

Dorota Anna Pawlak – Curriculum Vitae

<i>Full name</i>	Dorota Anna Pawlak
<i>Present position</i>	Professor, Head of Department
<i>Permanent working place address:</i>	Institute of Electronic Materials Technology Department of Functional Materials ul. Wólczyńska 133, 01-919 Warsaw, Poland
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Education

- 1994 – M.Sc., with distinction, Warsaw University, Chemistry Dept. – *crystallochemistry*,
1999 – Ph.D., with distinction, Warsaw University, Chemistry Dept. – *crystallochemistry*,
2011 - habilitation, with distinction, Warsaw University, Chemistry Dept. – *physicochemistry of solid state*

Main experience abroad

- Postdoc in Institute for Materials Research, Tohoku University, Sendai, Japan – 2 years (2000-2001)
- TOP500 Innovators 2012 program (9 weeks at the Stanford University Oct. – Dec. 2012, US – second university at the Academic Ranking of World Universities)
- Visiting professor at Centre de Recherche Paul Pascal - CRPP (University of Bordeaux), Bordeaux, France, (1 month, May 2015).
- pending Visiting professor at Sapienza University, Rome, Italy (invited with contract - 1 month in 2017)

Scientific and organizational activity

DAP published ~70 original papers - excluding conference papers (including **J. Am. Chem. Soc.** *IF*~13.0, **Adv. Funct. Mat.** *IF*~11.4, **Chem. Mater.** *IF*~9.4, **Appl. Catalysis B** *IF*~8.3, **Adv. Opt. Mat.** *IF*~5.2, **Inorg. Chem.** *IF*~4.8, **Cryst. Growth & Design.** *IF*~4.4, **Phys. Rev. B** *IF*~3.7, **Opt. Exp.** *IF*~3.1, **Appl. Phys. Lett.** *IF*~3.1,) with number of citations ~ **788**, (excluding own citations); Index H (total) = **15**; Index H (without own citations) = **14**, >**195** total Impact Factor, 4 journal covers, 3 book articles, **3 granted patents** (1 EPO, 2 UPRP) **7 pending patents** (2 EPO, 5 UPRP), **74 invited lectures** at conferences (including 1 plenary & 4 keynote lectures), **29 invited lectures at foreign** (12) **and polish** (17) scientific institutions (including at: *Stanford Univ., US, King's College London, UK, Univ. of Illinois at Urbana-Champaign, US, Univ. of Geneva, Switzerland, Optoelectronic Research Centre, Univ. of Southampton, UK, NASA Glenn Research Center, Cleveland, US, Wright-Patterson Air Forces Base, Dayton, US, Naval Research Laboratory, Washington, US, Univ. of Bordeaux, France, Joseph Stefan Institute, Ljubljana, Slovenia, Univ. of Zaragoza, Spain*).

She is a member of the ITME Scientific Board (2008-2019); the President of the Polish Society for Crystal Growth (2013-2016); on the Directorial Board of Metamorphose Virtual Institute for Artificial Electromagnetic Materials and Metamaterials METAMORPHOSE VI AISBL (2007-now), <http://www.metamorphose-vi.org/index.php/association/structure>; a member of “Stowarzyszenie Krajowa Rada Koordynatorów Projektów Badawczych EU (KRAB, trans.: 'Association-National Committee of Coordinators of EU Projects')”. DAP in the **J. Phys. D editorial board**, in **2016 ERC-starting grants Panel**. DAP has been the organizer of sessions at META- International Conference on Metamaterials, Photonic Crystals and Plasmonics - yearly since 2012; chairman of 5th International Workshop on Directional Ceramics, www.dsec5.com, 3-7.04.2016 Warsaw; chairman of 10th International Conference of Polish Society for Crystal Growth and 6th Congress of Polish Vacuum Society (ICPSCG10 - CPVS6), 16-21.09.2016, Zakopane; co-founder and vice president of the board at 3C CRYSTALS sp. z o.o - SME started with the group members on 18.11.2014, KRS 0000533979.

Prizes

- The FOUNDATION FOR POLISH SCIENCE (FNP) prize for young scientists, 2000.
- Innovator 2011 Laureate. Competition organized by Polish Federation of Engineering Associations, Polish Patent Office, Society of Polish Innovators, and editorial office of „Przegląd Techniczny”.

Chosen more detailed information

International projects

1. **FP6 – Network of Excellence**

METAMORPHOSE - MetaMaterials ORganized for radio, millimeter wave, and PHOtonic Superlattice Engineering
Contract No 500252, Realization time: 01.06.2004 – 31.05.2008, <http://www.metamorphose-eu.org>

DAP – coordinated the efforts of 3 ITME groups participating in NoE, Governing Board member, Executive Committee member, Workpackage leader

2. **FP6 – Network of Excellence**

Towards Functional Sub-Wavelength Photonic Structures,
Realization time: 2008-2012, <http://cost-mp0702.nit.eu/cost-mp0702/>

DAP – co-chaired a sub-project within COST workpackage on self-organization and nanomaterials for novel electromagnetic properties

3. **FP7 – Collaborative Project**

ENSEMBLE - ENgineered SELf-organised Multi-component structures with novel controllaBLe Electromagnetic functionalities, Contract No. NMP4-SL-2008-213669, Realization time: 01.05.2008 – 30.04.2012
<https://www.ensemble-fp7.eu>

DAP – coordinated the efforts of ENSEMBLE Project.

4. **COST - Action MP0803**

Plasmonic components and devices, Realization time: 2008-2012, http://www.cost.esf.org/index.php?id=247&action_number=MP0803

DAP – in Management Board, STSM coordinator

5. **The Polish-Swiss Research Programme**

Hybrid semiconducting materials for solar energy conversion

DAP – Project Leader

6. **AFOSR 14RT0477**, (AFOSR - Air Force Office for Scientific Research)

NOE: NOvel metamaterials and plasmonic materials properties enabled by directional eutectic solidification,
Realization time: 01.03.2014 - 28.02.2017.

