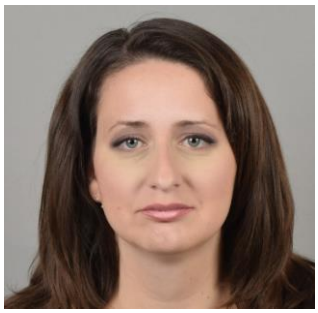
ЛИЧНА ИНФОРМАЦИЯ

Мария Петрова Александрова - Пандиева



ТУ-София, Факултет по електронна техника и технологии, катедра Микроелектроника, бул. „Климент Охридски“, № 8, бл.1
+3592 965 30 85 (каб. 1000В)
m_ aleksandrova@tu-sofia.bg

Пол жена | Дата на раждане | Националност Българска

Област на работа и научни интереси: Материали и технологии за микро- и наноелектрониката

ТРУДОВ СТАЖ

от 2015 - до момента

Доцент

по научна специалност “Технология на електронното производство”, направление 5.2. Електротехника, електроника и автоматика , ТУ София, ФЕТТ, катедра “Микроелектроника”. Разработване на лекционни курсове за нуждите на учебния процес в катедра “Микроелектроника”. Ръководство на докторанти и дипломанти. Ръководство и участие в научно изследователските и образователни проекти към катедра МЕ и ФЕТТ.

от 2012 до 2015

Главен асистент

по научна специалност “Технология на електронното производство”, направление 5.2. Електротехника, електроника и автоматика , ТУ София, ФЕТТ, катедра “Микроелектроника. Разработване на лабораторни и семинарни упражнения за нуждите на учебния процес в катедра “Микроелектроника”. Участие в научно-изследователските и образователни проекти към катедрата. Отговорник за учебната дейност в катедрата.

от 2010 до 2012

Асистент

ТУ- София, ФЕТТ, катедра “Микроелектроника”. Разработване на макети за практическите занятия, разработване на лабораторни и семинарни упражнения за нуждите на учебния процес в катедра “Микроелектроника”, провеждане на летни стажове на студенти. Участие в научно изследователските проекти към катедрата.

от юни 2010-до декември 2010

Инженер електроника

БАН, Институт по физика на твърдото тяло, лаборатория по Акустоелектроника

Поддръжка на апаратурата в лабораторията, вакуумно нанасяне на сензорни слоеве тестване и измерване на параметрите на газови сензори, изготвяне на постери за конференции, поддръжка на базата данн и на лабораторията.

ОБРАЗОВАНИЕ

2007-2010	Доктор по научна специалност “Технология на електронното производство”. ТУ-София, ФЕТТ, катедра “Микроелектроника” Тема на дисертационния труд: “Оптимизиране на интерфейси при молекулни оптоелектронни структури”.
2005 - 2007	Магистър, специалност “Електроника”. ТУ-София, ФЕТТ, катедра “Микроелектроника” Тема на дипломната работа: “Газови сензори на базата на тънки слоеве от титанов диоксид”.
2001 - 2005	Бакалавър, специалност “Електроника”. ТУ-София, ФЕТТ, катедра “Микроелектроника” Тема на дипломната работа: “Сензорни слоеве от титанов диоксид”.

Майчин език Български

Други езици

	РАЗБИРАНЕ		ГОВОРЕНЕ		ПИСАНЕ
	Слушане	Четене	Участие в разговор	Самостоятелно устно изложение	
Английски език	C1	C1	C1	C1	C1

Комуникационни умения и компетенции

Много добри комуникационни у мения, придоби ти по време на работата ми като междуфакултетен координатор на проект от “Структурни фондове”, ръководител на 2 международни и 2 национални проекта с партньори, и като участник в разнородни екипи на международни и междуинституционални научно-изследователски и образователни проекти.

Организационни умения и компетенции

Много добри организационни умения като ръководител на 2 научно-изследователски лаборатории, за научните проекти отговорна за екип от> 25 души от различни институции; организатор на учебния процес, отговорен за средно годишно 80 студенти бакалаври и 30 студенти магистри; отговорник за образователната дейност на ниво катедра.

Професионални умения и компетенции

1. Владеене на технологич ни процеси в електронното и микроелектронното производтсво;
2. Работа със специализирана вакуумна апаратура за нанасяне и на тънки слоеве
3. Работа със специализирана апаратура за спояване и заваряване в електрониката и микроелектрониката.
4. Работа със специализирана апаратура за характеризиране на слоеве и тестване на микроелектронни структури;
5. Владеене на програми с изследователска насоченост, умения за разработка и управление на научно-изследователски проекти и владеене на специализиран технически английски език.

