

RESUME

1. **Present Job Status** : Professor, *Department of Chemical Engineering, Indian Institute of Technology, Roorkee, Uttarakhand-247667*
2. **Earlier job profile as Professor:** (a) around 7.5 years at Department of Polymer Science & Technology, University of Calcutta, Kolkata-9, West Bengal (India).
(b) around 1.5 years at Department of Chemical Technology, SLIET (a deemed university of MHRD, GOI), Longowal, Punjab.
3. **Area of specialization** : Polymer Science & Technology
4. **Name** : Prof. (Dr.) Patit Paban Kundu
5. **Place of birth** : Jhargram (West Bengal), India
6. **Father's name** : Late. Bhaben Chandra Kundu
7. **Date of Birth** : 23.12.1964
8. **Address for correspondence** : A-1/113, Akshara Whispering Willows, Salua, Rajarhat Road, Kolkata-136, West Bengal (India).
9. **E. Mail and Phone No** : ppk923@yahoo.com; ppkfch@iitr.ac.in;
91-7251040403 (cell phone);
01332-284875
9. **Marital status** : Married
10. **Educational and Professional Qualification:**

<i>Degree</i>	<i>University</i>	<i>Year of passing</i>	<i>Division</i>	<i>% age of marks</i>	<i>Rank</i>
B. Sc (Chemistry, Physics, Math)	Calcutta University	1986	Honours in Chemistry		
B. Tech. (Plastics & Rubber Technology)	Calcutta University	1989	1st	72.0	5 th
M. Tech. (Plastics & Rubber Technology)	Calcutta University	1992	1 st	75.0	2 nd
Ph. D.	I. I. T. Kharagpur	1997	-	-	-

- 11. No. and List of Publications :** 166 already published in international journals and another ten sent for publications (List attached).
- 12. No. of Students guided for Ph. D:** Fourteen awarded, three submitted, another eight working for Ph. D.
- 13. Sponsored research Projects: Total fund >4.0 Crores in 15 sponsored projects (List in achievements)**
- 14. Academic/ Research Industrial/Professional and Administrative Experience:** Seventeen Years Post Ph. D.) and another four years (pre- Ph. D.); Six and half years as Professor

Organisation	Period	Post	Job
Department of Chemical Engineering, IIT Roorkee, Uttarakhand-247667	3 rd May, 2016 to till date	professor	Teaching & Research
Department of Polymer Science & Technology University of Calcutta, Kolkata-9	29 th Sep, 2008 to 2 nd May, 2016	Professor	Teaching & Research
Deptt of Chemical Technology, Sant Longowal Institute of Engg & Tech Longwal- 148106 (India)	5 th March, 2007 to 28 th Sep, 2008	Professor	Teaching & Research
Department of Chemical Engineering, Yonsei University, S. Korea	June, 2006 to August, 2006	Visiting Sc	Research
Department of Chemistry, Iowa State University USA	17 th June, 2003 to for a year	Post Doctoral Research Associate	Research
Deptt of Chemical Engg., Inha University, Inchon, Korea.	1 st June, 2001 to 15 th May, 2002	Post Doctoral fellow	Research
Deptt of Chemical Technology, Sant Longowal Institute of Engg & Tech. Longwal- 148106 (India)	5 th March, '99 to 4 th March, 2007	Assistant Professor	Teaching & Research
-Do-	1 st Oct., '96 to 4 th Mar., '99	Lecturer	-Do-
Indian Institute of Technology, Kharagpur-721302, India.	12 th Aug., '93 to 30 th Sept, '96	Senior Research Fellow	Research
J. K. Tyres, Morena, M. P., India.	July, '92 to July, '93	Production officer	Supervision

- 15. Research Interests:** Polymers in Gene Therapy, Nonconventional Energy such as Direct Methanol Fuel Cell (DMFC) and Microbial Fuel Cell (MFC), Polymer biodegradation, Nanoplastics and composites, Controlled protein delivery.
- 16. Achievements:** Details of achievements as below:

