RESUME

i. Name of the applicant as per SSC records: Dr. Tanmoy Rath

ii. Postal address: Dr. Tanmoy Rath, C/O – Syamapada Acharya, Vill. Jalalkhanbard, P.O. – Contai, Near JIO Office. Dist.- Purba Medinipur, 721401, West Bengal

iii. Email id: tanmayrath@gmail.com

iv. Land line & Cell phone numbers: 6294514373 or 8348865568

Academic qualification

Sl. No	Academic Degree	Name of the institute	Year of Passing	Pass percentage
1.	B.Sc	Midnapore College, Vidyasagar University	2001	65.62%, 1st
2.	M.Sc	Vidyasagar University	2003	72.5%, 1st
3.	Ph.D	IIT Kharagpur	2009	---

GATE/GRE/UGC-NET/SET qualifications

CSIR-NET --- 2005

Experience in Industry & Educational institutions in chronological order.

Sl. No.	Name and address of Employer	Designation	From	To	Brief description of duties	Reasons for leaving
1.	Motihari College of Engineering(Govt. Eng. College), Motihari, Bihar,	Assistant Professor	19.01.2018	30.09.2023	Teaching and research	Contractual
2.	Central Institute of Petrochemicals Engineering and Technology (CIPET), Bhubaneswar. Odisha formerly Central institute of Plastics Engineering and Technology (CIPET).	Assistant Professor	07.08.2013	06.08.2016	Teaching and research	Contractual

3.	National Institute of Advanced Industrial Science and Technology (**AIST**), Tsukuba**, Japan**	Postdoctoral Research scientist	15.05.2009	31.03.2011	Research	---
4.	Korea Advanced Institute of Science and Technology **(KAIST),** Daejeon, **South Korea.**	Postdoctoral Research	17.05.2011	30.04.2012	Research	----

❖ Sponsored Research Project Completed and ongoing as Principal Investigator (PI)/Co-PI

Project Title:

1. Development of Flexible graphene/polymer composites film for supercapacitor applications. (Completed)
Sanctioned no. SR/FTP/ETA-16/2012
Agency: DST, Govt. of India
Period: 06.12.2012 to 05.03.2016 (3 Years 3 Months)
Amount: 24,62,000/- Lakhs
Principal Investigator: Dr. Tanmoy Rath.

2. Facile synthesis and development of 3D-graphene/ WS_2/oxydized-CNT nanohybrids as advanced electrode materials for high performance flexible supercapacitors. (Completed).
Sanctioned no. DST/TMD/MES/2k18/180 (Stream A).
Date: 21.06.2019 to till Date
Agency: DST, Govt. of India
Amount: Rs. 56,01,992/- Lakhs
Co-Investigator: Dr. Tanmoy Rath

3. Synthesis of hierarchical mesoporous WO_3@MnO_2/3D-RGO hybrid composite for high performance supercapacitor electrode (Completed).
Sanctioned no. 1-5708294912
Date: 18.06.2019 - 30/06/2021
Agency: NPIU-MHRD, Govt. of India
Amount: Rs. 17,42,000/- Lakhs
Principal Investigator(PI): Dr. Tanmoy Rath

❖ Complete List of Research Publications

1. Fluorine-free Ionic Liquid Electrolyte enabling Na/K Co-Doped Graphene Oxide Electrodes for High-Temperature Supercapacitors. Gaurav Tatrari, **Tanmoy Rath**, **Energy Storage** ***(Submitted)***

2. Upcycling waste plastic into 2D-carbon nanomaterial for high-performance supercapacitors by incorporating $NiCo_2O_4$: A sustainable approach to renewable energy, Diksha Bhatt, Mayank Pathak, Nishtha Thakur, Gaurav Tatrari, **Tanmoy Rath**, Zaher Judeh, Nanda Gopal Sahoo. **Materials Advances.** 2024, **5**, 6255-6269**. Impact Factor = 5.2** https://doi.org/10.1039/D4MA00469H

3. Fabrication of co-continuous morphology of Polysulfone/Nylon 6,6 nanocomposites by varying the concentration of organically modified clay content. **Tanmoy Rath**, Ibrahim A. Alnaser, Asiful H. Seikh. **Journal of Thermoplastics Composites Materials, 2025, 38(1), 3 - 19, Impact Factor = 3.6** https://doi.org/10.1177/08927057241270907

4. Improvement of compatibility, thermal stability and mechanical properties of poly(phenylene oxide)(PPO) and liquid crystalline polymer(LCPA950) blends with epoxy containing acrylate rubber(ACM) as a compatibilizer. **Tanmoy Rath,** Asiful H Seikh, Hany S Abdo, Nilkamal Pramanik, **Journal of Thermoplastics Composites Materials, 2023,** Volume 37, Issue 8, 2680 – 2701, **Impact Factor = 3.6.** https://doi.org/10.1177/08927057231217239.