Компютърни умения и компетенции

Специализирани софтуерни продукти, свързани с практикуваната научна и учебна дейност - SimOLED , Optalix , LabVIEW , Origin, Protel.

Публикации	>60 за последните 5 години. https://scholar.google.bg/citations?user=4nIU9nIAAAAJ&hl=bg https://www.scopus.com/authid/detail.uri?authorId=35076971000. https://www.researchgate.net/profile/Mariya_Aleksandrova?ev=hdr_xprf&_sg=ptTWGkUtL-CW534PJscnqbYztYD6lCvxA_qOjdfB1knUM9iKMQQtKNLisnNXUSLL
Проекти	18 (7 национални и 11 международни). Подробна информация е дадена в края на документа.
Мобилност	Гост лектор в 1. University of Lakehead, Thunderbay, Canada (2019) с тема на курса „Гъвкава електроника“; 2. University of Cyprus, Nicosia, Cyprus, 2019 с курс по Органична електроника; 3. HEIG-VD, University of Applied Sciences Western Switzerland, Institut de Micro et Nanotechniques – Laboratory of Applied NanoSciences, 2014 с курс Пиезоелектрични преобразуватели; 4. Hellenic Mediterranean University, Greece, 2020 с теми, свързани с обучението на инженери по микротехнологии и наноинженеринг.
Награди	16 (Подробна информация е дадена в края на документа.)
Членства	Съюз на учените в България; Член на Европейската асоциация на изследователите; Член на Български комитет по стандартизация – секция Нанотехнология; Член на организационен и научен комитет на международни конференции и член на редакторски колегии на сисания (подробна информация е дадена в края на документа)
Специализации	“Piezoelectric nanogenerators” (Prof. Wang, MNE, Rhodes, 2019) , “Complex semiconductors epitaxy” and “X-ray diffraction” (University of Leakhead, Canada, 2018), “Imaging at the Nanoscale I: Scanning Tunneling Microscopy - measurement principle, instrumentation and applications”, March 17-21, 2014, HEIG-VD, University of Applied Sciences Western Switzerland, Institut de Micro et Nanotechniques – Laboratory of Applied NanoSciences, CH-1401 Yverdon-les-Bains.

Научни и образователни проекти:

1. ERA.Net RUS Plus Call 2019 on Science and Technology, Project: - Controllable Synthesis, Plasma - Induced Functionalization, Experimental Characterization and Modeling of the Advanced Hybridized Carbon - Based Nano - Scale Materials and Coatings with Desired Properties for Development the New - Generations of High - Performance Sensor Architectures with Different Sensing Mechanisms for Environment and Health, 2020- 2024.
2. National center of Mechatronics and clean technologies, 2019-2023, BG05M2OP001-1.001-0008-C01
3. Bi-lateral projects “Bulgaria – India” 2018, “Stable and High Sensitive Low Dimensional Perovskite Photodetectors”, 2019-2021.
4. Bi-lateral projects “Bulgaria – India” 2018, “Ultrahigh efficient lead-free perovskite solar cells”, 2019-2021.
5. Researcher and coordinator in project of R&D sector of TU-Sofia entitled “Study of oxide piezoelectric elements with application in NEMS”, 2019-2021.
6. Researcher and coordinator in project of National Science Fund in concourse “Competition for financial support of fundamental research”, entitled “Ferroelectric materials on silicon for new sensor devices”, 2018-2021.
7. Researcher and coordinator in project of National Science Fund in concourse “Competition for financial support of fundamental research”, entitled “Study of the piezoelectric response of layered microgenerators on flexible substrates”, 2016-2019.
8. Lecturer, trainer and co-author of curriculum in Nanomaterials in ERASMUS+/Knowledge Alliance/562206-EPP-1-2015-1-BG-EPPKA2-KA “Microelectronics Cloud Alliance – MECA”, 2016-2018.
9. On-line course lecturer “Nanomaterials: Organic semiconductors and their application in molecular electronics” and video lab training course “Flexible OLED fabrication”, Project 543861-TEMPUS-1-2013-BG-TEMPUS-JPCR (2014-2017) Education in Nanotechnologies (EduNano), 2015.
10. Project Leader and researcher in Scientific-Research Project “Perspective project leader”, № 141ПР0005-03, “Fabrication of polymeric light emitting structures on flexible substrates”, 1 year duration, 2014.
11. SCOPES project “Skills development for young researchers and educational personal in nano and microelectronics curricula: implementation of methods for bilateral knowledge transfer between universities and SMEs”, no. IZ74Z0_137353 (2011-2014), funded by the SNSF and the Swiss Agency for Development and Cooperation, boosting scientific co-operation between research groups and institutions in Switzerland and in Eastern Europe, 2014.
12. Academic advisor in project № BG051PO001-3.3.07-0002 "Student practice", funded by EU OP “Development of Human Resources” with 3 successful finished bachelors in Electronics as a trainee-researcher in the Institute of informatics and communication technologies, BAS, 2014.