DAP – PI - Principal Investigator

7. **ERA.Net RUS Plus INNOVATION**

EXODIAGNOS: Selective express tumor diagnostic with narrow band nanophotonic structures,
Realization time: 01.02.2016 - 31.07.2018.

DAP – PI - Project Coordinator

Programs financed from structural funds

1. **TEAM Programme of the Foundation for Polish Science**

Projects carried out by students, PhD students and postdocs in the best research teams in Poland. The overall objective of the programme is to increase engagement of young scientists in research performed by the best teams and in the best laboratories in Poland. The projects may be carried out in one of the three main thematic areas: Bio, Info, Techno. <http://www.itmeteam.pl>, Realization time: 01.02.2009 – 31.04.2013

Dorota A. Pawlak – Project laureate

National projects

1. **Personal Grant for young scientists**, *Investigation of YAG doped with praseodymium crystal structure,*
Realization date: 01.01.1996-31.12.1996, Project leader.

2. **Personal Grant for young scientists**, *Investigation of YAG doped with chromium and magnesium crystal structure,*
Nr 3 T09A 036 13, Realization date: 01.09.1997-31.08.1998, Project leader.

3. **Personal Grant**, *Correlation of geometrical and spectroscopic parameters in garnet structures,*
Nr 7 T08A 007 15, Realization date: 1999-2001, Main executive.

4. **Personal Grant**, *Self-organized micro and nano oxide materials with periodic structuring,*
Nr 4 T11B 015 24, Realization date: 21.05.2003-20.11.2005, project leader

5. **Personal Grant**, *Self-organized hybrid micro- and nanomaterials,* N515 028 31/1103

- Realization date: 19.09.2006-18.03.2009, project leader
6. **Personal Grant**, *Crystalization and spectroscopic properties of Pr_xLa_{1-x}AlO₃ crystals*, N507 143 32/4056
Realization date: 28.03.2007-27.09.2008, main executive
 7. **Personal Grant**, *Crystallization and characterization of eutectic SrTiO₃-TiO₂ bi-crystals*,
Realization date: 27.11.2008-26.05.2009, main executive
 8. **Personal Grant**, *Emission properties of active oxide materials with periodic structuring*
N N515 421034, Realization date: 2008-2010, main executive
 9. **Personal Grant**, *Emission properties of active hybrid eutectics*
N N515 544238, Realization date: 2008-2011, main executive
 10. **MAESTRO - NCN**, *New generation plasmonic materials*
Realization date: 2012-2016, project leader
 11. **HARMONIA - NCN**, *Na skrzyżowaniu eutektyków z metamateriałami*
Realization date: 2014-2018, project leader

Leader of 10 intra-ITME projects and main executive in 5 intra-ITME projects.

Publications IF = IF(2015)

1. R. Anulewicz, T. Bak, M. Cyranski, T.M. Krygowski, *D. Pawlak*, B. Pniewska, D. Rasala, R. Gawinecki
Substituent Effects on the Geometry of the Pyridine Ring in 1-Methyl-4-(4-R-phenyl)-2,6-diphenylpyridinium Perchlorates
Acta Chem. Scand., (1995), **49**, 515-523 IF(2005)=1.376
2. T.M. Krygowski, *D. Pawlak*, R. Anulewicz, D. Rasala, R. Gawinecki, G. Häfeling, M. N. Homs, F.K.H. Kuske
Resonance Interactions in N-Nitroamine group. X-Ray Study of 2, 3 and 4 - Nitroaminopyridines
Acta Chem. Scand., (1996), **50**, 808-815 IF(2005)=1.376
3. K. Wozniak, T.M. Krygowski, *D. Pawlak*, W. Kolodziejski, E. Grech
Solid-state NMR and X-Ray Diffraction Studies of a Complex of DMAN with Picrolonic Acid
J. Phys. Org. Chem., (1997), **10**, 814-824 IF=1.515
4. T.M. Krygowski, K. Wozniak, R. Anulewicz, *D. Pawlak*, W. Kolodziejski, E. Grech, A. Szady
Through-Resonance Assisted Ionic Hydrogen Bonding in 5-Nitro-N-salicylidene-ethylamine
J. Phys. Chem. A, (1997), **101**, 9399-9404 IF=2.883
5. *D.A. Pawlak*, Z. Frukacz, Z. Mierczyk, A. Suchocki, J. Zachara
Spectroscopic and crystallographic studies of YAG: Pr⁴⁺ single crystals
J. Alloys and Comp., (1998), **275**, 361-364 IF=3.014
6. T. Vosegaard, I.P. Byriel, *D.A. Pawlak*, K. Wozniak, H. J. Jakobsen
Crystal Structure Studies on the Garnet Y₃Al₅O₁₂ by ²⁷Al Single-Crystal NMR Spectroscopy
J. Am. Chem. Soc., (1998), **120**, 7900-7904 IF=13.038
7. *D.A. Pawlak*, K. Wozniak, Z. Frukacz, T.L. Barr, D. Fiorentino, S. Seal
ESCA Studies of Yttrium Aluminium Garnets
J. Phys. Chem. B, (1999), **103**, 1454-1461 IF=3.187
8. K. Wozniak, R. Anulewicz, *D. Pawlak*, K. Jackowski, W. Kolodziejski, T. Dziembowska, Z. Rozwadowski
Hydrogen bonded Schiff bases; dianil of 2-hydroxy-5-methyl-isophthalaldehyde
J. Mol. Struct., (1999), **478**, 267-274 IF=1.780
9. *D.A. Pawlak*, K. Wozniak, Z. Frukacz, T.L. Barr, D. Fiorentino, S. Hardcastle
ESCA Studies of Yttrium Orthoaluminium Perovskites
J. Phys. Chem. B, (1999), **103**, 3332-3336 IF=3.187
10. *D.A. Pawlak*, K. Wozniak, Z. Frukacz
Correlation between structural parameters of garnet and garnet-like structures
Acta Cryst B., (1999), **55**, 736-744 IF=2.892
11. D. Maciejewska, *D. Pawlak*, V. Kolewa
Hydrogen bonding and tautomerism of benzylideneanilines in the solid state

