

Curriculum Vitae (CV)

Dr. Puja Dey
Associate Professor

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D. O. B. : 28th April, 1979



Academic Qualifications :

Name of the examination/Degree	Name of Institute/ University/ Board	Year of passing
Madhyamik (10)	W. B. B. S. E., W. B., India	1995
Higher Secondary (10 + 2)	W. B. C. H. S. E., W. B., India.	1997
Bachelor of Science (B. Sc.)	University of North Bengal, W. B., India	2000
Master of Science (M. Sc.)	University of North Bengal, W. B., India	2002
GATE	Conducted by I. I. Ts'	2002
Ph. D.	Indian Institute of Technology Kharagpur, (I.I.T. Kharagpur) , W. B., India.	2008

Employment History :

Period (Year)		Name of the examination/Degree/ Post as applicable	Area of specialization/ Subjects	Name of Institute/ University/
04/05/2018	<i>Present</i>	Associate Professor	Physics	Kazi Nazrul University, Asansol, India
01/03/2016	03/05/2018	Assistant Professor	Physics	Kazi Nazrul University, Asansol, India
12/08/2013	29/02/2016	Assistant Professor	Physics	National Institute of Technology Agartala, Tripura, India
July, 2012	August, 2013	Post Doctoral Researcher	Magnetism, Organic Spintronics	UGC-DAE Consortium For Scientific Research, Indore, India
October, 2008	September, 2011	CNRS Post Doctoral Research Fellow	Spintronics, Hybrid Inorganic-Organic Interface study	IPCMS, CNRS, Strasbourg, France
January, 2007	September, 2008	CSIR Senior Research Fellow	Magnetism and Magnetic Materials	Indian Institute of Technology Kharagpur, W. B., India

Areas of Research Interest :

a. Topological Insulator based heterostructure devices; **b.** Organic Spintronics; **c.** Opto-Spintronics; **d.** Multifunctional Nanostructured Oxides; **e.** Multifunctional *hybrid* Inorganic-Organic heterostructures; **f.** *Ultra*-thin Ferromagnetic film; **g.** Organic Photodetector.

Research Credentials :

Number of Research Articles Publications in Referred Journals : 76

Citations : 1500

h-index : 21 ; i10-index : 34

Website : Google Scholar Citation <https://scholar.google.com/citations?user=MirRRjEA>

Books Publications : (Authored Books)

[1] "*Spintronics: Fundamentals and Applications*" [ISBN No. - 978-981-16-0068-5] by **P. Dey** and J. N. Roy, *Springer* Singapore, (2021).

**** Book Referred in the Library of IPCMS, CNRS, Strasbourg, France.**

[2] "*Spintronics For Beginners*" [ISBN No. - 978-3-639-66375-4] by **P. Dey** and S. K. Mandal, *Scholars' Press*, Saarbrücken, Germany, (2014).

**** Book Referred as Text Book** in the course Master's Degree in Materials Engineering, **The Universidad Politécnica de Madrid, Spain.**

[3] "*Physics of Oxide Materials For Spintronics*" [ISBN No. - 978-3-639-51305-9] by S. K. Mandal, **P. Dey** and T. K. Nath, *Scholars' Press*, Saarbrücken, Germany, (2013).

Publications : (Edited Books/Conference Proceedings/Journals)

[1] "*Proceedings of International Conference on Natural Sciences and Engineering for Sustainable Development (NSES2024)*" [ISBN No. – 978-8-197-10876-1], **Editors** – Jitendra Nath Roy, **Puja Dey**, Arindam Changder, *New Delhi Publisher*, New Delhi, India, (2024).

[2] "*Science and Culture*" [Journal*, ISSN 0036-8156], **Guest Editors** - Jitendra Nath Roy and **Puja Dey**, Special Issue on *Natural Sciences and Engineering for Sustainable Development*, Vol. **90**, No. 7 – 8, July - August (2024). [* Indian Science News Association, Established 1935].