13. Project coordinator of Master syllabus development “Microtechnology and Nanoengineering” in project “Renewing of the syllabus and student courses of the specialties in Faculty of Electronic Engineering and Technologies, Faculty of Telecommunications and Faculty of Industrial Technology in TU-Sofia and formation of new Master syllabus according to the necessities and requirements of the labor market , 2013-2014.

14. INERA, “Research and Innovation Capacity Strengthening of ISSP-BAS in Multifunctional Nanostructures” REGPOT-2012-2013-1 NMP, EU FP7 Nanosciences, Nanotechnologies, Materials and new Production Technologies – NMP, 2013-2016, Work group “Smart window-electrochromic devices and electrochemical splitting of water”.

15. Project Leader and researcher in Scientific-Research Project for Young Scientists funded by Ministry of Education and Science of Bulgaria DMU 03/5 “New methods for preparation of low-molecular based electroluminescent layers in flexible display structures” 2011-2013.

16. Researcher in National Scientific-Research Project for Young Scientists funded by Ministry of Education and Science of Bulgaria, entitled “Application of new low-molecular weight organic compounds in experimentally prepared display structures”, 2008-2011.

17. Main Researcher in project for PhD students support funded by Scientific Research Centre of Technical University of Sofia, Bulgaria, entitled “Preparation and investigation of multilayer electroluminescent structures based on organic materials” - 2009.

18. Researcher in project funded by Scientific Research Centre of Technical University of Sofia, Bulgaria, entitled “Molecular based optoelectronic structures with organic semiconductors” - 2008.

Научни награди:

1. International award WOMEN RESEARCHER AWARD, International Research Awards on Science, Technology and Management, 14 & 15-May-2022, Chennai, India.
2. Engineered Science Society Fellow award, Engineered Science Publisher LLC, Knoxville, TN 37934 USA for achievement in science and engineered practice, 26.12.2021.
3. Vebleo Fellow Keynote Talk Award, "Ferroelectric oxides on silicon for sensor devices" in the Webinar on Materials Science, Engineering and Technology, 25 - 28 June 2021.
4. Science award of the International Association of Advanced Materials, 2021.
5. Awards for Excellence – 2017, Category “Outstanding Papers”, Highly commended paper in Microelectronics International“, Volume 33 number 1, Study of flexible organic electroluminescent devices with PEDOT:PSS anodes by impedance measurements, Mariya Petrova Aleksandrova.
6. “Key Scientific Article”, 2016, awarded from Advances in Engineering for paper Mariya Aleksandrova, Nikolay Kurtev, Valentin Videkov, Slavka Tzanova, Silvia Schintke, Material alternative to ITO for transparent conductive electrode in flexible display and photovoltaic devices, Microelectronic Engineering, Special Issue Micro/Nano Devices & Systems, vol. 145, art. no. 9805, pp. 112 – 116, 2015.
7. Best Developed course topic "Development of educational content using modern interactive ICT in teaching, according to ECTS", TU-Sofia, 24.07.2014.
8. National Award of FEDERATION OF THE SCIENTIFIC ENGINEERING UNIONS for paper presented on XI National Scientific and Practical Conference for Young Scientists, 25 – 26 April, 2013, Sofia.
9. WASET Certificate of Award in oral and technical presentation, recognition and appreciation of research contributions to ICMON 2012 International Conference on Microelectronics, Optoelectronics, and Nanoelectronics, Paris, France, November 28-29, 2012, International Scientific Research and Experimental Development.
10. Certificate of excellent poster presentation awarded for paper “Thermally activated current for defect analysis in electroluminescent devices based on new synthesized low-molecular weight compound”, reported on 14th International workshop on Nanoscience and Nanotechnology, NANO`2012, 22-23.11.2012, Sofia, Bulgaria.
11. Best poster presentation on 17th International School on Condensed Matter Physics, September 2nd - September 7th, 2012, Varna, Bulgaria.
12. Insignia of honor with diploma from Union of Chemists in Bulgaria for Best Young Researcher in Polymer Science, 2012.
13. National Award of Federation Of The Scientific Engineering Unions for participant in the Ninth Youth Scientific Applied Session, 02 - 03 May 2011, Sofia with paper “Defect analysis in organic electroluminescent structures”, 2011.
14. Insignia of honor with diploma from Union of Chemists in Bulgaria for Best Young Researcher in Polymer Science, 2011.
15. National Award of Scientific Engineering Federation of Universities in Bulgaria for development and demonstration of new generation flexible organic electroluminescent display - 2010.
16. National Award of Federation Of the Scientific Engineering Unions for development and investigation of polymer based light-emitting device - 2009.