Achievements of Dr. P. P. Kundu

1. *Working as Professor at the Department of Chemical Engineering, Indian Institute of Technology, Roorkee from 3rd May, 2016 to till date.*
2. **Worked as Professor, Department of Polymer Sc & Technology, University of Calcutta from 29 th Sept, 2008 to 2nd May, 2016.**
3. **Worked as Professor in Chemical Technology, SLIET, Longowal from 5 th March, 2007 to 28 th Sept, 2008.**
4. **Worked as Head, Department of Polymer Sc & Technology, University of Calcutta from 2 nd Nov, 2010- 1 st Nov, 2012.**
5. **Worked as Head, Department of Chemical Technology, SLIET(Deemed University of GOI), Longowal, Pb-148106 from 1st April, 2005 to 31 st March, 2008.**
6. **Worked as Member, Senate of University of Calcutta from 2nd February, 2012 to 1 st Nov, 2012.**
7. **Worked as a Member of Senate, SLIET (Deemed University of GOI), Longowal, Pb-148106.**
8. **Member BOG, SLIET Longowal (For a year 1 st January, 2007 to 31 st Dec, 2007).**
9. **Coordinated fifteen sponsored research projects worth >375 lakhs.**
10. **Worked as coordinator, Person with Disabilities scheme (MHRD, New Delhi) from 1 st Sept, 2004 to 30 th Nov, 2005.**
11. **Published one hundred sixty six research papers in peer reviewed international journals of repute, published nine book chapters and one book as editor and published ten papers in national/international conferences. My published research papers are well cited by international scientists in their journals. All most all of the journals are cited more than ten times (Total citation of my published papers is around 2700). Total Impact Factor of my published papers is more than 450. List at the end.**
12. **Ex-Member, BOS- Chemical Engineering, Punjab Technical University, Jalandhar.**

13. Guided twelve students for their Ph. D. (three in the process of submission), and another eight students working for their Ph.D under my guidance.
14. Guided Sixteen M. Tech Thesis and several B. Tech. Thesis in SLIET, Longowal.
15. Conducted as Chairman one national level Seminar on “Recent Advances in Polymer Science & Technology” (RAPT-05) on 10-11 th Dec, 2005.
16. Conducted as Chairman one national level Conference on “Advances in Chemical Engineering & Technology” (ACET-07) on 26-27 th March, 2007.
17. **International Talk:** Delivered one international invited talk on the topic of “Polymers in Gene Therapy” at Yonsei Cancer Research Center, Faculty of Medicine, Yonsei University, South Korea on 21 st Dec, 2007.
18. Qualified GATE examination (GATE-1990) for admission to M. Tech. Programme.
19. Selected Individual Senior Research Fellow (SRF) of CSIR for Ph. D. Programme in the year 1994.

20. Projects Handled (Total amount Approx. 4.0 crores in 15 projects)

- I. *Ministry of Food Processing Industries (MOFPI) GOI sponsored project on “Development of Anti microbial Polymeric Nanocomposite Film from PET waste for Packaging of Milk and Milk Products” NO. 28/MFPI/R&D/2011 dated 18 th Feb, 2013; Amount: Rs 48,29,100; Status Continuing.*
- II. *Council of Scientific and Industrial Research (CSIR) sponsored project on “Microbial Synthesis of Copolymers of Polyhydroxybutyrate from Waste Cooked Oil for Biomedical Applications”. Amount: Approx 15 lakhs; Duration: Three Years. Status: Continuing.*
- III. *DST, Govt. of West Bengal sponsored project on Synthesis of Derivatives of Chitosan and Their IPNs for oral insulin Delivery” (No. 428(sanc.)/ST/P/S7T/2G-7/2011 Dated 31.08.2012; amount: Rs 13,10,000; Duration: Three Years; Status: Continuing.*
- IV. *AICTE Sponsored MODROBS project on “Modernization of Polymer Characterization Laboratory in the area of Polymer Biodegradation”, No 8024/RIFD/MOD-295/2011-12 Dated 16.03.2013; Amount 6.5 lakhs; Status: Continuing.*
- V. *Ministry of New and Renewable Energy (MNRE), GOI sponsored project on “Development of High Performance Direct Methanol Fuel Cell”: 102/ S6/ 2009 – NT dated 29/09/2010 (59.03 lakhs), duration : three years; status: Continuing.*