1. **J. Phys. Org. Chem.**, (1999), 12, 875-889 **IF=1.515**
12. *D.A. Pawlak*, Y. Kagamitani, A. Yoshikawa, K. Wozniak, H. Sato, H. Machida, T. Fukuda
Growth of Tb-Sc-Al garnet single crystals by the micro-pulling down method
J. Cryst. Growth (2001), 226, 341-347 **IF=1.462**
13. *D.A. Pawlak*, K. Wozniak, K. Shimamura, T. Fukuda
Correlation Between Structural Parameters of Colquiriite Structures
J. Cryst. Growth (2001) 233/4, 699-708 **IF=1.462**
14. *D.A. Pawlak*, M Ito, M. Oku, K. Shimamura, T. Fukuda
Interpretation of XPS O (1s) in mixed oxides, proved on the mixed perovskite crystals
J. Phys. Chem. B (2002), 106/2, 504-507 **IF=3.187**
15. M. Ito, K. Shimamura, *D. A. Pawlak*, T. Fukuda
Growth of perovskite-type oxides (RE,Sr)(Al,Ta)O₃ as substrates for GaN epitaxial growth (RE=La, Nd)
J. Cryst. Growth (2002), 235, 277-282 **IF=1.462**
16. A. Yoshikawa, Y. Kagamitani, *D. A. Pawlak*, H. Sato, H. Machida, T. Fukuda
Czochralski growth of Tb₃Sc₂Al₃O₁₂ single crystal for Faraday rotator
Mater. Res. Bull. (2002), 37, 1-10 **IF=2.435**
17. M. Ito, K. Shimamura, *D. A. Pawlak*, T. Fukuda,
Growth and characterization of the Perovskite-type oxide (Nd,Sr)(Al,Nb)O₃ and (La,Sr)(Ga,Nb)O₃ as substrates for GaN epitaxial growth
J. Alloys and Comp.(2002), 339 (1-2) 335-338 **IF=3.014**
18. *D.A. Pawlak*, G. Lerondel, I. Dmytruk, Y. Kagamitani, S. Durbin, T. Fukuda
Second order self-organized pattern of terbium-scandium-aluminium garnet terbium-scandium perovskite eutectic
J. Appl. Phys. (2002), 91, No. 12, 9731-9736 **IF=2.101**
19. T. Nishimatsu, N. Terakubo, H. Mizuseki, Y. Kawazoe, *D.A. Pawlak*, K. Shimamura, T. Fukuda
Band structures of perovskite-like fluorides for vacuum-ultraviolet-transparent lens materials
Jpn. J. Appl. Phys. (2002), 41, Part 2, No.4A, L365-L367 expr. letter **IF=1.122**
20. Y. Kagamitani, *D. A. Pawlak*, H. Sato, A. Yoshikawa, H. Machida, T. Fukuda
Annealing effect in terbium-scandium-aluminum garnet single crystal
Jpn. J. Appl. Phys. (2002), 41 Part 1, No.10, 6020-6022 **IF=1.122**
21. T. Nishimatsu, N. Terakubo, H. Mizuseki, Y. Kawazoe, *D.A. Pawlak*, K. Shimamura, N. Ichinose, T. Fukuda
Ab Initio study of divalent 3d transition metal impurities in KMgF₃ and BaLiF₃
Jpn. J. Appl. Phys. (2003), 42, Part 1, No.8, 5082-5085 **IF=1.122**
22. Y. Kagamitani, *D. A. Pawlak*, H. Sato, A. Yoshikawa, J. Martinek, H. Machida, T. Fukuda
Dependence of Faraday effect on the orientation of Tb-Sc-Al garnet
J. Mater. Res. (2004), 19(2) 579-583 **IF=1.579**
23. L. Dobrzycki, E. Bulska, *D. A. Pawlak*, Z. Frukacz, K. Woźniak
Structure of YAG Crystals Doped/Substituted with Erbium and Ytterbium
Inorg. Chem. (2004), 43(24) 7656-7664 **IF=4.82**
24. W. Szyrski, M. Malinowski, J. Kisielewski, M. Swirkowicz, *D. A. Pawlak*, A. Klos, R. Diduszko
Kryształy Yb:Sr₃Y(BO₃)₃ do budowy pompowanych diodowo laserów femtosekundowych
Materiały Elektroniczne (2004), 1/4, 49-63
25. *D. A. Pawlak*, T. Lukaszewicz, M. Carpenter, M. Malinowski, R. Diduszko, J. Kisielewski
Czochralski crystal growth, microstructure and spectroscopic properties of PrAlO₃ perovskite
J. Cryst. Growth (2005), 282(1-2), 260-269 **IF=1.462**
26. M. Kruczek, E. Talik, *D. A. Pawlak*, T. Lukaszewicz
XPS studies of PrAlO₃ crystals before and after the thermal treatment
Optica Applicata (2005) 35(3) 347-354 **IF=0.637**
27. *D.A. Pawlak*, M Ito, L. Dobrzycki, K. Wozniak, M. Oku, K. Shimamura, T. Fukuda
Structure and spectroscopic properties of (AA')(BB')O₃ mixed perovskite crystals
J. Mat. Res. (2005), 20 (12), 412-422 **IF=1.579**