Рецензент към следните списания с импакт фактор:

- Materials MDPI
- Materials Letters
- Sensors MDPI
- Sensors and Actuators A
- “Materials Science and Engineering B”
- “Materials and Manufacturing Processes”
- “Solid-State Electronics”

- “Cogent Engineering”
- “Journal of Physics: Conference Series”
- “Vacuum”
- “Flexible and printed electronics”

https://publons.com/author/513314/mariya-aleksandrova#profile

Асоциран редактор в списания:
Journal of Applied Sciences
Trends in Applied Sciences Research
Research Journal of Nanoscience and Nanotechnology
International Journal of Advances in Engineering, Science and Technology
Editorial Advisory Board - Microelectronics International, since 2019.
Academic Editor of Advanced Materials Proceedings, 2020.

Учебници, учебни помагала и глави от книги:

Mariya Aleksandrova, Recent engineering approaches for lead-free piezoelectric harvesters design, book Handbook of Nanomaterials and Nanocomposites for Energy and Environmental Applications, Springer-Nature, 2021.

Mariya Aleksandrova, book chapter "Polymer Light-Emitting Devices by Solution Processing" in book “Polymers for Light-emitting Devices and Displays”, Springer, 2020.

М. Александрова, Г. Добриков, В. Видеков, И. Рускова, Г. Колев, “Ръководство по материалознание в микроелектрониката”, ТУ-София, 2020.

М. Александрова, К. Денишев, Ръководство по технология на микро- и наносистеми“, ТУ-София, 2019.

М. Александрова, Г. Добриков, В. Видеков, “Материалознание в микроелектрониката”, учебник ТУ-София, 2016.

Mariya Aleksandrova, book chapter 11: “Production and Application of Thin Films“, Comprehensive Guide for Nanocoatings Technology Volume 4: Application and Commercialization, Nova Science Publishers, New York, pp. 259-314, 2015.

K. Denishev, M. Aleksandrova, G. Kolev, Practical guide for laboratory works of Technology of MEMS (in English), Technical University Publishing House, 2013.

В. Видеков, С. Андреев, К. Денишев, “Ръководство по технология на МЕМС”, ТУ-София 2012.

М. Ръсовска, М. Александрова, Г. Добриков, С. Бояджиев, Дисплеи, учебник ТУ-София, 2011

Административна дейност:

- Отговорник за учебната дейност на кат. Микроелектроника 2012 – 2016
- Член на български институт по стандартизация 2012-2016
- Член на националния координационен съвет по Нанотехнологии 2019 –

Член на научни и организационни комитети на конференции

Advisory board of The International Conference on Clean Energy, Systems and Smart Applications (CESA'20) https://cesaconference.org/ 9-10 July 2020. Cambridge, United Kingdom.

Scientific committee of Third Int. Scientific Conference "Alternative Energy Sources, Materials &Technologies (AESMT'20)”, 8 - 9 June, 2020, Varna, Bulgaria.

Technical Committee member of the 2021 the 6th International Conference on Energy Engineering and Smart Materials (ICEESM 2021)

Track chair of the International Scientific Conference Electronics, Faculty of Electronics Engineering and technology, TU-Sofia.

Избрани публикации за последните 5 години

2022

Mariya Aleksandrova, and Dimiter Badarov, Recent progress in the topologies of the surface acoustic wave sensors and the corresponding electronic processing circuits, Sensors, 22 (13), 4917, 2022

Mariya Aleksandrova, Georgi Kolev, Georgi Dobrikov, Andrey Brigadin and Alexander Lukin, Unlocking the Carbyne-Enriched Nanocoating Sensitivity to Volatile Organic Vapors with Plasma-Driven Deposition onto Bulk Micromachined Silicon Membranes, Nanomaterials 2022, 12, 2066

Mariya Aleksandrova, Georgi Kolev, Andrey Brigadin and Alexander Lukin, Gas-Sensing Properties of a Carbyne-Enriched Nanocoating Deposited onto Surface Acoustic Wave Composite Substrates with Various Electrode Topologies, Crystals 2022, 12(4), 501

Mariya Aleksandrova, Georgy Dobrikov, Habib Pathan, Shrikrishna Sartale, ValentinVidekov, Study of front panel electrode coatings for combined visible and short wavelength infrared photodetectors, Materials Today: Proceedings, Volume 54, Part 1, 2022, Pages 57-62

Mariya Aleksandrova, Texturing of nanocoatings for surface acoustic wave based sensors of volatile organic compounds, Open chemistry, 20 (1), 611-617, 2022