- VI. *DST (GOI) sponsored project under “DST-FIST” programme NO SR/FST/ETI-024/2011 ; Amount Rs 117 lakhs; Worked as Coordinator (in the capacity of Head, Department of Polymer Sc & Technology). Conceptualized the project, presented and convinced the experts for its funding. Status: Continuing.*
- VII. University Grants Commission sponsored project on “Development of Elastomers from Vegetable Oils and Vibration damping Characterization through a fabricated machine”; Amount: Rs 10, 09, 300; Duration : 3 years; Status: completed. Worked as Principal Investigator.
- VIII. AICTE sponsored MODROBS project on “Modernization of Polymer Characterization Laboratory in the area of Polymer Biodegradation” 8024/RIFD/MOD-316/2011-12; Amount: Rs15 lakhs. Duration: Two Years. Status: Completed.
- IX. Ministry of Environment and Forests (GOI) sponsored project on “Production of Bioelectricity from Sludge and Domestic wastewater using Microbial Fuel Cell” (Rs45,49,600); Duration : 3 years; Status: completed. Worked as Principal Investigator.
- X. Nanoscience and Nantechnology center, University of Calcutta sponsored project on Modified Chitosan as nonviral vector in gene therapy (Rs 2lakhs and a senior Research Fellow). Completed, Worked as Principal Investigator.
- XI. Nanoscience and Nantechnology center, University of Calcutta sponsored project on Delivery of Antisense oligonucleotides (ASO) to the androgen receptor of prostate cancer cells by nanoparticles: a prospective antitumoral strategy (Rs 2lakhs and a senior Research Fellow). Completed. Worked as Co-Principal Investigator.
- XII. *AICTE Research sponsored project on “Modified Chitosan as Nonviral vector in Gene therapy” (Rs11,60,000); F.No. - 8023/BOR/RID/RPS-19-9-10 dated 31/3/2010; duration two years. Status: Completed.*
- XIII. Council for Scientific and Industrial Research (New Delhi) sponsored project on “Design and Development of Bridge Bearing based on Metal Reinforced Rubbers”. Duration : 2 years; Status: Completed (Rs2,00,000). Worked as Principal Investigator.
- XIV. Ministry of Human Resource Development (New Delhi) sponsored project on “Development of PET waste based Polyurethanes and its modeling studies”. Duration 3.5

years; Status: Completed (Rs10,00,000). Worked as Co-Principal Investigator.

- XV. Council for Scientific and Industrial Research (New Delhi) sponsored project on “Development of Novel Micro-porous Polyolefin Films for Disposable Diaper”. Duration 3 years; Status: completed (Rs7,50,000). Worked as Principal Investigator.

21. . Post-Doctoral Experiences: My-self was the First Engineering faculty in SLIET who got a chance to work as a Post doc fellow in abroad (S. Korea). During my 1-st post doctoral tenure of a year at the Department of Chemical Engineering, Inha University, S. Korea, I published eight papers. **Worked for a year as a post doctoral fellow at the Iowa State University, USA** and published six papers; one in ACS Publication and another three in JAPS of Wiley Publications. **I worked with Prof. Y. G. Shul of Yonsei University, South Korea for approximately three months** (summer vacation, June, 2006 to August, 2006) for the development of novel membranes for direct Methanol Fuel Cell. Published two papers from this work.