28. *D. A. Pawlak*, K. Kolodziejak, S. Turczynski, J. Kisielewski, K. Roźniatowski, R. Diduszko, M. Kaczkan, M. Malinowski, *Self-organized, rod-like, micron-scale microstructure of Tb₃Sc₂Al₃O₁₂-TbScO₃:Pr eutectic* **Chemistry of Materials** (2006), **18**(9), 2450-2457 **IF=8.535**
29. K. Kolodziejak, S. Turczynski, R. Diduszko, L. Klimek, *D. A. Pawlak* *Tb₃Sc₂Al₃O₁₂ – TbScO₃ eutectic self-organized microstructure for metamaterials and photonic crystals application* **Opto-electronics Review** (2006), **14**, 203-209 **IF=1.611**
30. M. Kruczek, E. Talik, *D. A. Pawlak*, K. Kolodziejak, T. Lukaszewicz *XPS study of PrAlO₃-PrAl₁₁O₁₈ and PrAlO₃-Pr₂O₃ eutectics* **J. Alloys and Comp.** (2007) **442**, 255-258 **IF=3.014**
31. *D. A. Pawlak*, K. Kolodziejak, R. Diduszko, K. Roźniatowski, M. Kaczkan, M. Malinowski, J. Kisielewski, T. Lukaszewicz, *The PrAlO₃-Pr₂O₃ eutectic, its microstructure, instability, and luminescent properties* **Chemistry of Materials** (2007), **19**, 2195-2202 **IF=9.407**
32. *D. A. Pawlak*, K. Kolodziejak, K. Roźniatowski, R. Diduszko, M. Kaczkan, M. Malinowski, M. Piersa, J. Kisielewski, T. Lukaszewicz, *PrAlO₃-PrAl₁₁O₁₈ eutectic – its microstructure and spectroscopic properties* **Crystal Growth & Design** (2008), **8**, 1243-1249 **IF=4.425**
33. M. Kaczkan, *D. A. Pawlak*, S. Turczyński, M. Malinowski *Emission properties of Tb₃Sc₂Al₃O₁₂-TbScO₃ eutectic with self-organized rodlike microstructure* **Physics Procedia**, 2009 **2**, 391-406 **IF=0.7**
34. J. Zhao, N. L. Ross, R. J. Angel, M. A. Carpenter, Ch. J. Howard, *D.A. Pawlak*, T. Lukaszewicz *High-pressure Crystallography of Rhombohedral PrAlO₃ perovskite* **J. Physics, Condensed Matter**, 2009 **21**, 235403 **IF=2.209**
35. A.L. Bajor, J. Kisielewski, K. Kopczyński, T. Lukaszewicz, J. Mierczyk, Z. Mierczyk, J. Młyńczak, *D. A. Pawlak*, M. A. Świrkowicz, *Investigation of nonlinear absorption in YAP and YAG single crystals doped with Co and co-doped with Si* **Opto-electronics Review**, 2009 **17** (2), 187-192 **IF=1.611**
36. M. Wencka, S. Vrtnik, M. Jagodič, Z. Jagličić, S. Turczynski, *D.A. Pawlak*, J. Dolinšek *Observation of anomalous magnetism in the low-temperature monoclinic phase of single-crystalline PrAlO₃ perovskite*, **Phys. Rev. B**, (2009) **80**, 224410 **IF=3.718**
37. K. Sadecka, M. Gajc, *D. A. Pawlak* *Samoorganizujące się struktury eutektyczne metal-tlenek dla zastosowań w fotonice* **Mat. Elektr.**, (2009), **37**(3),3-12
38. M Szubka, E Talik, K Kołodziejak, *D A Pawlak* *Electronic structure and magnetic properties of TiO₂-MnTiO₃ eutectics* **J. of Physics – Conference Series**, (2010), **200**, 072097 (4pp) **IF=0.45**
39. *D. A. Pawlak*, S. Turczynski, M. Gajc, K. Kolodziejak, R. Diduszko, K. Roźniatowski, J. Smalc, I. Vendik *How far are we from making metamaterials by self-organization? The microstructure of highly anisotropic particles with an SRR-like geometry*, **Adv. Funct. Mat.** (2010) **20**(7) 1116-1124 **IF = 11.382**
40. K. Wieteska, W. Wierzchowski, A. Malinowska, S. Turczyński, M. Lefeld-Sosnowska, *D. A. Pawlak*, T. Łukaszewicz, W. Graeff, *X-ray topographic investigations of domain structure in Czochralski grown Pr_xLa_{1-x}AlO₃ crystals*, **Acta Phys Pol A.** (2010) **117**(2), 268 - 271 **IF=0.53**
41. M.A. Carpenter, E.C. Wiltshire, C.J. Howard, R.I. Thomson, S. Turczynski, *D. A. Pawlak*, T. Lukaszewicz *Pseudoproper ferroelastic softening behaviour and dynamic microstructure of monoclinic PrAlO₃ perovskite* **Phase Transitions: A Multinational J.**, (2010) **83** (9), 703-713 **IF=0.858**
42. R. I. Thomson, J. M. Rawson, C. J. Howard, S. Turczynski, *D. A. Pawlak*, T. Lukaszewicz, M. A. Carpenter *Ferroelastic phase transitions and anelastic dissipation in the LaAlO₃ - PrAlO₃ solid solution series* **Phys. Rev. B** (2010) **82**, 214111 **IF=3.718**
43. C. Filipie, V. Bobnar, S. Turczynski, *D. A. Pawlak*, M. Wencka, J. Dolinšek, A. Leystik *Influence of the magnetic field on phase transitions in PrAlO₃* **J. Appl. Phys.** (2010) **108**, 116102 **IF=2.101**