Patents :

"Organic Coupled Spin Valve Photodetector for Cross-Coupling between Optical response and Spin-Valve property" by **P. Dey**, Apurba Pal, Nitish Ghosh, J. N. Roy, S. M. Yusuf. **The patent is going to be filed jointly by Kazi Nazrul University, Asansol and Department of Science and Technology (DAE), India.**

Invited Talk (Important and Significant) :

[1] *"Development of Novel Spin-Controlled Optoelectronic Eco-friendly and Energy Efficient hybrid Inorganic-Organic heterostructure"* by **Puja Dey**, will deliver an Invited Oral Presentation

as Distinguished Speaker in **7th Edition of Advanced Materials Science World Congress scheduled during March 24-25, 2025 at London, UK.**

[2] “Development of Novel Optically Controlled hybrid Inorganic-Organic Spintronic heterostructure”, by **Puja Dey**, delivered an **Invited Talk** in the **International Conference on Sustainable Technologies held at NIT Durgapur during December 12-15, 2024.**

[3] “Integration of Organic Photodetector with Spin-Valve : Development of Novel Spin-Controlled Organic Optoelectronic Eco-friendly and Energy Efficient device”, by **Puja Dey**, delivered an **Invited Oral Presentation** in the **3rd International Conference on Carbon Chemistry and Materials (CCM-2023)** organized by **United Scientific Group (USG)**, scheduled during 23rd October to 25th October 2023, at **Paris, France.**

[4] “A Journey towards Spintronics to Optospintronics”, by **Puja Dey**, delivered an **Invited Talk** in the **64th DAE Solid State Physics Symposium (DAE SSPS 2019)** held at **Indian Institute of Technology Jodhpur, Rajasthan** during December 18-22, (2019). (Organized by **BARC, Department of Atomic Energy, India**)

[5] “Temperature driven transition from Giant to Tunneling magneto-resistance in $Fe_3O_4/Alq_3/Co$ Spin Valve: Role of Verwey transition of Fe_3O_4 ”, by **P. Dey**, R. Rawat, S. R. Potdar, R. J. Choudhary, A. Banerjee, **58th International Conference on Magnetism and Magnetic Materials (“MMM 2013”)**, Denver, Colorado, USA.

Sponsored Project :

[1] “Fabrication and study of Hybrid Inorganic-Organic Dual Spin Valves for Multifunctional Spintronics Application”, PI : **Puja Dey**, CoPI : J. N. Roy, **Sanctioned by UGC-DAE CSR, Govt. of India**, Sanction No.: CRS/2022-23/01/692, dated 24/03/2023. (**Status : Ongoing**).

[2] “Integration of Organic Photodetector and Spin Valve for development of Novel Spin-Controlled Magnetic Organic Photodetector”, PI : **Puja Dey**, CoPI : J. N. Roy, **Sanctioned by Board of Research in Nuclear Sciences (BRNS), DAE, Govt. of India**, Sanction No.: 58/14/07/2020-BRNS/37074, dated 26/08/2020, Sanction Amount : 34,61,750/- (**Status : Ongoing**).

[3] “Study of High-Performance Organic Visible Photodetector For Novel Spin-based Optoelectronic Devices”, **Department of Science and Technology (DST) INSPIRE**

Fellowship, Govt. of India, **Recipient** : Scholar- Apurba Pal, Research Supervisor- Dr. Puja Dey, Sanction No. - DST/INSPIRE Fellowship/2017/IF170939, INSPIRE Code - IF170939, Start Date- 29/05/2018 (**Status** : **Completed**).

[4] “*Fabrication of Hybrid Organic Molecular Semiconductor - Inorganic Ferromagnet based Organic Spin Valves for Molecular Spintronics Application*”, funded by **Department of Science and Technology (DST), SERB, New Delhi**, under **Start-Up Research Grant Scheme**, Project No.- SB/FTP/PS-034/2014, **Sanctioned** Amount - 22.1 Lakhs (**Status** : **Completed**).

Thesis Supervision :

M. Sc. Thesis Supervision : 40 Completed (2014-23)

Ph. D. Thesis Supervision : 1. Three Ph. D. Degree Awarded

2. Four Ongoing

Other Academic Position :

Joint-Coordinator of CENTRE FOR ORGANIC SPINTRONICS AND OPTOELECTRONICS DEVICES (COSOD), Faculty of Science and Technology, Kazi Nazrul University, Asansol.

Organization of National/International Conference/Workshop :

1. An International conference on “***Natural Sciences and Engineering for Sustainable Development (NSESD2024)***” was organized by Centre for Organic Spintronics and Optoelectronics Devices (COSOD), Kazi Nazrul University Asansol on 6th & 7th march, 2024.