22. International recognition

- a. To get a chance to work as a post doctoral fellow at three different laboratories of USA and S. Korea is a type of international recognition.
- b. The scientist of international community shows immense interest in my published research papers.
- c. *Reviewer of international journals like Journal of Applied Polymer Science, Polymer, Reactive & Functional Polymers, RAPRA, Polymer for advanced Technologies etc.*
- d. *Working as expert for evaluating Ph.D thesis of IIT Kharagpur, Tezpur University, CIPET, Madras*

23. National Talk:

- a) Delivered one invited talk on the topic “Polymeric Nanocomposites” during the period of 7-18 th Nov, 2005 for the A. I. C. T. E. sponsored staff development programme, organized by Department of Physics, SLIET, Longowal.
- b) Delivered one invited talk on the topic “Polymer Blends & Composites Used in Fuel Cell”

during National Conference organized by the School of Physics & Material Science, Thapar University, Patiala during 1-3, Feb 2007.

- c) Delivered one invited talk on the topic “Response Surface Methodology as Optimization Tool in Rubber Compounding” at the national seminar organized by Department of Mathematics, SLIET, Longowal during Jan, 19-20, 2007.
- d) Delivered one invited talk in the area of Direct methanol fuel cell in AICTE sponsored short term course, organized by Material Science Center, IIT Kharagpur on 12 Nov, 2012.
- e) Delivered one invited talk in the area of Cationic Polymerization and Linseed oil based polymers from cationic polymerizations at the UGC-NRC-M programme organized by the Department of Materials Engineering, IISc, Bangalore on 19 th July, 2012.

List of Publications of Professor P. P. Kundu

One hundred sixty six research papers have been published in international journals of repute (with 465 total impact factors and around 2680 total citations with present H-Index of 25, i10 index of 63).

Numbers of published papers with Impact Factor between 3 and 5 : 44

Numbers of published papers with Impact Factor more than 5 : 20

Year 2017 (Four Publications)

1. Mukherjee, S.; RoyChoudhury, U.; Kundu, P. P. (2017): Anionic surfactant induced oxidation of low density polyethylene followed by its microbial bio-degradation, International Bio deterioration and Biodegradation (Elsevier Sc, I.F. 2.43), 117, 255-268.
2. Bhowmick, Arundhati; Pramanik, Nilkamal; Jana, Piyali; Mitra, Tapas; Gnanamani, Arumugam; Das, Manas; Kundu, Patit Paban (2017): Development of bonelike zirconium oxide nanoceramic modified chitosan based porous nanocomposites for biomedical application, International Journal of Biological Macromolecules (Elsevier Sc, UK, I.F. 3.1), 95, 348-356, <http://dx.doi.org/10.1016/j.ijbiomac.2016.11.052>.

3. Bhowmick, Arundhati; Pramanick, Nilkamal; Mitra, Tapas; Banerjee, Soval Lal; Gnanamani, Arumugam; Das, Manas and Kundu, Patit Paban (2017): Fabrication of porous magnetic nanocomposites for bone tissue engineering, *New Journal of Chemistry* (Royal Chemical Society, UK, I. F. 3.22), 41 (1), 190-197.
4. Rudra, R.; Kumar, V.; Pramanik, N.; Kundu, P. P. (2017): Graphite oxide incorporated crosslinked polyvinyl alcohol and sulfonated styrene nanocomposite membrane as separating barrier in single chambered microbial fuel cell, *Journal of Power Sources* (Elsevier Sc., UK; IF-6.2), 341, 285-293.
5. Bhowmick, Arundhati; Weatherman, D.; Kundu, P. P. ; Sykes, A. G. (2016): Polypyrrole-Coated Magnetite Fe₃O₄ Nanoparticles Containing an Anthraquinone Crown Ether Macrocycle Used for the Extraction of Cu (II) Ion from Water, *Advances in Polymer Technology* (Wiley & Sons, I.F. 1.1), In Press. DOI: 10.1002/adv.21661.