5. High electrochemical performance flexible solid-state supercapacitor based on Co-doped reduced graphene oxide and silk fibroin composites. **Tanmoy Rath,** Nilkamal Pramanik, Sandeep Kumar. **Energy 2017, 141, 1982-1988. Impact Factor = 9.4.** ISSN: 0360-5442. https://doi.org/10.1016/j.energy.2017.11.126

6. Polyhydroxybutyrate-co-hydroxyvalerate copolymer modified graphite oxide based 3D scaffold for tissue engineering application. Nilkamal Pramanik, Saurav Bhattacharya, **Tanmoy Rath,** Ranjan Kumar Basu,Patit Paban Kundu. **Materials Science and Engineering C 2019, 94, 534 - 546. Impact Factor = 8.1**. https://doi.org/10.1016/j.msec.2018.10.009

7. Fabrication of magnetite nanoparticles doped reduced graphene oxide grafted polyhydroxyalkanoate nanocomposite for tissue engineering application. Nilkamal Pramanik, P.P.Kundu, **Tanmoy Rath**. **RSC Advances 2016, 6(52), 46116-46133. Impact Factor = 4.6.** ISSN 2046-2069. DOI: https://doi.org/10.1039/C6RA03233H

8. "Reduced graphene oxide paper based nanocomposites materials for flexible supercapacitor." **Tanmoy Rath,** P.P Kundu**. RSC Advances 2015, 5(34), 26666–26674**. **Impact Factor = 4.6.** ISSN 2046-2069. https://doi.org/10.1039/C5RA00563A

9. "Microbial degradation of linseed oil based elastomer and subsequent accumulation of poly(3-hydroxybutyrate-co-3-hydroxyvalerate) copolymer". N. Pramanik, **Tanmoy Rath,** P.P. Kundu. **Applied Biochemistry and Biotechnology 2014, 174(4), 1613-30. Impact Factor = 3.1. DOI:** 10.1007/s12010-014-1061-5

10. **"**Nanocomposites based on polystyrene-b-poly (ethylene-r-butylene)-b-polystyrene and Exfoliated Graphite Nanoplates blend: Effect of Nanoplatelet loading on morphology and mechanical properties". **Tanmoy Rath**, Yongjin Li. **Composites Part A: Applied Science and Manufacturing, 2011, 42(12), 1995-2002. Impact Factor = 8.9.** ISSN: 1359-835X. https://doi.org/10.1016/j.compositesa.2011.09.002

11. "Mechanical, morphological and thermal properties of *in situ* ternary composites based on poly (ether imide), silicone rubber and liquid crystalline polymer". **T. Rath**, S. Kumar, R. N. Mahaling, B. B. Khatua, C. K. Das and S. B. Yadaw. **Materials Science and Engineering A, 2008, Volume 490, Issues 1-2 : 198-207. Impact Factor – 7.0.** ISSN: 0921-5093. https://doi.org/10.1016/j.msea.2008.01.076

12. "Flexible composite of PEEK and Liquid Crystalline Polymer in Presence of Polyphosphazene"**. T. Rath**, S. Kumar, R. N. Mahaling, M. Mukherjee, K. N. Pandey, A. K. Saxena, C. K. Das, **Journal of Applied Polymer Science 104:3758–3765(2007)**. **Impact Factor = 2.8** ISSN: 0021-8995. https://doi.org/10.1002/app.25934

13. "Processing and characterization of carbon nanofiber/syndiotactic polystyrene reinforced composites in the absence and presence of Liquid crystalline polymer". S.Kumar, **T.Rath**, C.K.Das. **Composites Part A: applied science and manufacturing 38:1304–1317(2007)**. **Impact Factor = 8.9.** ISSN: 1359-835X. https://doi.org/10.1016/j.compositesa.2006.11.006