2. A Webinar for One Day National Workshop “***Recent Trends in Optoelectronics and Semiconductor Devices for Computing and Communication***” Celebrating *National Inventors Month* was organized by COSOD, Kazi Nazrul University Asansol on 20th May, 2020.

3. BOSE-125 Outreach Programme entitled “***Conference on Research Trends in Multifunctional and Hybrid Nanomaterials (CRMN 2018)***” on the occasion of 125th Birth Anniversary of Professor S. N. Bose held on 21.06.2018.

Value added Course Offered :

A Certificate Course (Credit = 4) in “***Organic Optoelectronics & Spintronics : Fabrication, Modelling and Experimental Techniques***” was organized by COSOD, Kazi Nazrul University

Asansol, **Coordinator:** Prof. J. N Roy; **Joint-Coordinators:** Dr. Puja Dey and Dr. Arindam Biswas.

Research Collaborations :

International –

- 1. Department of Electrical and Computer Engineering, Virginia Commonwealth University (VCU), Richmond, Virginia, USA.**
- 2. Division of Physics, Engineering, Mathematics and Computer Sciences & Optical Science Center for Applied Research (OSCAR), Delaware State University, USA.**
- 3. Centre National de la Recherche Scientifique (CNRS), Strasbourg, France.**

National -

- 1. UGC-DAE Consortium For Scientific Research Indore.**
 - * Research Articles Publication (in collaboration).*
 - * Sanctioned Collaborative Project (2023-2026) (Funding Agency : UGC-DAE, India).*
- 2. Bhabha Atomic Research Centre (BARC), Department of Atomic Energy, India.**
 - *Research Articles Publication (in collaboration).*
 - *Sanctioned Collaborative Project (2020-2023)(Funding Agency : Board of Research in Nuclear Sciences (BRNS), DAE, Govt. of India).*
- 3. Dept. of Physics & Meteorology, I. I. T. Kharagpur.**
 - *Paper Publication (in collaboration).*
- 4. Dept. of Electrical Engineering, I. I. T. Bombay.**
 - *Paper Publication (Collaborative project under INUP (Indian Nanoelectronics User Program) at IIT-Bombay).*
- 5. Department of Physics & Dept. of Electronics, NIT Agartala, Tripura.**
 - * Joint PhD Student Supervision (Degree Awarded).*
 - * Paper Publication (in collaboration).*

Awards & Fellowships :

- 1. CNRS Post Doctoral Fellow, Centre National de la Recherche Scientifique (CNRS), Strasbourg, France (2008-2010).**

2.

Scholarship /Award	Institute/Organization	Year
Senior Research Fellowship	Council of Scientific and Industrial Research (C. S. I. R), India.	2007 - 2008
Post Doctoral Research Fellowship	Centre National de la Recherche Scientifique (CNRS), Strasbourg, France.	2008 - 2010
Post Doctoral Research Fellowship	UGC-DAE Consortium For Scientific Research, Indore, India	2012 - 2013

3. Best Paper Award :

[A] *Probing the Opto-Organic-Spintronic effect hybrid Inorganic-Organic-based ITO/Co/C₆₀/V(TCNE)₂/C₆₀/Co/Au Dual Spin Valve Devices* by Subhadip Paul, Nitish Ghosh, Debajit Deb, **Puja Dey** at **Regional level**, Durgapur Government College, Durgapur - 713214, West Bengal, India and Department of Science and Technology and Biotechnology, Government of West Bengal (2024).

[B] *Coexistence of Photocurrent Generation and Spin Valve Effect in ITO/V[TCNE]₂/OSC/Co/Au (OSC = C₆₀, Rubrene) Magnetic Organic Photodetector Heterostructures* by Apurba Pal, J. N. Roy, **P. Dey**, and S. M. Yusuf at **State level**, Department of Science and Technology and Biotechnology, Government of West Bengal (2024).

[C] *Coexistence of Photocurrent Generation and Spin Valve Effect in ITO/V[TCNE]₂/OSC/Co/Au (OSC = C₆₀, Rubrene) Magnetic Organic Photodetector Heterostructures* by Apurba Pal, J. N. Roy, **P. Dey**, and S. M. Yusuf at **Regional level**, Durgapur Government College, Durgapur - 713214, West Bengal, India and Department of Science and Technology and Biotechnology, Government of West Bengal (2024).