44. M. Szubka, E. Talik, A. Molak, S. Turczyński, *D. A. Pawlak*
Electronic structure of Pr_xLa_{1-x}AlO₃ solid solution
Cryst. Res. & Techn. (2010) **45** (12), pp. 1309-1315 **IF=0.88**
45. M. Malinowski, M. Kaczkan, S. Turczynski, *D. Pawlak*
Concentration effects on Pr³⁺ luminescence in LaAlO₃ crystals
Opt. Materials (2011) **33** (7), 1004-1007 **IF=2.183**
46. M. Kaczkan, *D. A. Pawlak*, S. Turczyński, M. Malinowski
Emission properties of (SrTiO₃ - TiO₂):Pr³⁺ eutectic with self-organized fractal microstructure
Opt. Materials (2011) **33** (10), pp. 1519-1524 **IF=2.183**
47. S. Turczynski, K. Orlinski, *D. A. Pawlak*, R. Diduszko, M. Pękała, J. Mucha, J.F. Fagnard, Ph. Vanderbemden, M. A. Carpenter, *Czochralski crystal growth, thermal conductivity and magnetic properties of Pr_xLa_{1-x}AlO₃, where x = 0, 0.75, 0.55, 0.40, 1*
Cryst. Growth & Design (2011) **11**, 1091–1097 **IF=4.425**
48. K. Bienkowski, S. Turczynski, R. Diduszko, M. Gajc, E. Gorecka, *D. A. Pawlak*
Growth of a Plate-Shaped SrTiO₃-TiO₂ Eutectic
Cryst. Growth & Design (2011), **11**, 9, 3935-3940 **IF=4.425**
49. B. Andrzejewski, *D. A. Pawlak*, T. Klimczuk, S. Turczyński
Relation between structure and magnetic properties of microstructure PrAlO₃
Acta Physica Polonica A (2012) **121**, 1315-1317 **IF=0.53**
50. K. Wieteska, W. Wierzchowski, A. Malinowska, S. Turczyński, M. Lefeld-Sosnowska, *D. A. Pawlak*, T. Łukasiewicz, C. Paulmann, *Synchrotron topographic studies of domain structure in Czochralski grown Pr_xLa_{1-x}AlO₃ and Pr_xLa_{1-x-y}Mg_yAlO₃ crystals*
Acta Physica Polonica A (2012) **121**, 910-914 **IF=0.53**
51. V. Myroshnychenko, A. Stefanski, A. Manjavacas, M. Kafesaki, R. I. Merino, V. M. Orera, *D. A. Pawlak*, E. J. Garcia de Abajo, *Interacting plasmon and phonon polaritons in aligned nano- and microwires*
Opt. Express (2012) **20**, 10879-10887 **IF=3.148**
52. V Z. Boruc, B. Fetlinski, M. Malinowski, S. Turczynski, *D. Pawlak*
Optical transitions intensities of Dy³⁺:Y₄Al₂O₉ crystals
Opt. Materials (2012) **34**(12), 2002-2007 **IF=2.183**
53. Z. Boruc, B. Fetlinski, M. Kaczkan, S. Turczynski, *D. Pawlak*, M. Malinowski
Temperature and concentration quenching of Tb³⁺ emissions in Y₄Al₂O₉ crystals
J. Alloys and Comp (2012) **532**, 92-97 **IF=3.014**
54. M. Gajc, H. B. Surma, A. Klos, K. Sadecka, K. Orlinski, A. E. Nikolaenko, K. Zdunek, *D. A. Pawlak*,
NanoParticle Direct Doping: Novel method for manufacturing three-dimensional bulk plasmonic nanocomposites,
Advanced Functional Materials (2013), **23**, 3443 **IF=11.382**
55. M. O. Ramírez, P. Molina, L. Mateos, S. Turczynski, M. Kaczkan, M. Malinowski, *D. A. Pawlak*, L. E. Bausá,
Pr³⁺-Based Fluorescent TiO₂ Split Ring Resonator-Like Crystalline Microstructures
Science of Advanced Materials (2013) **5**(8), 921-926 **IF=1.812**
56. K. Sadecka, M. Gajc, K. Orlinski, H. B. Surma, A. Klos, I. Jozwik-Biala, K. Sobczak, P. Dluzewski, J. Toudert, *D. A. Pawlak*,
When Eutectics Meet Plasmonics: Nanoplasmonic, Volumetric, Self-Organized, Silver-Based Eutectic
Advanced Optical Materials (2015) **3**, 381-389 **IF=5.19**
57. K. Sadecka, J. Toudert, H. B. Surma, *D. A. Pawlak*,
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Total number of citations and the H index

