Dr. Sarat Kumar Swain, FRSC

Professor,
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- **Date of Joining as Professor : 16th September 2011**
- **Thesis Supervised (Completed): Ph.D.: 19 M.Tech.: 04 M.Phil.: 14 M.Sc.: 48**
- **Research Credentials : Journals:** ~150 **Patents:** 02 **Books Authored/Edited:** 07
  Book Chapters: ~50 **Chapters in Encyclopedia:** 03
  Popular Scientific Reports: 05 **Monograph:** 01
  Conferences: 80 **h-Index (Scopus):**37
  i10-Index: 116 **Average Impact Factor of Journals:** 5.18
  Citations: ~5000 **Research Projects Handled:** 04
- **Awards/Fellowship:**
  - **Fellow of Rayal Society of Chemistry (FRSC),** London UK
  - **Samanta Chandrasekhar Award-2015:** Odisha Bigyan Academy, DST, Govt. of Odisha
  - **INSA S R Fellowship (2013):** Indian National Science Academy, Govt. of India
  - **DAE Young Scientist Research Award (2008)**: BRNS-DAE, Govt. of India
  - **JNCASR Visiting Fellowship (2007)**: JNCASR, Bengaluru, Govt. of India
  - **BOYSCAST Post-Doc Fellowship (2004)**: DST, Govt. of India
  - **Prof. R. K. Nanda Award (1994)**: P G Seminar, Ravenshaw College, Cuttack, Odisha
  - **Best Science Project Award (1992)**: S. V. M. College, Jagatsingpur, Odisha
- **Professional Experience:** **Teaching**: 27 years, **Post Ph.D. Experience**: 24 years
- **Research Collaborations:**
  - **Academic:** Prof. Mohammad Jawaid**,** Laboratory of Biocomposite Technology, Institute of Tropical Forestry and Forest Products (INTROP), University of Putra, Malaysia.
  - **Industry:** M/s. Liveco Materials LLP, 103/104, 1st Floor, Orbit Plaza, Mumbai, India
- **Administrative Experiences:**
  - Director (IQAC), VSSUT, May 2024 to till date
  - Dean (Academic Affairs), VSSUT, May 2019 to Mar 2021& Nov 2014 to Jan 2016 (3 Years)
  - Dean (PGS&R), VSSUT, Mar 2016 to May 2017 & Nov 2014 to Jul 2015 (3 Years)
  - Head of the Department, Chemistry, VSSUT, Sept 2011 to Sept 2014 (3 Years)
  - Prof-in-charge Central Library, VSSUT, Burla, Sept 2013 to Apr 2016 (2.5 Years)
  - Chairman, Estate Committee, VSSUT, Dec 2012 to Mar 2015 (2 years)
  - First Appellant Authority, RTI Act 2005, VSSUT, Sept 2011 to Sept 2013 (2 years)
  - Deputy Registrar, Registrar (I/C), North Orissa University, Aug 2009 to Sept 2011 (2 years)
  - HoD, Chemistry, NOU, Sept 2004 to Mar 2005 & Jun 2010 to Sept 2011(2 years)
  - Programme Coordinator, NSS, NSS Bureau, NOU, Feb 2008 to Sept 2011 (3 years)
  - Secretary, Sports Council, NOU, Jul 2006- Jul 2008 (2 years)
- **Conferences/Workshop Organized (As Secretary/Convenor): Conference:** 06 **Workshop:** 02

- **Research Interest:**
  - Synthesis, characterization and evaluation of properties of Polymeric/nonpolymeric Nanocomposites for different applications: Designing of films for packaging applications; Hydrogels for drugs delivery and wound healing applications; Organic-Inorganic hybrid materials for dye removal; Sensing of glucose, heavy metal ions, amino acids etc.

- **Post-Doctoral Research Fellowship:**
  - **Post-Doctoral Fellow** at the Department of Polymer Engineering, **The University of Akron**, Akron, Ohio, **USA**, associated with *Prof. A. I. Isayev* through BOYSCAST Fellowship from Department of Sci. & Techn., Government of India.
  - **Post-Doctoral Fellow** at Jawaharlal Nehru Centre for Advance and Scientific Research (JNCASR), Govt. of India, Bangalore, associated with *Prof C. N. R. Rao* through JNCASR Fellowship
  - **INSA S R Fellow** at Indian Association for Cultivation of Science, Govt. of India, Jadavpur, Kolkata, associated with *Prof S. Ghosh*.