Mariya Aleksandrova, Texturing of nanocoatings for surface acoustic wave based precise sensors, 4th Edition of World Nanotechnology Conference, April 25 - 27, 2022, Las Vegas, USA

Rade Tomov, Mariya Aleksandrova, Study of lead-free perovskite photoelectric devices with TiO2 as a buffer layer, Sustainability, 14 (16), 10043, 2022

Rostislav Rusev, George Angelov, Boriana Tzaneva and Mariya Aleksandrova, Improving Piezo Effect of Egg Shell Composition by Rochelle Salt Nanocrystals, 57th International Conference on Information, Communication and Energy Systems and Technologies, Ohrid, Macedonia, June 16-18, 2022.

Mariya Aleksandrova, Georgi Dobrikov, Electrical Characterization of Multisensor Elements with Ferroelectric Nanocoatings, Proc. 13th National Conference with International Participation "Electronica 2022", May 19 - 20, 2022, Sofia, Bulgaria.

Mariya Aleksandrova, Georgi Kolev, Andrey Brigadin and Alexander Lukin, Mass-Sensitive Gas Detectors Based on Bulk Micromachined Silicon Cantilevers Coated by Carbyne-Enriched Nanolayer, 45th International Spring Seminar on Electronics Technology, 11-15 May 2022 Vienna (Austria)

Mariya Aleksandrova, Ivailo Pandiev, Jai Singh, Surya P. Singh, Aditi Banjare, Ayesha Hashmi, Ajaya K. Singh, Thermal Conductivity Measurements of Novel Lead-Free Perovskite Photoelectric Materials, 18th Advanced Energy Materials conference, Imperial College, London, UK, 6-8 April 2022

Mariya Aleksandrova, Rade Tomov, Role of the buffer layer from TiO2 for the performance of the lead-free perovskite photoelectric devices, 10. EUROPEAN CONFERENCE ON RENEWABLE ENERGY SYSTEMS Istanbul/Turkey 07-09 May 2022

Igor Vrublevsky, Nikita Lushpa, Alexander Tuchkovsky, Mariya Aleksandrova, Mikhail Bunevich, Applying Aniline for P-doping of PEDOT:PSS Films to Improve Their Conductivity and Efficiency of Perovskite Solar Cells, XXXI International Scientific Conference Electronics - ET2022 13 - 15 September 2022, Sozopol, Bulgaria I

Shah, Shruti ; Bhorde, Ajinkya; Hase, Yogesh; Aher, Rahul ; Doiphode, Vidya ; Waghmare, Ashish ; Punde, Ashvini ; Shinde, Pratibha ; Rahane, Swati; Bade , Bharat ; Pathan, Habib; Prasad, Mohit ; Aleksandrova, Mariya; Patole, Shashikant; Jadkar, Sandesh, Role of solvent in the preparation of Methylammonium Bismuth Iodide (MBI) perovskite films toward self-biased photodetector application, ACS Applied Electronic Materials, 4, 6, 2793–2804, 2022

Mariya Aleksandrova, Application of the impedance spectroscopy for characterization of thin-film perovskite photoelectric devices, Fifth International Scientific Conference Alternative Energy Sources, Materials and Technologies AESMT '22, Proceedings of short papers, Volume 4, p. 95, 27 - 28 June, 2022, Veliko Tarnovo, Bulgaria,

Mariya Aleksandrova, Rade Tomov, Igor Vrublevsky, Study of lead-free perovskite solar cells at elevated temperatures and UV irradiation, XXXI International Scientific Conference Electronics - ET2022, 13 - 15 September 2022, Sozopol, Bulgaria

Mariya Aleksandrova, Georgi Kolev, Habib Pathan, Sandesh R. Jadkar, Georgi Dobrikov, Fabrication and Study of Infrared Detectors with Lead-Free Perovskite Films at Different Electrode Designs, XXXI International Scientific Conference Electronics - ET2022, 13 - 15 September 2022, Sozopol, Bulgaria

2021

M Aleksandrova, A Sohan, P Kollu, G Dobrikov, Pyroelectric Properties of BaxSr (1− x) TiO3/PVDF-TrFE Coating on Silicon, Membranes 11 (8), 577, 2021.

Mariya Aleksandrova, Ivailo Pandiev, Impedance Spectroscopy of Lead-Free Ferroelectric, Coatings, 11, 221, pp. 1-21, 2021

Mariya Aleksandrova, Solar Energy Sources Based on Perovskites – Future Research Prospects and Industrial Opportunities, Advanced Materials Proceedings, Volume 6, Article ID 21010420, 2021

Ivailo Pandiev, Mariya Aleksandrova, Dynamic FPAA Based Mixed-Signal Processing Circuit for Thin-Film CdTe/Lead-Free Perovskite Photodetectors 25th International Conference ELECTRONICS, Palanga, Lithuania from 14th - 16th June, 2021, Elektronika ir Elektrotechnika, vol. 27, no. 2, pp. 22-30, 2021.