14. "Study on mechanical, morphological and electrical properties of carbon nanofiber/polyetherimide composites".S. Kumar, **T. Rath**, R.N. Mahaling, C.S.Reddy, C.K. Das, K.N. Pandey, S.B. Yadaw. **Materials Science and Engineering B 141: 61–70(2007). Impact Factor = 4.6.** ISSN: 0921-5107. https://doi.org/10.1016/j.mseb.2007.06.002

15."The flexible PEI composites".**T.Rath**, S.Kumar, R.N.Mahaling, M.Mukerjee, C.K.Das. **Polymer Composites 27: 533-538 (2006). Impact Factor = 4.7.** ISSN: 0272-8397. https://doi.org/10.1002/pc.20223

16. "In Situ Reinforcement of Poly (butylene terephthalate) and Butyl Rubber by Liquid Crystalline Polymer". S. Kumar, **T. Rath**, R. N. Mahaling, C. K. Das, R. B. Srivastava, S. B. Yadaw. **Polymer Composites 30(5): 655-664 (2009). Impact Factor = 4.7**. ISSN: 0272-8397. https://doi.org/10.1002/pc.20634

17. "Multi-walled carbon nanotubes/pol/ymer composites in absence and presence of acrylic elastomer (ACM)"**.**S.Kumar, **T.Rath,** R.N.Mahaling, B.B.Khatua, C.K.Das. **Journal of Nanoscience and Nanotechnology 9: 2981-2990 (2009). Impact Factor = 1.354.** ISSN: 1533-4880**.** https://doi.org/10.1166/jnn.2009.012

18. Preparation and Characterization of Poly(methyl methacrylate)/Multi-Walled Carbon Nanotube Composites. S. Kumar, **T.Rath,** A.Dhibar, B.B.Khatua, C.K.Das. **Journal of Nanoscience and Nanotechnology 9: 4644-4655 (2009). Impact Factor = 1.354.** ISSN: 1533-4880. https://doi.org/10.1166/jnn.2009.220

19."Mechanical and morphological study of PPS/LCP blends compatibilized with a maleic anhydride grafted copolymer".**T. Rath**, S. Kumar, R. N. Mahaling, S. B.Yadaw and C. K. Das, **Journal of Applied Polymer Science 106: 3721–3728 (2007). Impact Factor = 2.8.** ISSN: 0021-8995. https://doi.org/10.1002/app.27047

20. "Effect of Clay Platelet dispersion as affected by the manufacturing techniques on Thermal and Mechanical Properties of PMMA/Clay Nanocomposites". A. K. Dhibar, S. Mallick, **T. Rath** and B. B. Khatua. **Journal of Applied Polymer Science 113: 3012-3018 (2009). Impact Factor = 2.8.** ISSN: 0021-8995. https://doi.org/10.1002/app.30420

21. "Effect of polyphosphazene Elastomer on the properties of blend of Nylon 66 and Thermotropic Liquid Crystalline Polymer (Vectra A950)".S. Bose, M. Mukherjee, **T. Rath,** C. K. Das. A. K. Saxena. **Journal of Reinforced Plastics and Composites 28(2): 157-166 (2009). Impact Factor = 2.3.** ISSN: 0731-6844. https://doi.org/10.1177/0731684407084121

22."Effects of Rubber/Filler Interaction on the developments of Physical, Mechanical and Interfacial Properties of Vamac/ Silica Nanocomposites",R.N.Mahaling, S. Kumar, **T.Rath** and C. K. Das, **Journal of Elastomers and Plastics 39: 253-268 (2007). Impact Factor = 1.4.** ISSN: 0095-2443. https://doi.org/10.1177/0095244307076495

23."Acrylic elastomer/filler nanocomposite: effect of silica nanofiller on thermal, mechanical and interfacial adhesion".R. N. Mahaling, S. Kumar, **T. Rath** and C. K.Das. **Plastics, Rubber and Composites 36: 267-273 (2007). Impact Factor = 2.1.** ISSN: 1465-8011. https://doi.org/10.1179/174328907X191459

24. Self-reinforcing composites based on ethylene acrylic elastomer(Vamac B124/TLCP). S.Kumar, T.Rath, R.N.Mahaling, C.S.Reddy and C.K.Das. **Kauchuk I Rezina. 3:2-8 (2006).** ISSN**: 0022-9466.**

25."Mechanochemical Recycling of Sulfur Cured Gum Natural Rubber"G.K.Jana, **T. Rath,** A Kozlowska, M Kozlowski and C K Das. **Polimery 52(2), 131 – 136, (2007). Impact Factor = 1.528.** ISSN: 0032-2725. DOI:10.14314/polimery.2007.131

26. "Simulation of Fiber orientation in PC/LCP blends". **T. Rath,** C.K. Das, S. Alam, T. N. Chung, G. Mennig. **Journal of Polymer Materials 25(3):293(2008). Impact Factor = 0.355.** ISSN: 0970-0838.