- **Research Projects Handled:**
  - Synthesis of polymer/clay nanocomposites by emulsifier-free emulsion technique: superabsorbency and biodegradable study, **DST-SERC, Govt. of India**, Ref: SR/FTP/CS-130/2006, 2008-2011.
  - Synthesis and characterization of polymer/CNT nanocomposites by chemically functionalized carbon nanotubes, **DAE-BRNS, Govt. of India**, Ref: 2008/20/37/BRNS/1936, , 2009-2012.
  - Sonochemical investigation of some pharmaceutical active biopolymers and proteins for biomedical application, **DST, Govt. of Odisha**, Ref: ST-Bio-15/2014, 2014-2017.
  - Preparation and characterization of graphene nanocomposites by reinforcement of transition metal based quantum dots, **CSIR, Govt. of India**, Ref: 01(2836)/15/EMR-II, 2015-2018.

- **Academic and Professional Trainings Completed: (Total Period: ~35 weeks)**
  - **NPTEL-AICTE** Faculty Development Programme on the topic **Pericyclic Reactions and Organic Photochemistry** from February 1st 2022 to April 30th 2022.(MOOCs) [8 weeks]
  - **NPTEL-SWAYAM** Online Refresher Courses in "**Chemistry for Higher Education**" by SGTB Khaisa College, University of Delhi, From December 1st 2020 to March 31st 2021.[16 weeks]
  - **Train the Trainers on Examination Reforms** at KLE Technological University, Hubbali, Karnataka, January 20-22, 2020.[3 days]
  - **Professional Development Training** programme at IIM Tirchy, February 19-23, 2018. [1 week]
  - **Faculty Development Training** programme at IIM Raipur, October 12-16, 2015. [1 week]
  - **Summer Training School on Nanotechnology: Processing and Application** at IIT Kharagpur, September 14-19**,** 2009**.**[1 week]
  - **DST Advance School on Nanoscience and Nanobiology** at Indian Institute of Science, Bangalore, Feb. 5-16**,** 2007, Selected by Department of Science & Technology(DST), Govt. of India.[2 weeks]
  - "**Green Chemistry**" at IIT Guwahati, Sponsored by Department of Science & Technology, New Delhi, February 25-26, 2005.[2 days]
  - DST-Nano school (Nanotechnology) in the subject of **"Preparation, Characterization and Manipulation of Nanomaterials"** at IISc Bangalore, February 9-21, 2003.[2 weeks]
  - U.G.C sponsored refresher course in the subject **"Recent Trend in Chemistry"** at Utkal University, Bhubaneswar, March 06-26, 2002.[3 weeks]

- **Editorial board of journals**
  - Polymer-Plastic Technology and materials (*Tylor Francis*)
  - American Journal of Polymer Science and Technology (*Science Publishing Group*)
  - Guest Editor of Gel (MDPI)

- **Foreign Countries Visited in Academic assignments:**
  - Department of Polymer Engineering, University of Akron, Ohio, USA,
  - Institute of Materials, Malaysia, Subang Jaya, Selangor, Malaysia,
  - University of Putra Malaysia, Kuala Lumpur, Malaysia,
  - 3rd International Conference and Exhibition on Materials Science and Engineering, San Antonio, USA,
  - 5th International conference on Nanomaterails, Bangkok, Thailand,
  - University of Putra, Malaysia,

- **Educational Degrees:**
  - **Ph.D. (Chemistry)** in Polymer Chemistry from Utkal University, Bhubaneswar. Odisha, India. **Thesis Title**: Emulsifier-Free Emulsion Polymerization Involving Metal Salts and Complex Initiating Systems and Study on Solution Properties of Polymers. (Awarded 2001)
  - **M.Phil. (Chemistry)** with Organic Chemistry as major elective from Utkal University, Bhubaneswar, Odisha, India, passed with 1st Division. **Thesis title:** Oxa and tha Diels-Aldol reactions: A Review. (Awarded 1996)
  - **M.Sc. (Chemistry)** with Organic Chemistry specialization from Utkal University, Bhubaneswar, Odisha, India, passed with 1st Division.
  - **B.Sc. (Chemistry Honours)** with Physics & Mathematics as minor subjects from Utkal University, Bhubaneswar, India, passed with 1st Division & Distinction.