Mariya Aleksandrova, Maria Petrovska, Svetozar Andreev, Georgi Kolev, Valentin Videkov – Design and realization of micropower processing system for utilization of the thermal energy in compact solar energy harvesters, 25th International Conference ELECTRONICS, Palanga, Lithuania from 14th - 16th June, 2021.

Mariya Aleksandrova, Svetozar Andreev, Design and thick film technology of piezoelectric and piezoresistive sensors – a tutorial, IEEE Sensors Journal, DOI: 10.1109/JSEN.2021.3093275 Early access, 2021

Mariya Aleksandrova, Tatyana Ivanova, Velichka Strijkova, Tsvetozar Tsanev, Ajaya Kumar Singh, Jai Singh, and Kostadinka Gesheva, Ga-doped ZnO coating – a suitable tool for tuning the electrode properties in the solar cells with CdS/ZnS core-shell quantum dots, Crystals, 11 (2), 137, 2021

Mariya Aleksandrova, Ivailo Pandiev, Application of Thin Film Ultralow-Power Lead-Free Perovskite Solar Energy Harvesters in Power Management Systems, 28th International Conference Mixed Design of Integrated Circuit and System, 24-26 June, 2021, Wroclaw, Poland

Mariya Aleksandrova, Georgi Dobrikov, Ivailo Pandiev, Tsvetozar Tsanev, Georgi Kolev, Valentin Videkov, Ferroelectric oxides on silicon for sensor devices,

"Webinar on Materials Science, Engineering and Technology, 25 - 28 June 2021

Mariya Aleksandrova, Piezoelectric materials-a crossing between the sensing electronics and the green energy, Vid. Proc. Adv. Mater., Volume 2, Article ID 2102116, Web Symposium and Web Session on Structural and Engineering Materials, Date: 12 February 2021, Sweden.

Mariya Aleksandrova, Study of lead-free perovskite and quantum dots core-shell infrared photodetector integrated with the silicon technology, Proceedings of the IEEE International Conference Devices for Integrated Circuit (DevIC 2021)", Kalyani Government Engineering College, India, 19-20 May, 2021, Page(s):494 - 497.

Mariya Aleksandrova, Georgi Kolev, Habib Pathan, Sandesh R. Jadkar, and Georgi Dobrikov, Study of Hybrid Infrared Detectors with Perovskite Films and Quantum Dots, “International Conference on Advances in Functional Materials which will be held at UCLA (AAAFM-UCLA)”, 18-20 August, 2021 r, California University, Los Angeles, USA

Rusev, R., G. Angelov, B. Tzaneva, M. Aleksandrova, Electrophoretic Deposition of Rochelle Salt on Cu2O Plate, 56th International Scientific Conference on Information, Communication and Energy Systems and Technologies, Sozopol, Bulgaria, June 16-18, 2021, Proceeding of the conference, pp. 107-110.

Ayesha Hashmi, Bhawana Jain, Jai Singh, Mariya Aleksandrova, Ajaya Kumar Singh, Facile Synthesis of Bismuth-Based Perovskite and Solvent Engineering for Improving the Crystallinity of Lead-Free Perovskite Material: A Microstructural Exploration, EFEA 2021: 6th International Conference on Environment-Friendly Energies and Applications, Vitosha Park Hotel, Sofia, Bulgaria, March 24-26, 2021.

Sohan, A., Banoth, P., Aleksandrova, M., Nirmala Grace, A., Kollu, P., Review on MXene synthesis, properties, and recent research exploring electrode architecture for supercapacitor applications, International Journal of Energy Research, online first, 2021.

Mariya Aleksandrova, Georgi Kolev, Georgi Dobrikov, Krassimir Denishev – Design and Fabrication of Perovskite LiTaO3-based Infrared Detectors, XXX International Scientific Conference Electronics - ET2021, 15 - 17 September 2021

Mariya Aleksandrova, Habib Pathan, Chaitali Jagtap, Vishal Kadam, Sandesh Jadkar, Georgi Kolev, Krasimir Denishev, Microelectronic infrared pyroelectric detector – an overview, Engineered Science, in press 2021

2020

M.P.Aleksandrova, T.D.Tsanev, I.M.Pandiev, G.H.Dobrikov, Study of piezoelectric behaviour of sputtered KNbO3 nanocoatings for flexible energy harvesting, Energy, Volume 205, 15 August 2020, 118068.

