicz B., Stafiniak A., Prażmowska-Czajka J., Vincze A., Indykiewicz K., Stępiak M., Kaczmarczyk B., Paszkiewicz R., Metalorganic vapour-phase epitaxy of AlGaIn/GaN heterostructures on chlorine plasma etched GaN templates without buried conductive layer, Materials Science in Semiconductor Processing, 107, (2020), 104816, https://doi.org/10.1016/j.mssp.2019.104816	2020
9.	Glinkowski M., Paszkiewicz B., Wośko M., Paszkiewicz R., The origin and influence of compensatory current in AlGaIn/GaN type high electron mobility transistor heterostructures with two conducting channels on the Hall measurements, Physica Status Solidi. A, Applications and Materials Science, 217, (2020), 1900661, https://doi.org/10.1002/pssa.201900661	2020
10.	Stępiak M., Wośko M., Prażmowska-Czajka J., Stafiniak A., Przybylski D., Paszkiewicz R., Growth uniformity in selective area epitaxy of AlGaIn/GaN heterostructures for the application in semiconductor devices, Electronics, 9, (2020), art. 2129, doi.org/10.3390/electronics9122129	2020

3. Projects and grants

List of the most important 5 projects/grants with basic description including: title, source(s) of funding, name of the call, role in the project (e.g., principal investigator).

1.	Role in the project (e.g., principal investigator, work package leader, etc.)	Lider
	Project title	Epitaxial system with AIXTRON reactor, homogenisation head, equipment and infrastructure
	Sources of funding	Ministry of Education and Science, (MES)
	Name of the call	SPUB 36/564935/SPUB/SP/2023
	Implementation period	07.2023-07.2026
2.	Role in the project (e.g., principal investigator, work package leader, etc.)	Principal Investigator
	Project title	Hybrid magnetic/non-magnetic van der Waals heterostructures with transition metal dichalcogenides: novel materials for spintronics, valleytronics and opto-spintronics
	Sources of funding	National Science Centre
	Name of the call	OPUS, UMO-2022/45/B/ST5/
	Implementation period	07.2023-06.2027
3.	Role in the project (e.g., principal investigator, work package leader, etc.)	Work package leader of WP2
	Project title	Technologies of semiconductor materials for high power and high frequency electronics, WP2: Technology and materials for vertical AlGaIn/GaN HEMT (VHEMT) fabrication
	Sources of funding	National Centre for Research and Development
	Name of the call	TECHMATSTRATEG, 346922
	Implementation period	(1.12.2017÷31.05.2021).



4.	Role in the project (e.g., principal investigator, work package leader, etc.)	Lider
	Project title	The influence of piezotronic effect on the operation of electronic devices fabricated in AlIn nanostructures
	Sources of funding	National Science Centre
	Name of the call	OPUS no. DEC-2015/19/B/ST7/02494
	Implementation period	6.07.2016÷5.07.2019
5.	Role in the project (e.g., principal investigator, work package leader, etc.)	Lider
	Project title	AlGaIn/GaN HEMT microwave transistor for C and X bands
	Sources of funding	National Centre for Research and Development,
	Name of the call	PBS no. 178782
	Implementation period	1.11.2012÷31.06.2016

4. International experience

Brief description of international cooperation and experience (e.g., research stays, cooperation with foreign entities, coordination or participation in international projects or programmes, keynote speeches and presentations delivered at renowned international conferences, visiting professor stays, invited lectures).

No.	Description	Year(s)
1.	Long term cooperation with International Laser Centre of Slovak Centre of Scientific and Technical Information (ILC SCSTI), Bratislava (Prof. Francisek Uherek)	2010 - present
2.	Long term cooperation with Faculty of electrical engineering Slovak Technical University, Bratislava (Prof. Lubica Stuchlikova, Prof. Jaroslav Kovacs)	2005 - present
3.	Long term cooperation with Institute for Solar Energy, Technical University of Madrid (prof. Carlos Algora, Prof. Mercedes Gabas))	2014 - present
4.	Long term cooperation with Science Faculty, University of Malaga (Prof. Jose Ramos Barrado, Prof. Francisco de Paula Martín Jiménez)	2012 - present
5.	Long term cooperation with IHP GMBH - INNOVATIONS FOR HIGH PERFORMANCE MICROELECTRONICS (Prof. Thomas Schreder, Dr. Katarzyna Hnida)	2014 - present

5. Experience in teaching doctoral students

Brief description of experience in teaching doctoral students (e.g., courses in doctoral schools and PhD studies, summer/winter schools for doctoral students, tutorials, trainings, etc.).

No.	Description	Year(s)
1.	Technology and application of low dimensional semiconductor structures	Winter 2024/2025, Winter 2020/2021, Winter 2018/2019, WUST, Wrocław
2.	Technology of low dimensional semiconductor structures	Winter 2016/2017 WUST, Wrocław



3.	AlGaIn/GaN typu HEMT transducers for sensor applications	2015, Course in ITE PhD studies, Warsaw
4	Technology of AlGaIn/GaN HEMT	2015, Course in ITE PhD studies, Warsaw
5	Application of nanostructures	Winter 2012/2013 Winter 2014/2015, WUUST, Wrocław

6. List of supervised doctoral students

List of all supervised doctoral students that defended the PhD including: name of the student, dissertation title, year of awarding PhD.

No.	Name, surname	Dissertation title	Year of awarding PhD
1.	Mateusz Glinkowski	Conductivity in electronic heterostructures AlInN	2024
2.	Piotr Pokryszka	Development of in situ characterisation methods for MOVPE deposition of nitride films (AlInN),	2023
3.	Sławomir Owczarzak	Application of metallic and dielectric masks in the process of reactive ionic etching of AlGaIn/GaN heterostructures for piezotronic devices	2020
4	Tomasz Szymański	MOVPE of AlInN/Si heterostructures with two-dimensional electron gas	2018
5	Kornelia Indykiewicz	Application of electron beam lithography to the fabrication of AlGaIn/GaN HEMT transistor	2018
6	Jacek Gryglewicz	Process optimisation of reactive ion etching of AlGaIn/GaN heterostructures for electronic device applications	2015
7	Joanna Prażmowska	Interaction of hydrogen with catalytic metal in semiconductor sensors	2011
8	Mateusz Wośko	Development of design and technology of photodetectors using AlInBV semiconductor nanostructures with continuous composition change	2009
9	Adam Szyszka	Study of the influence of the block structure of heteroepitaxial nitride layers on the performance of MSM detectors	2008

7. Prizes and awards

The most important national and international prizes and awards related to research, development and teaching activities.

No.	Description	Year
1.	Rector Award of Wrocław University of Science and Technology	2024, 2022, 2021, 2020, 2013,
2.	Siemens Scientific Award	2004



8. Other significant achievements

Information on other significant achievements related to research, development and teaching activities.

President of the Contest Commission of J. Groszkowski's Award in Polish Vacuum Society, (2022-present)

Chair of Thin Films Section of Polish Vacuum Society at IVST (International Union for Vacuum Science, Technique and Applications), (2007-present)

Member of Polish Vacuum Society, (2004-present)

Member of Scientific Council of Institute of Electron Technology, Warsaw, Poland, (2017 - 2019)