- **Details of Employments:**
  - Professor of Chemistry; (Level 14) Veer Surendra Sai University of Technology, Burla, Sambalpur (Govt. of Odisha); since September, 2011 (Continuing)
  - Reader & Assoc. Prof. in Chemistry (Pay Band: 3 & Level 13A); From August 2004 to September 2011
  - ICFAI University, Faculty of Chemistry (Assoc. Prof.), Pay band:3; From July 2003 to August 2004
  - KIIT University; Lecturer & Promoted to Assoc. Prof. of Chemistry on October 2001 till July 2003

LIST OF RESEARCH CONTRIBUTIONS

PATENTS

1. Avraam I Isayev**, Sarat K Swain** and Sergey Lapshine "*Process Preparing Polymer Nanocomposites and Nanocomposites Prepared Therefrom"*Publication No**.: US 2010/0152325 A1,** Date of Final Grant**: June 17, 2010**.
2. **Sarat K Swain**, SkBasirudin and Kalyani Prusty "Design of Thermally Responsive Reversible Hydrophobic Gels" Indian Patent Publication No.**: 201631021775 A**, Publication Date: **December 29, 2017**.Date of final Grant: **October 06, 2021**

RESEARCH PAPERS IN JOURNALS
(Impact Factor/2023; *Corresponding Author)
ORCID® ID: https://orcid.org/0000-0003-1889-4375
SCOPUS ID: 7102336172; **Web of Science Researcher ID**: G-5788-2019
Google Scholar:https://scholar.google.co.in/citations?user=puINvP0AAAAJ&hl=en&oi=ao

PAPERS IN INTERNATIONAL SCI JOURNALS

2024

1. K. M. Sahu, A. Biswal, U Manisha and **S. K. Swain*** **"** Synthesis and drug release kinetics of ciprofloxacin from polyacrylamide/dextran/carbon quantum dots (PAM/Dex/CQD) hydrogels" **.** ***International Journal of Biological Macromolecules*****, (Elsevier),** 269(2), 132132 **(**2024**). (**Impact Factor: 8.2**)** ISSN: 1879-0003. DOI: https://doi.org/10.1016/j.ijbiomac.2024.132132 (Early view).

2. S. Patra, D. Sahoo and S. K. Swain* Carbon quantum dots in N, N′-Dicyclohexylcarbodiimide assisted cellulose: A fluorescence sensitive approach for ex vivo glucose monitoring in human serum" *International* ***Journal of Biological Macromolecules***, (Elsevier), 283(3), 137761 (2024). (Impact Factor: 7.7), ISSN: 1879-0003. https://doi.org/10.1016/j.ijbiomac.2024.137761.

3. S S Sana, C J Raorane, R Venkatesan, S Roy, S. K. Swain, Seong-Cheol Kim, M Al-Tabakha, R R. Bhandare , V Raj, S Lee, "State-of-the-art progress on locust bean gum polysaccharide for sustainable food packaging and drug delivery applications: A review with prospectives" ***International Journal of Biological Macromolecules***, (Elsevier), Available online 2 July 2024, 133619 (Impact Factor: 7.7), ISSN: 1879-0003. https://doi.org/10.1016/j.ijbiomac.2024.133619

4. Sk. Nazrul, A. Biswal, K M Sahu, S S Sana and **S. K. Swain*** **"** Nano Silver Imprinted Starch-co-Polymethylmethacrylate Sandwiched Layered Double Hydroxide Nanocomposite Films for Packaging Application**"** ***Starch Strake*** **(**Wiley**), 76(11-12),**2300106 **(**2024**). (**Impact Factor: 2.741**)** ISSN: **1521-379X.** DOI: 10.1002/star.202300106**.** (Early view)

5. P K Behera, D Sahu, B R Jali, A K Barick, **S K Swain** and P Mohapatra* "A Simple Method for Synthesizing Nitrogen-Doped Carbon Quantum Dots for Fluorescent "Turn off" Mercury (II) Ion Sensing" ***Journal of Fluorescence*** (Springer) **00**, 00-00 (2024), (Impact Factor: 2.7), ISBN: 1573-4994. DOI: https://doi.org/10.1007/s10895-024-03649-1. (Early view)

6. P K Behera, D Sahu, **S K Swain** and P Mohapatra* "Capsule-shaped nano silver-embedded reduced graphene oxide nanocomposites for sensing of mercury ions" ***Applied Nanoscience*** (Springer) **14**, 353-361 (2024), (**Impact Factor: 1.607**), ISBN: 22996-1729. DOI: https://doi.org/10.1007/s13204-023-02980-6 .