Year 2016 (Twenty two Publications)

6. Dutta, Kingshuk; Das, Suparna; Kundu, Patit P. (2016): Polyaniline nanowhiskers induced low methanol permeability and high membrane selectivity in partially sulfonated PVdF-co-HFP membranes, *RSC Advances* (Royal Chemical Society, UK, I. F. 3.8), 2016, 6, 107960.
7. Pramanik, Nilkamal; Dutta, Kingshuk; Basu, Ranjan; Kundu, Patit P. (2016): Aromatic π -Conjugated Curcumin on Surface Modified Polyaniline/Polyhydroxyalkanoates based 3D Porous Scaffold for Tissue Engineering Application, *ACS Biomaterials Science & Engineering* (American Chemical Society, USA; I. F. 3.2), 2(12), 2365-2377.
8. Banerjee, Sovan Lal; Khamrai, Moumita; Kundu, P. P.; Singha Nikhil K; (2016) Synthesis of a self-healable and pH responsive hydrogel based on an ionic polymer/clay nanocomposite, *RSC Advances* (Royal Chemical Society, UK, I. F. 3.8), 6 (85), 81654-81665.
9. Mukhopadhyay, Piyasi; Maity, Subhajit; Chakraborty, Sandipan; Rudra, Ruchira; Ghodadara, Hiral; Solanki, Manisha; Chkarborty, Abhay Sankar; Prajapati, A. K.; Kundu, Oral delivery of quercetin to diabetic animals using novel pH responsive carboxypropionylated chitosan/alginate microparticles, *RSC Advances* (Royal

Chemical Society, UK, I. F. 3.8), 6 (77), 73210-73221.

10. Jana, Piyali; Sarkar, Kishor; Mitra, Tapas; Chatterjee, Abhishek; Gnanamani, A; Chakraborty, Gopal; Kundu, P. P. (2016): Preparation of guar gum scaffold film grafted with ethylenediamine and fish scale collagen, cross-linked with ceftazidime for wound healing application, *Carbohydrate Polymers* (Elsevier Science, Impact Factor 4.0), 153, 573-581.
11. Bhowmick, Arundhati; Jana, Piyali; Pramanick, Nilkamal; Mitra, Tapas; Banerjee, Soval Lal; Gnanamani, Arumugam; Das, Manas and Kundu, Patit Paban (2016): Multifunctional zirconium oxide doped chitosan based hybrid nanocomposites as bone tissue engineering materials, *Carbohydrate Polymers* (Elsevier Science, Impact Factor 4.0), 151, 879–888.
12. Kumar, Vikash; Kumar, Piyus; Nandy, Arpita; Kundu, Patit Paban (2016): A Nanocomposite membrane composed of nano-alumina within sulfonated PVDF-co-HFP/Nafion blend as separating barrier in a single chambered microbial fuel cell, *RSC Advances* (Royal Chemical Society, UK, I. F. 3.8), 6 (28), 23571-23580.
13. Kumar, Vikash; Kumar, Piyus; Nandy, Arpita; Kundu, Patit Paban (2016): Analysis of polybenzimidazole and polyvinylpyrrolidone blend membranes as separating barrier in single chambered microbial fuel cells, *Biochemical Engineering Journal* (Elsevier Sc, UK, I. F. 2.1), 111, 34-42.
14. Kumar, Vikash; Mandal, Sudipta; Nandy, Arpita; Kundu, Patit Paban (2016): Fabrication of laminated and coated Nafion 117 membranes for reduced mass transfer in microbial fuel cells, *RSC Advances* (Royal Chemical Society, UK, I. F. 3.8), 6 (26), 21526-21534.
15. Nandy, Arpita; Kumar, Vikash; Kundu, Patit Paban (2016): Effect of electric impulse for improved energy generation in mediatorless dual chamber microbial fuel cell through electroevolution of *Escherichia coli*, *Biosensor and bioelectronics* (Elsevier Sc, UK; I.F. 6.4), 79, 796-801. DOI: 10.1016/j.bios.2016.01.023.
16. Bhattacharyya, Aditi; Mukhopadhyay, Piyasi; Pramanik Nilkamal; Kundu, Patit P. (2016) : Effect of Polyethylene Glycol on Bis(2-hydroxyethyl) terephthalate-Based