Google Scholar Citation

(https://scholar.google.co.in/citations?user=Lu4tmrMAAAAJ&hl=en)

Cited by		VIEW ALL
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Citations	793	273
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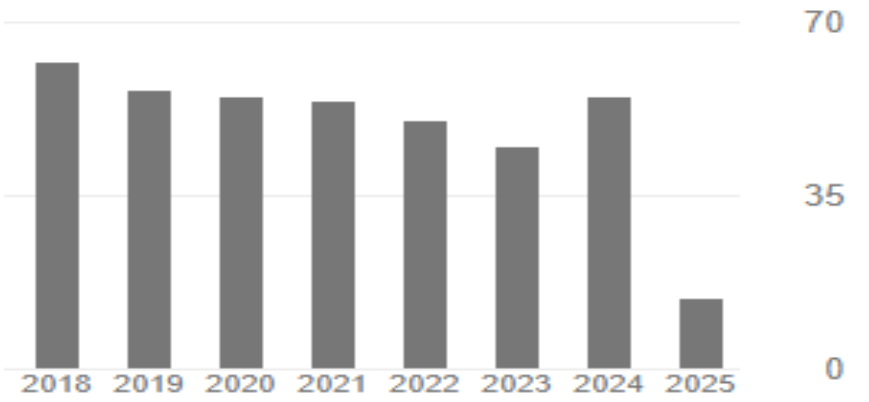
i10-index	19	9



❖ Conference Presentations:

1. "Reduced graphene oxide based electrode materials for high performance supercapacitor". **Tanmoy Rath,** 2nd International conference on Nanotechnology (ICNT 2015). February 19-22, 2015 at Haldia Institute of Technology, Haldia, West Bengal, India.

2. "Flexible energy storage device based on Graphene nanocomposites as a supercapacitor electrode". **Tanmoy Rath,** International Conference on 'Advancements in Polymeric Materials' **(APM 2014)** – Trends & Technology. February 14-16, 2014, CIPET, Bhubaneswar, India.

3."Preparation of polysulfone/polyamide/Mica Nanocomposites Using High-Shear Processing". **Tanmoy Rath,** Yongjin Li, Hiroshi Shimizu, 26th Annual Meeting of the Polymer Processing Society July 4-8, 2010, University of Calgary, Alberta, Banff, Canada.

4."Study on Thermal, Morphology and Electrical Characteristics of Acrylonitrile-butadiene-styrene (ABS)/CNT Nanocomposites in presence and absence of Liquid crystalline polymer" **Tanmoy Rath,** C. K. Das and S. B. Yadaw. Chemical Congress – 2008, May 23 – 25, 2008. Tribhuvan University, Kathmandu, Nepal.

5. "Studies on blends of PPO/LCP in presence and absence of epoxy containing acrylate rubber." **Tanmoy Rath,** C. K. Das and S. B. Yadaw, 9th Arab International Conference on polymer Science and Technology. 18-22 November, 2007.Cairo Univrsity, Cairo, Egypt.

6. "Fibrillation study in sPS-LCP blends as affected by the processing parameters". **Tanmoy Rath,** K. Banik, T. N. Chung, G. Mennig and Chapal Kr. Das. Polychar-14, Nara Women's University in Nara City, JAPAN, April17th-22nd, 2006.

7. "Blends of a Thermotropic Liquid-Crystal Polyester With Poly (Ether Sulfone)", **Tanmoy Rath,** S. B. Yadaw and C. K. Das. ETPST, (2006), 8-9 Sept. 2006, Indian Institute of Technology, Kharagpur, India.