7. J P Behera, S Patra, S K Najrul, S K surmma, D Kumar, M K Berma, A K Katare and **S K Swain* "**Nano Boron Nitride Laminated Poly(ethyl methacrylate)/Poly(vinyl alcohol) Composite Films Imprinted with Silver Nanoparticles as Gas Barrier and Bacteria Resistant Packaging Materials**"** ***Journal of Applied Polymer Science, 141(16),*** 00e55246, (Wiley), (**2024**). (Impact Factor: 3.0) **ISSN:** 1097-4628. **DOI:** 10.1002/app.20232930. (Early view)

8. S K Das, D Bharatiya, B Padhi. L Pradhan, B K Jena and **S K Swain*** "Effect of clay on TiO_2 **embedded** PMMA nanocomposite for high-performance energy storage application" ***Journal of Energy Storage***, **82**, 110586 (Elsevier), (**2024**). (Impact Factor: 9.4) **ISSN:** 2352-1538. **DOI** https://doi.org/10.1016/j.est.2024.110586

9. Sk. Nazrul, A. Biswal, L. Behera, and **S. K. Swain***"Synthesis of sandwiched chitosan-g-PMMA nanocomposite by layered double hydroxides for packaging applications" ***Polymer Bulletin*** (Springer), **81(1),** 633-660 (**2024**). (Impact Factor: 3.2) **ISSN:** 1436-2449. **DOI:** 101007/s00289-023-04732-6.

10. B. Patra, A Biswal, S. Swain, L. Behera and **S. K Swain** "Role of Nano SiC in Enhancement of Mechanical, Barrier and Flame-Retardant Properties of PANI-co-PAA Films" ***Polymer-Plastic Technology and Materials***, xx, xx-xx (Tylor & Francis), (**2024**). (Impact Factor: 2.439) **ISSN:** 2574-089X **DOI:** https://doi.org/10.1080/25740881.2023.2297963 . (Early view)

11. S. Patra, K. M. Sahu, A A. Reddy and **S K Swain*** Polymer and Biopolymer Based Nanocomposites for Glucose Sensing, ***International Journal of Polymeric Materials and Polymeric Biomaterials 73(6),*** 490-521 (Tylor & Francis), (**2024**). (Impact Factor: 3.221) **ISSN:** 1563-535X. **DOI:** 10.1080/00914037.2023.2175824.

2023

12. A. Biswal, S. Purohit, J. Pratapsingh, L. Mishra, M. Monalisa, S. B. Biswal, **S. K Swain*,**"Synergistic Effect of f-MWCNT and Nano Titania on Wound Healing Efficacy of Chitosan Films in Drosophila and Rat Models" ***ACS Applied Nano Materials***(ACS), 6, 24, 23064–23077 (**2023**) (Impact Factor: 5.9) **ISSN:** 2574-0970 DOI: https://doi.org/10.1021/acsanm.3c04413

13. S. Purohit, A. Biswal, L. Mishra, M. Monalisa, S. B. Biswal, **S. K Swain*** "In vivo Wound Healing in Drosophila Melanogaster and Mouse models: Synergistic Effect of Bovine Serum Albumin and Graphene Quantum Dots" ***ACS Appl. Bio Mater***ials (ACS) 6, 12, 5531–5540 (**2023**) (Impact Factor: 4.7) **ISSN:** 2576-6422. DOI: https://doi.org/10.1021/acsabm.3c00743.

14. S. K Das, D. Bharatia, B. Parhi, and **S K Swain* "**Influential factors modulating the dielectric behaviour of transition metal oxide nanocomposites for energy storage applications: A-state-of-the-art review**"** ***Journal of Energy Storage***, **73**, 108930 (Elsevier), (**2023**). (Impact Factor: 9.4) **ISSN:** 2352-1538. **DOI:** https://doi.org/10.1016/j.est.2023.108930.