Polyurethane/Alginate pH-Sensitive Blend for Oral Protein Delivery, *Advances in Polymer Technology* (Wiley & Sons, I.F. 1.1), 35(1). DOI: 10.1002/adv.21525

17. Dutta, Kingshuk; Das, Suparna; Kundu, Patit Paban (2016): Effect of the presence of partially sulfonated polyaniline on the proton and methanol transport behavior of partially sulfonated PVdF membrane, *Polymer Journal* (Nature Group, UK; I.F. 1.7), 48, 301-309. doi:10.1038/pj.2015.106.

18. Banerjee, S.L.; Khamrai, M.; Sarkar, K.; Singha, N. K.; Kundu, P. P. (2016): modified chitosan encapsulated core-shell Ag Nps for superior antimicrobial and anticancer activity, *International Journal of Biological Macromolecules* (Elsevier, Impact Factor 3.2), 85, 157-167. doi:10.1016/j.ijbiomac.2015.12.068.

19. Mukherjee, S.; Choudhury, U R; Kundu, P. P. (2016): Bio-degradation of Polyethylene Waste By Simultaneous Use of Two Bacteria: *Bacillus licheniformis* for production of Bio-surfactant and *Lysinibacillus fusiformis* for Bio-degradation. *RSC Advances* (Royal Chemical Society, UK, I. F. 3.8), 6 (4), 2982-2992. DOI: 10.1039/C5RA25128A.

20. Dutta, Kingshuk; Das, Suparna; Kundu, Patit Paban (2016): Highly methanol resistant and selective ternary blend membrane composed of sulfonated PVdF-co-HFP, sulfonated polyaniline and nafion, *Journal of Applied Polymer Science* (John Wiley and Sons, Impact Factor – 1.7), 133 (15), 43294.

21. Bhowmick, Arundhati; Mitra, Tapas; Gnanamani, Arumugam; Das, Manas and Kundu, Patit Paban (2016): Development of biomimetic nanocomposites as bone extracellular matrix for human osteoblastic cells, *Carbohydrate Polymers* (Elsevier Science, Impact Factor 4.0). 141, 82-91. doi:10.1016/j.carbpol.2015.12.074.

22. Jana, Piyali; Sarkar, Kishor; Mitra, Tapas; Chatterjee, Abhishek; Gnanamani, A; Chakraborty, Gopal; Kundu, P. P. (2016): Synthesis of a carboxy methylated guar gum grafted polyethyleneimine copolymer as an efficient gene delivery vehicle, *RSC Advances* (Royal Chemical Society, UK, I. F. 3.8), 6 (17), 13730-13741.

23. Das, Rakesh; Banerjee, Sovan Lal; Kumar, Rajesh; Kundu, P. P. Development of sustainable elastomeric engineering bio-nanocomposites from vegetable oil with improved mechanical stability and shape memory properties, *Journal of Industrial and Engineering*

Chemistry (Elsevier Sc, UK; I.F. 3.5). 35, 388-399.

24. Das, Rakesh; Banerjee, Sovan Lal; Kumar, Rajesh; Kundu, P. P. (2016): Fabrication and characterization of in situ graphene oxide reinforced high-performance shape memory polymeric nanocomposites from vegetable oil, RSC Advances (Royal Chemical Society, UK, I. F. 3.8), 6 (33), 27648-27658.

25. Bhattacharya, Aditi; Mukherjee, Debarati; Misra, Rosonara; Kundu, Patit Paban (2016): Development of pH sensitive polyurethane–alginate nanoparticles for safe and efficient oral insulin delivery in animal models, RSC Advances (Royal Chemical Society, UK, I. F. 3.8), 6 (48), 41835-41846.