[D] *Photogeneration and Tuning of Electrical Memory Effect Under Visible Light in ZnO/NiFe₂O₄ Heterostructure* by Apurba Pal, J. N. Roy, and **P. Dey** at Institute of Engineering & Management, Kolkata-700091, West Bengal, India (2022).

Societal Impact of Research Activities : Research activities of my Group on Carbon-based Opto-Spintronics is a promising field of research that explores the integration of high-speed operation of Optoelectronics and data storage capability of Spintronics in a single device to achieve future demands of Multifunctional, Fast, Ecofriendly and Energy Efficient integrated memory-logic devices, such as LiFi and Electro-Optical Hybrid Computing technologies. It is well known that the role of such Carbon-based materials in achieving ***Sustainable Development Goals (SDGs)*** of the **United Nations in the context of Clean Energy and Environmental issues** has become, nowadays, a subject of intense research interest. Noteworthy, Carbon-based materials are becoming extensively used in diversified research fields such as energy conservation, biomedical applications, Energy Efficient and Eco friendly low cost electronics and optoelectronics devices, solid fuel option etc. The societal impact of my research activities lies on the fact that it addresses the problems pertaining to rising prices, and the advent of global environmental issues.

List of Publications (International Journal) :

(Total Publications in International Journals = 76 ; Total Citations = 1500; h-index = 21; i10-index = 34)

[1] Magneto-Optical tuning of electronic transport in p-Si(100)/La_{0.7}Sr_{0.3}MnO₃/IL/Au [IL = CuPc and P3HT/CuPc] heterostructures: Role of inorganic-organic interface, by Md. Minhaj Ali, Apurba Pal, Nitish Ghosh, **P. Dey**, **J.N. Roy**, *Surfaces and Interfaces*, **56**,105706 (2025). <https://doi.org/10.1016/j.surfin.2024.105706>

[2] Investigation of Magneto-Optical Tunability in DC and AC Transport property on Si/NiFe₂O₄/ZnO-rGO Heterostructure, by Priyanka Banerjee, K. Mukhopadhyay, **P. Dey**, *Applied Physics A*, **131**, 83 (2025). <https://doi.org/10.1007/s00339-024-08209-9>

[3] Magneto-optical tunability of capacitance in ZnO-rGO/LSMO spintronic heterojunctions by Debajit Deb, Pamulapati Soujanya, Prasenjit Deb, Sandip Swarnakar, **P. Dey**, *Physica B: Condensed Matter*, **699**, 416860 (2024). <https://doi.org/10.1016/j.physb.2024.416860>

[4] Optically tunable magnetoresistance properties in La_{0.7}Sr_{0.3}MnO₃-Glass nanocomposites: A step towards Optospintronics, by Nitish Ghosh, Debajit Deb, **P. Dey**, *Journal of Materials Science: Materials in Electronics*, **35**, 2223, (2024). <http://doi.org/10.1007/s10854-024-13844-2>

[5] Optical tunability of magnetoimpedance properties in La_{0.7}Sr_{0.3}MnO₃-Glass nanocomposites: a signature of Opto-spintronics, by Nitish Ghosh, Debajit Deb, **P. Dey**, *Applied Physics A*, **130**, 717, (2024).