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52. *D. A. Pawlak, **Self-organizing materials: Bottom-up approach via directional solidification towards metamaterials and plasmonics, 15th Summer School on Crystal Growth - ISSCG-15, 23-29.08.2013, Gdansk, Poland.***
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54. *D. A. Pawlak, **What materials science can give to metamaterials and what metamaterials can give to materials science, Euprometa - European Doctoral Programmes in Metamaterials - School on bottom-up fabrication of metamaterials, 21.09.2013, Bordeaux, France.***
55. *K. Sadecka, M. Gajc, A. Klos, K. Orłinski, P. Osewski, D. A. Pawlak, **FP7 NMP ENSEMBLE: Plasmonic materials and metamaterials by bottom-up approach – manufacturing and properties, NAMF- Nano and Advanced Materials Workshop and Fair, 16-19.09.2013, Warsaw, Poland.***
56. *D. A. Pawlak, **FP7 NMP ENSEMBLE: Plasmonic materials and metamaterials by bottom-up approach – manufacturing and properties, Polish Crystallography - past, present and future, 14.04.2014, Warsaw, Poland.***
57. *K. Sadecka, M. Gajc, K. Korzeb, P. Osewski, S. Turczynski, A. Klos, B. Surma, D. A. Pawlak, **Novel hybrid materials for photonics manufactured by crystal growth methods, CES, 14.04.2014, Przesieka, Poland.***
58. *D. A. Pawlak, M. Gajc, K. Sadecka, K. Korzeb, P. Osewski, A. Klos, B. Surma, A. Belardini, G. Leahu, C. Sibilía, **Bottom-up crystal-growth-based manufacturing of bulk nanoplasmonic materials and metamaterials, META'14, 20-23.05.2014, Singapore.***
59. *D. A. Pawlak, K. Sadecka, M. Gajc, K. Korzeb, P. Osewski, A. Klos, B. Surma, A. Belardini, G. Leahu, C. Sibilía, **Manufacturing of bulk nanoplasmonic materials and metamaterials by micro-pulling down method, SPIE Optics & Photonics, 23-29.08.2013, San Diego, USA.***
60. *K. Sadecka, M. Gajc, B. Surma, D. A. Pawlak, **Advances in eutectic and nanoparticle based composite materials through directional solidification, 57th Meeting of The Polish Chemical Society and The Society of Engineers and Technicians of Chemical Industry - Nowe krystaliczne materiały funkcjonalne, 14-18.09.2014, Czestochowa, Poland.***
61. *D. A. Pawlak, M. Gajc, K. Sadecka, P. Osewski, K. Kolodziejak, S. Turczynski, A. Klos, A. Belardini, G. Leahu, C. Sibilía, **Metamaterials and plasmonic materials manufactured by crystal growth methods, Metamaterials Congress***

- **The 8th International Congress on Advanced Electromagnetic Materials in Microwaves and Optics**, 24-28.09.2014, Copenhagen, Denmark.

62. *D. A. Pawlak*, When crystal growth meets metamaterials and plasmonics, Interdisciplinary FNP Conference, 9-10.04.2015, Warsaw, Poland.
63. *D. A. Pawlak*, M. Gajc, K. Sadecka, P. Osewski, A. Klos, E. Petronijevic, A. Belardini, G. Leahu, C. Sibilica, *Crystal growth methods as a tool for manufacturing metamaterials and plasmonic materials*, **PIERS 2015 - Progress In Electromagnetics Research Symposium**, 6-9.07.2015, Prague, Czech Republic.
64. *D. A. Pawlak*, K. Sadecka, P. Osewski, M. Gajc, K. Korzeb, A. Klos, E. Petronijevic, A. Belardini, G. Leahu, C. Sibilica, *Plasmonics/metamaterials and crystal growth at the crossroads*, **META 2015 - the 6th International Conference on Metamaterials, Photonic Crystals and Plasmonics**, 4-7.08.2015, New York, US.
65. *M. Gajc*, K. Korzeb, H. Surma, D. Pawlak, *Plasmonic enhancement of photoluminescence of erbium ions and CdTe quantum dots in nanocomposites with silver nanoparticles*, **META 2015 - the 6th International Conference on Metamaterials, Photonic Crystals and Plasmonics**, 4-7.08.2015, New York, US.
66. *K. Sadecka*, M. Gajc, H. B. Surma, J. Toudert, D. A. Pawlak, *Metallo dielectric eutectic composite for plasmonic applications*, **META 2015 - the 6th International Conference on Metamaterials, Photonic Crystals and Plasmonics**, 4-7.08.2015, New York, US.
67. *D. A. Pawlak*, K. Sadecka, P. Osewski, M. Gajc, K. Korzeb, A. Klos, E. Petronijevic, A. Belardini, G. Leahu, C. Sibilica, *Bottom-up approach to metamaterials and plasmonic materials*, **Metamaterials Congress 2015**, 7-12.09.2015, Oxford, UK.
68. *D. A. Pawlak*, M. Gajc, K. Sadecka, P. Osewski, K. Korzeb, S. Turczynski, K. Wymułek, J. Sar, *Eutectic and nanoparticle based composite materials with unusual optical properties manufactured by crystal growth methods*, **E-MRS**, 15-18.09.2015, Warsaw, Poland.
69. *D. A. Pawlak*, K. Sadecka, P. Osewski, M. Gajc, K. Orlinski, A. Klos, *Novel materials made by crystal growth methods for light-matter interaction*, **EUROMAT**, 20-24.09.2015, Warsaw, Poland.
70. *D. A. Pawlak*, K. Sadecka, P. Osewski, M. Gajc, A. Klos, E. Petronijevic, A. Belardini, G. Leahu, C. Sibilica, *Plasmonic materials and metamaterials manufactured utilizing directional solidification*, **2nd EOS Topical Meeting on Optics at the NanoScale (ONS'15)**, 17-19.07.2015, Capri, Italy.
71. *D. A. Pawlak*, K. Sadecka, P. Osewski, M. Gajc, A. Klos, E. Petronijevic, A. Belardini, G. Leahu, C. Sibilica, *Plasmonic materials and metamaterials obtained by crystal growth methods*, **Nanoitaly**, 21-24.09.2015, Rome, Italy.
72. *D. A. Pawlak*, M. Gajc, K. Sadecka, P. Osewski, B. Surma, K. Wymułek, J. Sar, *Crystal growth methods as a tool for manufacturing metamaterials and plasmonic materials*, **40th International Conference and Expo on Advanced Ceramics and Composites - ICACC**, 24-29.01.2016, Daytona, US.
73. *D. A. Pawlak*, M. Gajc, K. Sadecka, P. Osewski, B. Surma, A. Klos, *Functional hybrid oxide-based materials for photonics*, **E-MRS**, 19-22.09.2016, Warsaw, Poland.
74. *D. A. Pawlak*, R. Nowaczynski, M. Kurowska, P. Paszke, M. Gajc, K. Sadecka, P. Osewski, B. Surma, A. Klos, *Crystal growth-based methods used for manufacturing of volumetric novel photonic materials as plasmonic nanomaterials, metamaterials*, **OPTICS2016**, 28-30.11.2016, Atlanta, US.