26. Pramanik, N.; Dey, J.; Basu, R. K.; Rath, T.; Kundu, P. P. (2016): Fabrication of magnetite nanoparticle doped reduced graphene oxide grafted polyhydroxyalkanoate nanocomposites for tissue engineering application, RSC Advances (Royal Chemical Society, UK, I. F. 3.8), 6 (52), 46116-46133.

27. Das, S.; Datta, K.; Kundu, P. P. (2016): Sulfonated polypyrrole matrix induced enhanced efficiency of Ni nanocatalyst for application as an anode material for DMFCs, Materials Chemistry and Physics (Elsevier Sc, UK, I.F. 2.4), 176, 143-151.

Year 2015 (Twenty Eight Publications)

28. Mukherjee, S.; Choudhury, U R; Kundu, P. P. (2015): Biotic oxidation of polyethylene by using bio-surfactant produced by B.licheniformis: A novel technique, RSC Advances (Royal Chemical Society, UK, I. F. 3.8), 5 (92), 75089-75097.

29. Bhowmick, Arundhati; Pramanik, Nilkamal; Jana Manna, Piyali; Mitra, Tapas; Selvaraj, Thirupathi Kumara Raja; Gnanamani, Arumugam; Das, Manas and Kundu, Patit Paban (2015): Development of porous and antimicrobial CTS-PEG-HAP-ZnO nanocomposites for bone tissue engineering, RSC Advances (Royal Chemical Society, UK, I. F. 3.8), 5 (120), 99385-99393.

30. Rudra, Ruchira; Kumar, Vikash and Kundu, Patit Paban (2015): Acid catalysed cross-linking of poly vinyl alcohol (PVA) by glutaraldehyde: effect of crosslink density on the characteristics of PVA membranes used in single chambered microbial fuel cells, RSC Advances (Royal Chemical Society, UK, I. F. 3.8), 5 (101), 83436-83447.

31. Mukhopadhyay, Piyasi; Kundu, Patit Paban (2015): Chitosan-graft-PAMAM / alginate core-shell nanoparticles: A safe and promising oral insulin carrier in Animal Model, RSC Advances (Royal Chemical Society, UK, I. F. 3.8), 5 (114), 93995-94007.
32. Das, Suparna; Kundu, Patit P. (2015): Pt-Ru/Al₂O₃-C Nanocomposites as Direct Methanol Fuel Cell Catalysts for electrooxidation of methanol in acidic medium, RSC Advances (Royal Chemical Society, UK, I. F. 3.8), 5 (113), 93539-93546; DOI:10.1039/c5ra1460 3h.
33. Mitra, Tapas; JanaManna, Piyali; Selvaraj, Thirupathi Kumara Raja; Gnanamani, Arumugam and Kundu, Patit Paban (2015): Curcumin loaded nanographene oxide reinforced fish scale collagen - A 3D scaffold biomaterial for wound healing application, RSC Advances (Royal Chemical Society, UK, I. F. 3.8), 5 (119), 98653-98665. DOI: 10.1039/C5RA15726A
34. Pramanik, Nilkamal; Mitra Tapas; Khamrai, Moumita; Bhattacharyya, Aditi; Mukhopadhyay, Piyasi; Gnanamani, A.; Basu, Ranjan Kumar; Kundu, Patit Paban (2015): Characterization and evaluation of curcumin loaded guar gum-polyhydroxyalkanoates blend film for wound healing application, RSC Advances (Royal Chemical Society, UK, I. F. 3.8), 5/78, 63489-63501.
35. Kumar, Piyush; Singh, A.D; Kumar, Vikash; Kundu, Patit Paban (2015): Incorporation of nano-Al₂O₃ within the blend of sulfonated-PVdF-co-HFP and Nafion for high temperature application in DMFC, RSC Advances (Royal Chemical Society, UK, I. F. 3.8), 5/78, 63465-63472.
36. Kumar, Piyush; Kundu, Patit Paban (2015): Formation of semi-IPN membrane composed of crosslinked SPS-[PVdF-co-HFP/Nafion] for application in DMFC: A fine tuning between crosslinker and initiator, Materials Chemistry and Physics (Elsevier Sc, UK; I.F. 2.3), 164, 188-197.
37. Sarkar, Kishor; Banerjee, Sovan Lal; Kundu, Patit Paban; Madras, Giridhar; Chatterjee, Kaushik (2015): Biofunctionalized surface-modified silver nanoparticles for gene delivery. Journal of Materials Chemistry-B (Royal Chemical Society publications, UK; I.F. 4.7), 3/26, 5266-5276.