Mariya Aleksandrova, Tatyana Ivanova, Frank Hamelmann, Velichka Strijkova, Kostadinka Gesheva, Study of Sputtered ZnO:Ga2O3 Films for Energy Harvesting Applications, July 2020, Coatings 10(7):650.

M Aleksandrova, T Tsanev, A Gupta, AK Singh, G Dobrikov, V Videkov, Sensing Ability of Ferroelectric Oxide Nanowires Grown in Templates of Nanopores, Materials – MDPI Basel 13 (7), 1777, 2020.

Mariya Aleksandrova, Tatyana Ivanova, Sascha Koch, Frank Hamelmann, Daniela Karashanova,and Kostadinka Gesheva, Study of Sputtered Barium Strontium Titanate Films for Energy Harvesting Applications, Advanced Materials Letters, Volume 11, Issue 10, Article ID 20101567, 2020.

Ivailo M. Pandiev and Mariya P. Aleksandrova, Design and Implementation of Dynamic FPAA Based Interface Circuit for Thin Film Lead-Free Piezoelectric Sensors, Advanced Materials Letters, Volume 11, Issue 10, Article ID 20101565, 2020.

Tsvetozar Tsanev, Mariya Aleksandrova, Boriana Tzaneva, Valentin Videkov, An Approach for Nanostructuring of Piezoelectric Materials by Template-assisted Growth in Porous Aluminum Oxide, Advanced Materials Letters, Volume 11, Issue 10, Article ID 20101566, 2020.

Mariya Aleksandrova, Piezoelectric Alternative Energy Sources as a Part of the Global Energy Concerns – Future Prospects in the Science and Market, Advanced Materials Letters, Volume 11, Issue 10, Article ID 20101561, 2020.

Mariya Aleksandrova, Georgi Dobrikov, Habib Pathan, Shrikrishna Sartale, and Valentin Videkov, Study of Front Panel Transparent Electrode Coatings for Combined Visible and Short Wavelength Infrared Photodetectors, 17th International Conference on Nanosciences & Nanotechnologies (NN20) 7-10 July 2020, Thessaloniki, Greece.

M Aleksandrova, R Aepuru, G Dobrikov, Study of printed polymeric flexible energy harvesting elements – impact of the electrode materials and patterns, 5th International Conference on Energy Engineering and Smart Materials (Europe), ICEESM 2020, Barcelona, Spain, April 15-17, 2020, IOP Conf. Ser.: Mater. Sci. Eng., 876, 012006, 2020.

I Pandiev, M Aleksandrova, G Kolev, Design and Implementation of Interface Circuits Intended for Printed Piezoelectric Micropower Harvesters on Flexible Substrates, 5th International Conference on Energy Engineering and Smart Materials (Europe), ICEESM 2020, Barcelona, Spain, April 15-17, 2020, IOP Conf. Ser.: Mater. Sci. Eng., 876, 012007, 2020.

Kanchana Shahi; Rama S Singh, Jai Singh,; Maria Aleksandrova,; Ajaya Kumar Singh, "Synthesis of Ag nanoparticles decorated ZnO nanorods adopting the low-temperature hydrothermal method", Journal of Electronic Materials, Volume 49, Issue 1 (2020) , Page 637.

Mariya Aleksandrova, Tsvetozar Tsanev, Tatyana Ivanova, Kostadinka Gesheva, Velichka Strijkova, Jai Singh, Ajaya Kumar Singh, Fabrication of transparent ITO/Ga-doped ZnO coating as a front panel electrode toward efficient thin film solar cells, 2nd Coatings and Interfaces Web Conference, 15/05/2020 - 31/05/2020, Basel, Switzerland, Materials Proceedings 2020, 2, 1, 1.

Mariya Aleksandrova, Tsvetozar Tsanev, Ivailo Pandiev, Georgi Dobrikov, Study of lead-free ferroelectric composite coatings by impedance spectroscopy, 2nd Coatings and Interfaces Web Conference, 15/05/2020 - 31/05/2020, Basel, Switzerland, Materials Proceedings 2020, 2, 1, 11.

M. P. Aleksandrova, G. D. Kolev, G.H.Dobrikov, R.Tomov, A. K. Singh, V. H. Videkov, Role of the absorber layer in the thin film solar cells with perovskites, Alternative Energy Sources, Materials & Technologies (AESMT'20), Volume 2, (pp. 87 - 88), 2020.

Mariya Aleksandrova, Tatyana Ivanova, Sascha Koch, Frank Hamelmann, Daniela Karashanova,and Kostadinka Gesheva, Study of Sputtered Barium Strontium Titanate Films for Energy Harvesting Applications, Advanced Materials Letters, in press.