Invited lectures at Foreign and Polish Scientific Institutions

1. BY *Prof. J. Gronkowski*, *Kryształy fotoniczne a metoda mikro-wyciągania*, 15.01.2003, **Physics Dept., Warsaw University, Poland.**
2. BY *Prof. Andrzej Suchocki*, *Kryształy fotoniczne – materiały przyszłości* 22.01.2003, **Inst. of Physics, PAS, Warsaw, Poland.**
3. BY *Prof. T. Szoplik*, *Kryształy fotoniczne – materiały przyszłości* 27.03.2003, **Physics Dept., Inst. of Geophysics, Warsaw University, Poland.**
4. BY *Prof. W. Gawlik*, *Kryształy fotoniczne a metoda mikro-wyciągania* 27.04.2005, **Physics Dept., Jagiellonian University, Cracow, Poland.**
5. BY *Prof. V. Orera*, *Eutectics for photonic crystals and metamaterials applications* 16.02.2007, **University of Zaragoza, Spain.**
6. BY *Prof. K. Wozniak*, *Samoorganizujące się struktury eutektyczne – na drodze do nowoczesnych zastosowań w fotonice, takich jak kryształy fotoniczne i metamateriały*, 16.02.2007, **Chemistry Dept., Warsaw University, Poland.**

7. BY Prof. K. J. Kurzydłowski, *Samoorganizujące się struktury eutektyczne – na drodze do nowoczesnych zastosowań w fotonice (kryształy fotoniczne, metamateriały)*, 18.09.2008, **Dept. of Materials Sciences, Warsaw Technical University, Poland.**
8. BY Prof. N. I. Zheludev, *Materials for Metamaterials: self-organized eutectic micro- and nanostructures*, 08.10.2008, **ORC Seminar Series, Optoelectronic Research Centre, University of Southampton, UK.**
<http://www.orc.soton.ac.uk/272.html>, <http://www.orc.soton.ac.uk/448.html>
9. BY Prof. E. Górecka, Prof. K. Woźniak, *O samo-organizujących się strukturach eutektycznych dla fotoniki (kryształy fotoniczne, metamateriały)*, 29.10.2008, **Chemistry Dept., Warsaw University, Poland.**
10. BY Prof. E. Talik for representatives of science and education from Katowice, *Samoorganizujące się struktury eutektyczne do zastosowań jako kryształy fotoniczne i metamateriały* 14.11.2008, **Institute of Electronic Materials Technology, Warsaw, Poland.**
11. BY Prof. J. Misiuk-Bąk, *Samoorganizujące się struktury eutektyczne – na drodze do nowoczesnych zastosowań w fotonice (kryształy fotoniczne, metamateriały)*, 18.11.2008, **Institute of Physics, PAS.**
12. BY Prof. E. Talik, *Symposium: 2009 Physics Nobel Prize, Samoorganizujące się struktury dla fotoniki* 10.03.2010, **Silesia University, Katowice, Poland.**
13. BY Prof. R. Czajka, *Samoorganizujące się struktury dla fotoniki (kryształy fotoniczne, metamateriały)* 18.03.2010, **Dept. of Technical Physics, Poznań Technical University, Poland.**
14. BY Prof. R. Czajka, *Granty europejskie – jak dostać i jak sobie radzić z ich realizacją (na przykładzie projektu ENSEMBLE)*, 18.03.2010, **Dept. of Technical Physics, Poznań Technical University, Poland.**
15. BY Prof. W. Jaskólski, *Thursday's Physics Seminars, Samoorganizujące się struktury dla fotoniki* 08.04.2010, **Institute of Physics, Nikolaus Copernicus University, Toruń, Poland.**
16. BY Prof. J. Dolinsek, *Novel self-organized materials for photonics* 13.05.2010, **Joseph Stefan Institute, Ljubljana, Slovenia.**
17. BY Prof. E. Gianini, *Bottom-up approach via directional solidification towards metamaterials and plasmonics* 13.05.2010, **University of Geneva, Département de Physique de la Matière Condensée, Switzerland.**
<http://dpmc.unige.ch/fr/seminaires/seminaires.php>
18. BY Dr. A. Sayir, *Eutectic and nanoparticle based composite materials for plasmonics and metamaterials* 05.06.2012, **NASA Glenn Research Center, Cleveland, Ohio, US.**
19. BY Dr. A. Urbas, *Eutectic and nanoparticle based composite materials for plasmonics and metamaterials* 07.06.2012, **Wright-Patterson Air Forces Base, Dayton, Ohio, US.**
20. BY Prof. P. V. Braun, *Bottom-up manufacturing methods for metamaterials and plasmonic materials* 13.09.2012, **University of Illinois at Urbana-Champaign, US.**
<http://www.matse.illinois.edu/hardseminar.html>
21. BY Prof. O. Solgaard, *Bottom-up manufacturing methods for metamaterials and plasmonic materials* 05.12.2012, **Stanford University, California, US.**
22. BY Prof. R. Holyst, *Bottom-up manufacturing methods for metamaterials and plasmonic materials* 28.02.2013, **Institute of Physical Chemistry, PAS, Warsaw, Poland.**
23. BY Prof. W. Gawlik, *Na drodze do metamateriałów i plazmoniki: kierunkowo zestalane materiały*, 10.04.2013, **Physics Dept., Jagiellonian University, Cracow, Poland.**
24. BY Prof. A. Maziewicz *Eutectic and nanoparticles-based composite materials for plasmonics and metamaterials*, 23.04.2013, **Physics Dept., University of Białystok, Białystok, Poland.**
25. BY Prof. E. Talik, *Symposium poświęcone prof. Janowi Czochochalskiemu, Zastosowanie kierunkowej krystalizacji dla materiałów nowoczesnej fotoniki (metamateriały, materiały plazmoneczne)*, 08.05.2013, **Silesia University, Katowice, Poland.**
26. BY Prof. Wittlin, *Na drodze do metamateriałów i plazmoniki – kierunkowo zestalane materiały* 21.05.2013, **Institute of Physics, PAS, Warsaw, Poland.**
27. BY Prof. V. Ponsinet and prof. Ph. Barois, *Plasmonic materials and metamaterials manufactured using directional solidification*, 06.05.2015, **Amadeus Seminar - Centre de Recherche Paul Pascal - CRPP (University of Bordeaux), Bordeaux, France.** <http://amadeus.labex.u-bordeaux.fr/Actualites/AMADEus-Seminar-Dr-Dorota-Pawlak-Wednesday-6-May-2015-10-30-am-CRPP,i2887.html>
28. BY Dr. O. Glembocki, dr. M. Spector, *Eutectic and nanoparticle based composite materials with unusual optical properties manufactured by crystal growth methods*, 21.05.2015, **Naval Research Laboratory, Washington DC, US.**
29. BY Prof. T. Cardinal, dr. M. Treguer-Delapierre, *Eutectic and nanoparticle based composite materials with unusual optical properties manufactured by crystal growth methods*, 03.06.2015, **ICMCB, Bordeaux, France.**