15. S. Patra, K. M Sahu, J. Mahanty, and **S. K. Swain*** "Ex Vivo Glucose Detection in Human Blood Serums with Carbon Quantum Dot-Doped Oleic Acid-Treated Chitosan Nanocomposites" ***ACS Appl. Bio Mater***.(ACS) **6(12),** 5730-5745 (2023) (Impact Factor: 4.7) **ISSN:** 2576-6422 https://doi.org/10.1021/acsabm.3c00851

16. P K Behera, D Sahu, **S. K. Swain**, P. Mohapatra "Capsule-shaped nano silver-embedded reduced graphene oxide nanocomposites for sensing of mercury ions" ***Applied Nanoscience(Springer)***, 00-00 (2023) (Impact Factor: 3.869) **ISSN:** 2190-5517https://doi.org/10.1007/s13204-023-02980-6

17. S. Patra, S. Mishra, B. Parhi, H. Mishra, **S. K. Swain*** "Role of transition metal nanocomposites in organic reactions: A state of art as an alternative to conventional catalysts" ***Results in Chemistry*** (Elsevier), 6 (2023) 101172. (Impact Factor: 2.3) **ISSN:** 2211-7156 https://doi.org/10.1016/j.rechem.2023.101172

18. **S. K. Swain***, Sk. Nazrul, S. K Das, A. Biswal and L. Behera, "Layered Double Hydroxides bundled Agar-g-PAN/Ag Nanocomposite Films: A Strategy to Improve Thermal, Barrier and Antibacterial Properties" ***Materials Today Communication***, (Elsevier), **37**, 107073 (2023). (Impact Factor: 3.8) ISSN: 2352-4928. DOI: https://doi.org/10.1016/j.mtcomm.2023.107073 .

19. A Biswal, S S Purohit and **S. K. Swain*** "Chitosan based composite scaffolds in skin wound repair: A review" ***Journal of Drug Delivery Science and Technology***, (Elsevier)84, 104549(**2023**) (Impact Factor: 5.0) **ISSN**: 1773-2247**DOI:**10.1016/j.jddst.2023.104549

20. K. M. Sahu, S. Patra and **S. K. Swain*** "Host-Guest Drug Delivery by β-cyclodextrin Assisted Polysaccharide Vehicles: A Review. ***International Journal of Biological Macromolecules***, (Elsevier), **240** 124338(1-20) (**2023**). (Impact Factor: 8.2) **ISSN:** 1879-0003. **DOI**:10.1016/j.ijbiomac.2023.124338

21. D. Bharatia, B. Parhi, and **S K Swain***"Dielectric Study of Nanostructured Ternary Composite Derived from Amalgamated CuO/Ag2O on Graphene Oxide Sheets. ***Journal of Materials Research*** (Springer), 00, 00-00 (**2023**). (Impact Factor: 2.7) **ISSN:** 2044-5326. 10.1557/s43578-023-01068-9

22. S. Patra, S. S. Purohit and **S. K. Swain*** In vivo fluorescence non-enzymatic glucose sensing technique for diabetes management by CQDs incorporated dextran nanocomposites in human blood serums. ***Microchemical Journal***, **109**,108646 (1-10) (Elsevier), (**2023**). (Impact Factor: 4.8) **ISSN:** 0026-265X. **DOI:**10.1016/j.microc.2023.108646.

23. D. Bharatia, B. Parhi, H. Sahuand **S K Swain***Factors influencing the dielectric properties of GO/MO nanocomposites: review, ***Journal of Materials Science: Materials in Electronics***, **34(5),** 452, (Springer), (**2023**). (Impact Factor: 2.8) **ISSN:** 0957-4522. **DOI:** 10.1007/s10854-023-09928-0.

24. D. Bharatiya, S. Patra, B. Parhi and **S K Swain*** "A materials science approach towards bioinspired polymeric nanocomposites: a comprehensive review" ***International Journal of Polymeric Materials and Polymeric Biomaterials***, **72(2)**, 119-134, (Tylor & Francis), (**2023**). (Impact Factor: 3.221) **ISSN:** 0091-4037. **DOI:** 10.1080/00914037.2021.1990057.