2019

M Aleksandrova, T Tsanev, G Dobrikov, G Kolev, M Sophocleous, J Georgiou and K Denishev, Sputtering of Ga-doped ZnO nanocoatings on silicon for piezoelectric transducers, 2019 IOP Conf. Ser.: Mater. Sci. Eng., vol. 618, 012014.
* Reporten on 8TH INTERNATIONAL SCIENTIFIC CONFERENCE "TechSys 2019" – ENGINEERING, TECHNOLOGIES AND SYSTEMS, Technical University of Sofia, Plovdiv Branch 16-18 May 2019.

Tsvetozar Tsanev, Mariya Aleksandrova, Tatiana Ivanova and Georgi Dobrikov, Investigation of Lead-free Potassium Niobate Nanocoatings on Silicon for Piezoelectric Transducers, Proc. X National Conference with International Participation "Electronica 2019", May 16 - 17, 2019, Sofia, Bulgaria

Tsvetozar Tsanev, Mariya Aleksandrova, Valentin Videkov, Study of nanoporous anodic aluminum oxide as a template filled with piezoelectric materials, 31st International Conference on Microelectronics, Niš, Serbia, September 16th-18th, 2019.

Ivailo Pandiev, Mariya Aleksandrova, Georgi Kolev, Analysis and Design of Power Processing Circuits for Thin Film Piezoelectric Energy Harvesters on Flexible Polyethylene Terephthalate Substrates, 31st International Conference on Microelectronics, Niš, Serbia, September 16th-18th, 2019.

Mariya Aleksandrova, Georgi Kolev, Yordanka Vucheva, Krassimir Denishev, Flexible oxide-polymeric composites for piezoelectric energy harvesting, 31st International Conference on Microelectronics, Niš, Serbia, September 16th-18th, 2019.

Mariya Aleksandrova, Tsvetozar Tsanev, Georgi Dobrikov, Study of piezoelectric behavior of sputtered KNbO3 nanocoatings for flexible energy harvesting, Second Int. Scientific Conference "Alternative Energy Sources, Materials &Technologies (AESMT'19), 3 - 4 June, 2019, Sofia, Bulgaria

Tsvetozar Tsanev, Mariya Aleksandrova, Boriana Tzaneva, Valentin Videkov, Approach for nanostructuring of piezoelectric materials by template-assisted growth in porous aluminum oxide, 45th International Conference on Micro & Nano Engineering, Rhodes Greece, September 23rd - 26th, 2019.

Mariya Aleksandrova, Polymeric seed layer as a simple approach for nanostructuring of Ga-doped ZnO films for flexible piezoelectric energy harvesting, 45th International Conference on Micro & Nano Engineering, Rhodes Greece, September 23rd - 26th, 2019.

Kanchana Shahi, R S Singh, Narendra P. Singh, Mariya Aleksandrova, Ajaya Kumar Singh, Synthesis and characterization of PEDOT:PSS/ZnO nanowires heterojunction on ITO coated plastic substrate for light-emitting diodes, Materials Today: Proceedings, Volume 15, Part 3, 2019, Pages 394-399, Part of special issue: International Conference on Multifunctional Advanced Materials, ICMAM-2018, October 5-7, 2018, Nagpur, India.

2018

Mariya Aleksandrova, Spray deposition of piezoelectric polymer on plastic substrate for vibrational harvesting and force sensing applications, AIMS Materials Science, Volume 5, Issue 6, 1214 –1222, 2018.

Georgi Kolev, Mariya Aleksandrova, Ivan Todorov, Martin Zahariev, Petar Mladenov, Krassimir Denishev, Design of flexible piezoelectric energy harvesting device with optimized performance, Journal Materials, Methods & Technologies, Volume 12, pp. 256-265, 2018.

Kanchana Shahi, Rama Shankar Singh, Ajaya Kumar Singh, Mariya Aleksandrova, Rabah Khenata, CdTe Quantum-dot-modified ZnO nanowires heterostructure, Applied Physics A, 124: 277, 2018.

Mariya Aleksandrova, Georgi Dobrikov, Georgi Kolev, Yordan Marinov, Todor Vlakhov and Krassimir Denishev, Flexible and Lead Free Barium Strontium Titanate Based Generators, IEEE 41st International Spring Seminar on Electronics Technology, Zlatibor, Serbia, May 16–20, 2018, Abstract book – p. 25.

B S Blagoev, M Aleksandrova, P Terziyska, P Tzvetkov, D Kovacheva, G Kolev, V Mehandzhiev, K Denishev and D Dimitrov, Investigation of the structural, optical and piezoelectric properties of ALD ZnO films on PEN substrates, Journal of Physics: Conf. Series, vol. 992 (2018) 012027.