- [6] Evidence of magneto-optical tunability in impedance spectroscopy of ZnO-rGO/La_{0.7}Sr_{0.3}MnO₃/ITO heterostructure, by Apurba Pal, Priyanka Banerjee, Debajit Deb, **P. Dey**, *Journal of Materials Science: Materials in Electronics*, **35**, 442, (2024).
- [7] Coexistence of Room Temperature Optical Response and Spin Valve Characteristics in ITO/V[TCNE]₂/Rubrene/Co/Au Magnetic Organic Photodetector Heterostructure, by Apurba Pal, Jitendra Nath Roy, **P. Dey**, Seikh Mohammad Yusuf, *Physica status solidi (RRL)– Rapid Research Letters*, **18**, 2400113, (2024).
- [8] Magneto-optical tunability of impedance through electronic structure modification in ZnO–rGO/LSMO/ITO spintronic devices, by Debajit Deb, **P. Dey**, *Journal of Applied Physics*, **134**, 223901, (2023).
- [9] Spin Injection through Ferromagnetic/Organic Semiconductor Interfacial Defect States in Hybrid Magnetic Tunnel Junctions, by D. Deb and **P. Dey**, *IEEE Transactions on Magnetics*, **59**, 4100106 (2023). doi: 10.1109/TMAG.2023.3275301.
- [10] Defect assisted magneto-tunable photoresponse in ZnO-rGO/La_{0.7}Sr_{0.3}MnO₃/ITO heterojunctions, by D. Deb, R. J. Choudhary, S. M. Yusuf, J. N. Roy, **P. Dey**, *Materials Science and Engineering B*, **290**, no. 2, 116353 (2023).
- [11] Optical and magneto-tunable electrical transport across La_{0.7}Sr_{0.3}MnO₃, Zn_{0.3}Ni_{0.7}Fe₂O₄/CuPc hybrid interfaces by D. Deb, D. Nath, A. Pal, **P. Dey**, *Physica Status Solidi A*, **220** 2200673 (2023).
- [12] Light-Dependent A.C. Transport Properties of Zinc Oxide (ZnO)/ Reduced Graphene Oxide (rGO) Heterostructure Device: A Signature of Electrical Memory by Priyanka Banerjee, K. Mukhopadhyay, Apurba Pal, **P. Dey**, *J. Electron. Mater.*, **52**, 4213 (2023).
- [13] Magneto-tunability of photocurrent in Zn_{0.3}Ni_{0.7}Fe₂O₄/ZnO-rGO composite heterojunction device by Apurba Pal, Debajit Deb, J. N. Roy, **P. Dey**, *Optics & Laser Technology* **149**, 107801 (2022).
- [14] Impedance spectroscopy of Zn_{0.3}Ni_{0.7}Fe₂O₄/ZnO-rGO composite heterostructure by Apurba Pal, J. N. Roy, **P. Dey**, *Physica B*, **645**, 414228 (2022).
- [15] Magneto-tunable photoresponse in ZnO-rGO/ La_{0.7}Sr_{0.3}MnO₃/ITO heterostructure: An opto-spintronic phenomenon” by D. Deb, D. Nath, R. J. Choudhary, J. N. Roy and **P. Dey**, *Physics Letters A* **446**, 128271 (2022).

[16] Coexistence of photoresponse and light-induced memresistive characteristics in zinc oxide (ZnO)-reduced graphene oxide (rGO) bilayer thin film by Priyanka Banerjee, Debarati Nath, K. Mukhopadhyay, Debajit Deb, **P. Dey**, *Applied Physics A* **128**, 326 (2022).

<https://doi.org/10.1007/s00339-022-05455-7>

[17] Temperature dependent transition of conduction mechanism from carrier injection to multistep tunneling in Fe₃O₄ (111)/Alq₃/Co organic spin valve by Debajit Deb, **P. Dey**, R. J. Choudhary, R. Rawate, A. Banerjee *Organic Electronics* **99**, 106324 (2021).

[18] Temperature Driven Pinned Layer Magnetization Reversal in Exchanged Biased Fe₃O₄/Alq₃/Co/CoO Hybrid Spin Valve by D. Deb, **P. Dey**, K. K. Sharma, R. J. Choudhary, R. Rawat, A. Banerjee, *IEEE Transactions on Magnetics* **57**, 4800106 (2021).

[19] Performance improvement of bilayer CuPc/BPPC organic photodetector by thermal annealing by Debarati Nath, **P. Dey**, Aneesh M. Joseph, J. K. Rakshit, J. N. Roy, *Optical Materials* **108**, 110371 (2020).

[20] CuPc/C₆₀ heterojunction for high responsivity zero bias organic red light photodetector by D Nath, **P. Dey**, AM Joseph, JK Rakshit, JN Roy, *Applied Physics A* **126** (8), 1-8 (2020).

[21] A comparative study in different rare earth ions in multiferroic nanocomposites: Low temperature resistivity minima and low field magnetoresistance by P. Dutta, S. K. Mandal, **P. Dey**, A. Lakhani, S. M. Yusuf, *Journal of Magnetism and Magnetic Materials* **502**, 166569 (2020).