2022

25. Sk. Nazrul, L. Behera, R. K. Singh, A. Biswal, **S. K. Swain*** "Combined Effect of Layered Double Hydroxides and Nano silver on Bacterial Inhibition and Gas Barrier Properties of Chitosan Grafted Polyacrylonitrile Nanocomposites" ***Polymer-Plastic Technology and Materials***,**61(18),** 1959-1972, (Tylor & Francis), (**2022**). (Impact Factor: 2.439) **ISSN:** 2574-089X **DOI:** 10.1080/25740881.2022.2086814.

26. P. K. Sethy, A. Biswal, P. Mohapatra, and **S K Swain* "**Nano BN reinforced cellulose-based tripolymeric hybrid nanocomposites as packaging materials" ***Polymer-Plastic Technology and Materials***,**61(11),**1233-1243, (Tylor & Francis), (**2022**). (Impact Factor: 2.439) **ISSN:** 2574-089X**. DOI:** 10.1080/25740881.2022.2044048.

27. D. Bharatiya, B. Parhi, and **S K Swain* "**Effect of polycaprolactone on physicochemical, biological, and mechanical properties of polyethylene oxide and polyamino acids nano block copolymers" ***Journal of Applied Polymer Science,* 139(19),** 52116, (Wiley), (**2022**). (Impact Factor: 3) **ISSN:** 1097-4628. **DOI:** 10.1002/app.20213091.

2021

28. K. Prusty, S. Patra and **S. K. Swain* "**Nano ZnO imprinted dextran hybrid poly (N-isopropylacrylamide)/poly ethylene glycol composite hydrogels for in vitro release of ciprofloxacin**"** ***Materials Today Communication,* 26,** 101869-670, (Elsevier), (**2021**). (Impact Factor: 3.8)**ISSN:** 0925-8388. **DOI:** 10.1016/j.mtcomm.2020.101869.

29. D. Bharatia, B. Parhi**and S K Swain*** "Preparation, characterization and dielectric properties of GO based ZnO embedded mixed metal oxides ternary nanostructured composites" ***Journal of Alloys and Compounds,* 869,** 159274-82, (Elsevier), **(2021).** (Impact Factor: 6.2) **ISSN:**03602559. **DOI:** doi.org/10.1016/j.jallcom.2021.159274**.**

30. P. K. Sethi, P. Mohapatra, S. Patra, D. Bharatia and **S. K. Swain***"Antimicrobial and barrier properties of polyacrylic acid/GO hybrid nanocomposites for packaging application" ***Nano-Structures & Nano-Objects,* 26,** 100747, (Elsevier), (2021). (Impact Factor:5.454) **ISSN:** 2352-507X. **DOI:**org/10.1016/j.nanoso.2021.100747.

31. A. Biwal, P. Sethy and **S. K. Swain*** "Change in orientation of polyacrylic acid and chitosan networks by imprintment of gold nanoparticles" ***Polymer-Plastic Technology and Materials***, **60(2)**, 182-194, (Tylor & Francis), (**2021**). (Impact Factor: 2.439) **ISSN:** 03602559.**DOI:**10.1080/25740881.2020.1793196.

32. K. Prusty and **S. K. Swain*** "Polypropylene oxide/polyethylene oxide-cellulose hybrid nanocomposite hydrogels as drug delivery vehicle" ***Journal of Applied Polymer Science***, **138(9)**, 49921-30, (Wiley), (**2021**). (Impact Factor: 3) **ISSN:** 1097-4628. **DOI:** 10.1002/app.20200978.

2020

33. B. Parhi, D. Bharatia and **S. K. Swain* "**Surfactant free green synthesis of GOSiMa hybrid nanocomposite for charge storage application**"** ***Ceramic International,* 46(17),** 27184-192,(Elsevier),(**2020**). (Impact Factor: 5.2) **ISSN:** 0272-8842. **DOI:** https://doi.org/10.1016/j.ceramint.2020.07.199.

34. N. Sarkar, G. Sahoo and **S. K. Swain* "**Graphene quantum dot decorated magnetic graphene oxide filled polyvinyl alcohol hybrid hydrogel for removal of dye pollutants**"** ***Journal of Molecular Liquids,*** 302, 112591-112608, (Elsevier), (**2020**). (Impact Factor: 6) **ISSN:** 0167-7322. **DOI:**10.1016/j.molliq.2020.112591.