Organizational efforts

Vice president of the board

3C CRYSTALS sp. z o.o. - SME started on 18.11.2014,
KRS 0000533979.

Different functions at Polish Society for Crystal Growth (PTWK) in different times.. secretary of the section, treasurer, Scientific Secretary (2005-2007), Leader of the Bulk Crystal Section (2007 - 2010), president-elect (2011-2013), president (2013-2016), eks-president (2016-2019)

Director in the Director Board	Metamorphose Virtual Institute for Artificial Electromagnetic Materials and Metamaterials METAMORPHOSE VI AISBL — terms of office: 2007-2008 and 2008-now, http://www.metamorphose-vi.org
Member	Association of the National Council of the EU Research Project Coordinators (Stowarzyszenia Krajowej Rady Koordynatorów Projektów Badawczych EU, KRAB) http://www.if.pw.edu.pl/~krab/
Member	Scientific Advisory Board, Institute of Electronic Materials Technology, terms of office: 2008-2011, 2011-2015, 2015-2019
Member	SPIE – The International Society for Optical Engineering

Participation in organization of conferences:

Participation in organization of different conferences:

Organizer of the session	8th International Conference on Metamaterials, Photonic Crystals and Plasmonics, META, 25-28 July 2017, Seoul, South Korea
Conference Chairman	X International Conference of Polish Society for Crystal Growth - ICPCSG10, 16-21 October 2016, Zakopane, Poland
Conference Chairman	5th International Workshop on Directionally Solidified Ceramics, DSEC 5, 3-7 April 2016, Warsaw, Poland
Organizer of the session	7th International Conference on Metamaterials, Photonic Crystals and Plasmonics, META, 25-28 July 2016, Malaga, Spain
Organizer of the session	6th International Conference on Metamaterials, Photonic Crystals and Plasmonics, META, 4-7 August 2015, New York, USA
Organizer of the session	5th International Conference on Metamaterials, Photonic Crystals and Plasmonics, META, 20-23 May 2014, Singapore
Conference Secretary	International Conf. on Crystal Growth, ICCG-2013, Warsaw Poland
Organizer of the session	4th International Conference on Metamaterials, Photonic Crystals and Plasmonics, META, 18-22 March 2013, Sharjah, UAE
Organizer of the session	3rd International Conference on Metamaterials, Photonic Crystals and Plasmonics, META, 19-22 April 2012 Paris
Programme sub-committee	on “Physics of Metamaterials, Periodic and Random Media” 23-27 August, 2010, Kazan, Russia, the International Conference on Coherent and Nonlinear Optics (ICONO-2010)
Technical Programme Committee	International Conference on Metamaterials, Photonic crystals and Plasmonics META'10, Cairo, Egypt on 22-25 February 2010
Programme Committee	SPIE Optics and Optoelectronics, Symposium 2009 (EOO09), 20-24 April 2009, Prague, Czech Republic
Chairman and organizer of the session	XXI Congress of the International Union of Crystallography, IUCr2008, 23-31 Aug. 2008, Osaka, Japan
Technical Programme Committee	META'08, NATO Advanced Research Workshop, Metamaterials for Secure Information and Communication Technologies, 7-10 May, 2008, Marrakesh – Morocco
Chairman and organizer of the School	Women in Photonics (WiP) – School on Photonic Metamaterials, 13-18.04.2008, Paris, France
Chairman of the session	METAMATERIALS-2007 Congress, 2007, 22-26 October, Rome, Italy
Steering Committee	Distributed European School on Metamaterials 8th Edition, October 25-26, 2007, Rome, Italy
Conference Secretary	Conference on Solid State Crystals and Eighth Polish Conference on Crystal Growth (ICSSC-5 & PCCG-8), 20-24 May 2007 Zakopane, Poland.
Co-organizer of the School	6th European Doctoral School on Metamaterials organized by METAMORPHOSE Network of Excellence, 7-9 may 2007, Warsaw, Poland
Chairman of the session	SPIE International Congress on Optics and Optoelectronics: Metamaterials 28 Aug. - 2 Sept. 2005, Warszawa, Poland