8. "In-situ fibrillation of liquid crystalline polymer in the presence of Ethylene Acrylic elastomers". S. Kumar, **Tanmoy Rath**, R.N. Mahaling, C.S. Reddy, C.K. Das, K.N. Pandey and S. B. Yadaw. (Published in proceeding of IFC 2006, **Seoul National university, Korea**. **pp 109-110).**

9. "The Flexible PEI composites" **Tanmoy Rath,** K.N.Pandey, A.K.Saxena, K.U.B.Rao, C. K. Das. 19th Rubber Conference, December 2005,IRMRA, 19 – 20th *Dec*., *2005* Mumbai, India Scientific:

❖ Book/Book Chapter:

1. **Thermoplastics-LCP composites: Effect of Compatibilizers. Tanmoy Rath. ISBN: 978-3-659-32438-3. Published by Lambert Academic Publishing Company. Omni Scriptum S.R.L. 120 High Road, East Finchley London, N2 9ED, United Kingdom Publication, Date: 22/04/2013.**

2. Polymer Nanocomposites based on Inorganic and organic Nanomaterials: **Chapter 3: Carbon Nanofibers: Synthesis, Properties and Applications. Tanmoy Rath.** ISBN: 978-1-1191-7910-8. **Wiley, Scrivener Publishing, USA)**, **Date: 3rd July 2015.**

3. Handbook of Vinyl Polymers: Radical Polymerization, Process, and Technology, Second Edition. **Chapter 17: Vinyl Polymers and it's Special Uses, pp. 545 - 602, (Taylor and Francis) Publisher CRC, USA, C. K. Das , T. Rath, S. Kumar, ISBN: 978-0-8247-2595-2, Publication Date: 07/24/2008.**

4. **"Quantum Dots: properties and Applications". Chapter: Quantum Dots Based Materials for New Generation Supercapacitors Application: pp 216-250,** ISBN: 978-1-64490-1250-9, Gaurav Tatrari, Manoj Karakoti, Mayank Pathak, **Tanmoy Rath**, Nanda Gopal Sahoo. **Materials Research Forum LLC, USA. 2/1/2020.**

5. "Biomechanics and Functional Tissue Engineering", **Chapter 8: Current Scenario of Regenerative Medicine: Roll of Cell, Scaffold and Growth Factor.** Nilkamal

Pramanik and **Tanmoy Rath.** ISBN: 978-1-83880-286-8, Intech Open Rijeka: Janeza Trdine 9, 51000 Rijeka. Croatia. 24th November 2021.

6. "Properties and Applications of Graphene Nanosheets**", Chapter 6: Graphene based metal/metal oxide nanocomposites, Tanmoy Rath, Nova Science Publishers, Inc. 415 Oser Avenue, Suite N Hauppauge, NY, 11788 USA, 2024. ISBN:** 979-8-89530-037-4.

Course Taught

Name of the course	Level (UG/PG)
Polymer Nanomaterial processing Technology	PG(M.Tech)-PNT-1st semester
Nanomaterial & nanotechnology	PG(M.Sc Tech)5th Semester
Polymer Nanocomposites	UG (B.Tech)7th Semester
Fundamental of Polymer Science	UG (B.Tech)3rd Semester
Nanostructured Materials	PG (M.Sc)2nd Semeter
Chemistry	UG(B.Tech) 1st and 2nd Semester

❖ Participation in Conferences/Seminars/Workshops of two days and more.

(a) Faculty Development Program

i. "Professional Development Training" under TEQIP-III, organized by IIM Kashipur, Uttarakhand. February 05th - 09th, 2018.

ii. "Faculty Induction Program" Under TEQIP-III, organized by IIT Kanpur. February 09th to 13th 2018.

(b) Refreshers Course through SWAYAM (ARPIT)

i. Nanotechnology, Science and application--- 29th July 2019 to 29th September 2019 (08 weeks)

(b) Short Term Course (STC)

i. "Artificial Intelligence and Optimization" organized by MCE, Motihari and NITTTR, Chandigarh, 21st -25th January 2019.

(c) Workshops

i. Participated in one day Workshop on **"Intellectual Property Rights & Patent Filing"**. Loknayak Jai Prakash Institute of Technology (LNJIPT), Chapra, Bihar in association with SPIU Bihar. 30th November 2018.

ii. Participated in five days training workshop on **"Advance Pedagogy and Digital Tools"**. Organized by Dept. of Management Studies and Dept. of Civil Engineering, IIT Roorkee. 17th to 21st June 2019.

iii. Participated in Two Days Online Workshop on "**Outcome Based Education (OBE) & Preparedness for NBA Accreditation"** Organized by State Project Implementation Unit, Bihar (SPIU Bihar) under TEQIP-III Project on 29-30th May 2020.

iv. Participated in e-Workshop on **"Electrochemical Energy Storage Devices",** organized by Dept. of Chemical Engineering, IIT Delhi, 07th to 11th December 2020.