35. N. Sarkar, G. Sahoo and **S. K. Swain* "**Nanoclay sandwiched reduced graphene oxide filled macroporus polyacrylamide-agar hybrid hydrogel as an adsorbent for dye decontamination" ***Nano-Structures & Nano-Objects***, **23**, 100507-100523, (Elsevier), (**2020**). (Impact Factor:5.454) **ISSN:** 2352-507X. **DOI:** 10.1016/j.nanoso.2020.100507.

36. N. Sarkar, G. Sahoo and **S. K. Swain* "**Reduced graphene oxide decorated superporous polyacrylamide based interpenetrating network hydrogel as dye adsorbent**"** ***Materials Chemistry and Physics***, **250**, 123022-123037,(Elsevier), (**2020**). (Impact Factor: 4.6) **ISSN:** 0254-0584. **DOI:**10.1016/j.matchemphys.2020.123022.

37. K. Prusty and **S. K. Swain*** "Nano ZrO_2 reinforced cellulose incorporated polyethylmethacrylate/polyvinyl alcohol composite films as semiconducting packaging materials" ***Journal of Applied Polymer Science,* 137(42)**, 49284, (Wiley), (**2020**). (Impact Factor: 3) **ISSN:** 1097-4628. **DOI:**10.1002/app.49284.

38. D. Sahu, P. Mohapatra and **S. K. Swain* "**Highly orange fluorescence emission by water soluble gold nanoclusters for "turn off" sensing of Hg^{2+} ion**"** ***Journal of Photochemistry & Photobiology, A: Chemistry***, **386**, 112098, (Elsevier), (**2020**). (Impact Factor: 4.3) **ISSN:** 1010-6030. **DOI:** 10.1016/j.jphotochem.2019.112098**.**

39. D. Sahu, N. Sarkar, P. Mohapatra and **S. K. Swain* "**Rhodamine B associated Ag/r-GO nanocomposites as ultrasensitive fluorescent sensor for Hg2+**"** ***Microchemical Journal***, **154**, 104577, (Elsevier), (**2020**). (Impact Factor: 4.8) **ISSN:** 0026-265X. **DOI:**doi.org/10.1016/j.microc.2019.104577.

40. P. K. Sethi, K. Prusty, P. Mohapatra and **S. K. Swain*** "Nano CaCO3 embodied poly acrylic acid/dextran nanocomposites for packaging applications" ***Journal of Applied Polymer Science***, **137 (3),** 48298-308,(Wiley), (**2020**). (Impact Factor: 3) **ISSN:** 1097-4628. **DOI:** 10.1002/app.48298.

41. B. Parhi, D. Bharatiya and **S. K. Swain*** "Application of quercetin flavonoid-based hybrid nanocomposites: a review**"** ***Saudi Pharmaceutical Journal,*** **28(12),** 1719–1732, (Elsevier), (**2020**). (Impact Factor: 4.1) **ISSN:** 1319-0164. **DOI:** 10.1016/j.jsps.2020.10.017.

2019

42. D. Sahu, N. Sarkar, P. Mohapatra and **S. K. Swain* "**Nano gold hybrid polyvinyl alcohol films for sensing of Cu^{2+} ions**"** ***Chemistry Select***, **4**, 9784-9793, (Wiley-VCH), (**2019**). (Impact Factor: 2.307)**ISSN:**2365-6549.**DOI:**10.1002/slct.201902167.

43. B. B. Singh, F. Mohanty, S. S. Das*, and **S. K. Swain** "Graphene sandwiched crumb rubber dispersed hot mix asphalt" ***Journal of Traffic and Transportation Engineering***, **7(5),** 652-667**,** (Elsevier), (**2019**). (Impact Factor:7.9) **ISSN:** 2095-7564. **DOI:** 10.1016/j.jtte.2019.02.003.

44. K. Prusty and **S. K. Swain*** "Release of ciprofloxacin drugs by nano gold embedded cellulose grafted polyacrylamide hybrid nanocomposite hydrogels" ***International Journal of Biological Macromolecules***, **126(1**), 665-675, (Elsevier), (**2019**). (Impact Factor: 8.2) **ISSN:**0141-8130.**DOI:** 10.1016/j.ijbiomac.2018.12.258 0141-8130.

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DECLARATION	All the information provided above are true and best of my knowledge and supporting documents can be produced on demand.

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