DOI: 10.1039/C5TB00614G.

38. Kumar, Piyush; Kundu, Patit Paban (2015): Coating and lamination of Nafion117 with partially sulfonated PVdF for low methanol crossover in DMFC applications, *Electrochimica Acta* (Elsevier Science, I.F. 4.5), 173, 124-130.

DOI information: 10.1016/j.electacta.2015.05.044.

39. Nandy, Arpita; Kumar, Vikash; Khamrai, Moumita; Kundu, Patit Paban (2015): MFC with vermicompost soil: power generation with additional importance of waste management, *RSC Advances* (Royal Chemical Society, UK, I. F. 3.8), 5 (39), 30758-30767.

40. Rath, Tanmoy; Kundu, Patit Paban (2015): Reduced graphene oxide paper based nanocomposite materials for flexible supercapacitors, *RSC Advances* (Royal Chemical Society, UK, I. F. 3.8), 5 (34), 26666-26674.

41. Kumar, Vikash; Kumar, Piyush; Nandy, Arpita; Kundu, P. P. (2015): Crosslinked inter penetrating network of sulfonated styrene and sulfonated PVdF-co-HFP as electrolytic membrane in a single chamber microbial fuel cell, *RSC Advances* (Royal Chemical Society, UK, I. F. 3.8), 5 (39), 30758-30767.

42. Bhowmick, A; Saha, A; Pramanik, N; Banerjee, S.; Das, M.; Kundu, P. P.. (2015): Novel magnetic antimicrobial nanocomposites for bone tissue engineering applications, *RSC Advances* (Royal Chemical Society, UK, I. F. 3.8), 5 (32), 25437-25445.

43. Das, Suparna; Dutta, Kingshuk; Kundu, Patit Paban (2015): Nickel nanocatalysts supported on sulfonated polyaniline: potential toward methanol oxidation and as anode materials for DMFCs, *J. Mater. Chem. A* (Royal Chemical Society, UK, I.F 7.3), 3 (21), 11349-11357; DOI: 10.1039/C5TA01837D.

44. Jana Manna, Piyali; Mitra, Tapas; Pramanik, Nilkamal; Kavitha, V; Gnanamani, A; Kundu, P. P. (2015): Potential use of curcumin loaded carboxymethylated guar gum grafted gelatin film for biomedical applications, *International journal of biological macromolecules* (Elsevier Sc. I. F. – 2.9), 75, 437-446.

45. Kumar, Piyush; Kundu, Patit Paban (2015): A study on the heat behavior of PEM, prepared by incorporation of crosslinked sulfonated polystyrene in the blend of PVdF-co-

HFP/Nafion, for its high temperature application in DMFC, *Materials Today Communications*, Elsevier Science, Volume 2, March 2015, Pages e1–e8.

46. Mukhopadhyay, Piyasi; Bhattacharya, Sourav; Nandy, Arpita; Bhattacharya, Aditi; Mishra, Roshnara and Kundu, P. P. (2015): Assessment if in-vivo chronic toxicity of chitosan and its derivatives used as oral insulin carrier, *Toxicology Research* (Royal Chemical Society, UK, Impact factor 3.9), 4, 281-290; DOI: 10.1039/C4TX00102H.
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