❖ Thesis Guided(PG):

Name of the Scholar	Title of the Thesis	Awarded (Yes/ No)	Name of the University	Month and Year
MR. VIJAY KUMAR - **REG. NO. 1207108026** M.Tech	Development and characterization of PET /nanoplatelet graphene (xgnp) composites.	Yes	Central Institute of Plastics Engineering and Technology (CIPET), **Biju Patnaik University, Rourkela, Orissa.**	09/01/2015
MS. NAMRATA SARKAR – **REG. NO. 1307108008** M.Tech	Development of polymer nanocomposites based on polyurethane and nanoplatelet garphene.	Yes	Central Institute of Plastics Engineering and Technology (CIPET), **Biju Patnaik University, Rourkela, Orissa**	30/09/2015
MR. ALOK SONI - **REG. NO. 1307108002** M.Tech	Modified clay (closite 93 A) reinforced polyurethane nanocomposites.	Yes	Central Institute of Plastics Engineering and Technology (CIPET), **Biju Patnaik University, Rourkela, Orissa**	30/09/2015
MR. RAMJEE CHAUDHARI - **REG. NO. 1407108032** M.Tech	Study of mechanical properties of HDPE material with modified fly ash at different compositions	Yes	Central Institute of Plastics Engineering and Technology (CIPET), **Biju Patnaik University, Rourkela,**	28/07/2016

			Orissa	
MR. JITENDRA SINGH – **REG. NO. 1407108030** M.Tech	Evaluation of flexural properties of fly ash filled polypropylene composites.	Yes	Central Institute of Plastics Engineering and Technology (CIPET), **Biju Patnaik University Rourkela, Orissa**	28/07/2016
MR.IMDADUL HOQUE – **REG.NO. 57476/10 M.Sc Tech**	Preparation and characterization of bentonite clay reinforced LLDPE film.	YES	Utkal University, Bhubaneswar	23/12/2015
MR. BISHNU CHOWDHURY - **REG. NO. 57474/10 M.Sc Tech**	Preparation and characterization of bentonite clays reinforced guar gum bionanocomposites film	YES	Utkal University, Bhubaneswar	21/12/2015

❖ Administrative Work

Sl. No.	Name and address of Employer	Responsibility	From	To
1.	Motihari College of Engineering, (Govt. Engineering College) Motihari, Bihar, 845401.	HoD (Head of Department), Department of Chemistry.	01.04.2021	30.09.2023
2.	Motihari College of Engineering, (Govt. Engineering College) Motihari, Bihar, 845401.	Institute Co-ordinator of Employability Skill Training for B.Tech students.	30.08.2018	30.09.2021
3.	Motihari College of Engineering, (Govt. Engineering College) Motihari, Bihar, 845401.	Co-ordinator of establishment of new chemistry lab(B.Tech + Research).	For the academic year 2022 - 2023	
4.	Motihari College of Engineering, (Govt. Engineering College) Motihari, Bihar, 845401.	Prepared course file for National Board of Accreditation (NBA) in MCE, Motihari.	01.06.2018	30.09.2023

❖ Honors and Awards:

- Bronze Medal from Midnapore college for 1st class in B.Sc examination in 2001
- Fast Track young scientist award for the year 2012 -2016 from DST, Govt. of India. This award contained a three years independent project (i.e. under own principal investigatorship) to implement a few innovative ideas on Supercapacitor research in India.

❖ Journal Reviewer:

i. Applied Physics A
ii. Sensor and Actuator B
iii. Synthetic Metals
iv. Diamond and related Materials.
v. Materials Research Express
vi. Advance Engineering Materials
vii. Materials Today Communication
viii. Nanotechnology

❖ Personal Information:

Fathers' Name	: Late Phanibhusan Rath
Date of Birth	: 20TH September, 1978
Gender	: Male
Nationality	: Indian
Marital Status	: Married
Languages Known	: English, Hindi, Bengali