[22] Photocurrent generation under forward bias with interfacial tunneling of carrier at Pentacene/F₁₆CuPc heterojunction photodetector by Debarati Nath, **Puja Dey**, Aneesh M Joseph, Jayanta Kumar Rakshit and Jitendra Nath Roy, *Journal of Alloys and Compounds* **815**, 152401 (2020).

[23] Zero bias high responsive visible organic photodetector based on Pentacene and C₆₀ by Debarati Nath, **P. Dey**, Aneesh M Joseph, J. K. Rakshit and J. N. Roy *Optics and LASER Technology* **131** 106393 (2020).

[24] Effect of interface on temperature dependent magnetoresistance and room temperature magnetoeimpedance of La_{0.7}Sr_{0.3}MnO₃ / Polyvinyl Alcohol Nanocomposites, by D. Deb, R. Debnath, S. K. Mandal, A. Lakhani, A. Nath, **P. Dey**, *Physica B: Condensed Matter* **582**, 411962 (2020).

[25] Modeling of Temperature-Dependent Sign Reversal of Magnetoresistance in 99.95% La_{0.7}Sr_{0.3}MnO₃ - 0.05% Paraffin Wax Nanocomposite: The Role of Pinning Center at Intergrain Defect Site by D. Deb and **P. Dey**, *Physica Status Solidi (b)*, **257** (3), 1900402 (2020). doi: 10.1002/pssb.201900402.

- [26] Interface driven electrical and magneto-transport properties of $(100-x)\%$ $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ - $x\%$ Paraffin wax ($0 \leq x \leq 1$) hybrid nanocomposites by Debajit Deb, Sanjay K. Mandal, Archana Lakhani, Aparna Nath, and **Puja Dey**, *The European Physical Journal B*, **92** 165 (2019).
- [27] Magnetically tunable alternating current electrical properties of $(100-x)\%$ $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ - $x\%$ paraffin wax ($0.05 \leq x \leq 1.0$) hybrid nanocomposites, D. Deb, Rajesh Debnath, S.K. Mandal, A. Nath, **P. Dey**, *Journal of Alloys and Compounds* **776**, 71-82 (2019).
- [28] Lead free $x\text{NiFe}_2\text{O}_4 - (1-x)\text{ErMnO}_3$ ($x = 0.1, 0.3$ and 0.5) multiferroic nanocomposites: Studies of magnetoelectric coupling, AC electrical and magnetodielectric properties, S. K. Mandal, Swati Singh, Rajesh Debnath, **P. Dey**, *Ferroelectrics* **536** (1), 77 – 90 (2018).
- [29] Light tuning DC and AC electrical properties of ZnO-rGO based hybrid nanocomposite film, Debarati Nath, S. K. Mandal, Debajit Deb, J. K. Rakshit, **P. Dey**, and J. N. Roy, *Journal of Applied Physics* **123**, 095115 (2018).
- [30] Optical, electrical properties and structural characterization of ZnO:rGO based photodetector, Debarati Nath, S. K. Mandal, Debajit Deb, J. K. Rakshit, **P. Dey** and J. N. Roy, *AIP Conference Proceedings* **1942**, 080006 (2018).
- [31] Magnetoelectric coupling and electrical properties of inorganic-organic based LSMO-PVDF hybrid nanocomposites, R. Debnath, S. K. Mandal, **P. Dey**, A. Nath, *AIP Conference Proceedings* **1942** (1), 050016 (2018).
- [32] Room temperature magnetoelectric coupling and electrical properties of Ni doped Co-ferrite–PZT nanocomposites S Chakraborty, SK Mandal, **P Dey**, B Saha, *AIP Conference Proceedings* **1942** (1), 050015 (2018).
- [33] Magnetic field tunable ac electrical transport of LaFeO_3 -wax nanocomposites S Roy, SK Mandal, R Debnath, D Nath, **P Dey**, *AIP Conference Proceedings* **1942** (1), 050020 (2018).
- [34] Frequency and temperature dependence of dielectric and ac electrical properties of NiFe_2O_4 –ZnO multiferroic nanocomposite P Dutta, SK Mandal, **P Dey**, A Nath *AIP Conference Proceedings* **1942** (1), 050033 (2018).
- [35] Enhanced room temperature magneto resistance in $(1-x) \%$ $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ - $x \%$ WAX ($x=0, 0.1, 0.2$ and 1.0) nanocomposites, D Deb, **P Dey**, SK Mandal, D Nath, A Nath *AIP Conference Proceedings* **1942** (1), 050014 (2018).
- [36] Sign reversal of spin-polarized tunnelling magnetoresistance in 99.95% $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ -0.05% Paraffin wax nanocomposite: An effect of spin-flip scattering at intergranular Paraffin wax

interface, **P. Dey**, D. Deb, Rajesh Debnath, S.K. Mandal, Archana Lakhani, T.K. Nath, J.N. Roy, A. Nath, *Journal of Magnetism and Magnetic Materials* **468**, 85–90 (2018).

[37] Magnetoelectric coupling and AC electrical properties of $x\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3 - (1-x)\text{HoMnO}_3$ ($x = 0.1, 0.3$ and 0.5) lead free multiferroic nanocomposites, S. K. Mandal, Swati Singh, Rajesh Debnath, **P. Dey**, J.N. Roy, T.K. Nath, *Materials Chemistry and Physics* **205** 217-227 (2018). **(Impact Factor = 2.08)**

[38] Room-temperature magnetoelectric coupling, dielectric and impedance studies of $0.5\text{ZnNiFe}_2\text{O}_4-0.5\text{HoMnO}_3$ nanocomposite by R. Debnath, S. K. Mandal, A. Nath, **P. Dey**, *International Journal of Modern Physics B* **32** (19), 1840060 (2018).

[39] Zn doped $\text{NiFe}_2\text{O}_4\text{-Pb}(\text{Zr}_{0.58}\text{Ti}_{0.42})\text{O}_3$ multiferroic nanocomposites: Magnetoelectric coupling, dielectric and electrical transport, S. K. Mandal, S. Chakraborty, **P. Dey**, B. Saha, T. K. Nath *Journal of Alloys and Compounds* **747**, 834-845 (2018).

[40] $x\text{Zn}_{0.3}\text{Ni}_{0.7}\text{Fe}_2\text{O}_4-(1-x)\text{HoMnO}_3$ ($x = 0.1, 0.3$ and 0.5) nanocomposites: magnetoelectric, magnetodielectric and AC electrical response, S. K. Mandal, Rajesh Debnath, **P. Dey** and A. Nath, *Mater. Res. Express* **4**, 115014 (2017). **(Impact Factor = 1.08)**

[41] Signature of Magnetoelectric Coupling of $x\text{NiFe}_2\text{O}_4 - (1-x)\text{HoMnO}_3$ ($x = 0.1$ and 0.3) Multiferroic Nanocomposites, S. K. Mandal, Rajesh Debnath, Swati Singh, A. Nath, **P. Dey**, and T. K. Nath, *Journal of Magnetism and Magnetic Materials* **443**, 222–232 (2017). **(Impact Factor = 2.630)**

[42] Magnetoelectric Coupling, Dielectric and Electrical Properties of $x\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3 - (1-x)\text{Pb}(\text{Zr}_{0.58}\text{Ti}_{0.42})\text{O}_3$ ($x = 0.05, 0.1$) Multiferroic Nanocomposites, S. K. Mandal, Swati Singh, Rajesh Debnath, A. Nath and **P. Dey**, *Journal of Alloys and Compounds* **720**, 550-561 (2017). **(Impact Factor = 2.726)**.

[43] Temperature and Frequency Dependence of AC Electrical Properties of Zn and Ni doped CoFe_2O_4 Nanocrystals, S. K. Mandal, Swati Singh, **P. Dey**, J. N. Roy, P. R. Mandal and T. K. Nath, *Philosophical Magazine* **97**, 1628–1645 (2017). **(Impact Factor = 1.632)**

[44] Fabrication and characterization of organic semiconductor based photodetector for optical communication, Debarati Nath, **Puja Dey**, Debajit Deb, Jayanta Kumar Rakshit and Jitendra Nath Roy, SPECIAL ISSUE VISVESVARAYA 2016, *CSI transactions on ICT* **5** (2), 149-160 (2017), DOI 10.1007/s40012-016-0150-8.

- [45] Magnetoelectric coupling and dielectric study of $x\text{NiFe}_2\text{O}_4 - (1-x)\text{ErMnO}_3$ lead free multiferroic nanocomposites, Swati Singh, S. K. Mandal, and **P. Dey**, *AIP Conference Proceedings* **1832**, 050022 (2017).
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