

Name of Faculty	<b>Dr. Ashoutosh Panday</b>		
Designation	Professor		
Nature of Job/Appointment	Regular		
Date of Joining	23-11-2022		
E-mail	<a href="mailto:ashoutoshpanday_biotech@cbit.ac.in">ashoutoshpanday_biotech@cbit.ac.in</a>		
Education Qualifications	Name of the Degree	Class	
Ph. D	Doctor of Philosophy (Polymer Science and Engineering)	Awarded	
PG	M. Tech. (Chemical Engineering)	First Class	
UG	B. Tech. (Chemical Engineering)	First Class	
Work Experience			
Teaching	18 years		
Research	11 years		
Industry	1 year		
Others	--		
Areas of Specialization	TEM of Block Copolymers, Defects of Grain Boundaries, Avrami Kinetics, Microstructural Stability of Block Copolymers, Layered Silicates, Nanocomposites, Plant Utilities, Electrochemical Measurements of Lithium Ion Batteries, Broadband dielectric spectroscopy of polymers, Guinier Theory of Polymers, Physics of Colloids and Intermolecular Forces, Petroleum Refining, and Natural Gas Processing, Biological macromolecules, Computer Simulation LPG Sweetening, PET recycling, for Circular Economy, Piping Engineering,		
Professional Memberships	The Energy Institute, UK		
Responsibilities held at Institution Level	<b>Chairperson, Transport Committee, Sudhee and Shruthi, 2023</b>		
Responsibilities held at Department Level	<b>Member, Course Expert Group</b>		
Research Guidance	<b>5 Ph D (awarded)</b>		
Awards Received	<b>9 M. Tech. (awarded)</b>		
Courses Handled at Under Graduate / Post Graduate Level.	<ol style="list-style-type: none"> <li>1. Transport Phenomena</li> <li>2. Heat Transfer</li> <li>3. Mass Transfer</li> <li>4. Energy Conservation Resources</li> <li>5. Fluid Mechanics</li> <li>6. Chemical Engineering Economics</li> <li>7. Petrochemical Technology</li> <li>8. Downstream Processing</li> <li>9. Plant Utilities</li> <li>10. Piping Engineering, etc.</li> </ol>		
No. of Papers Published	National Journals – NIL	International Journals – 15	
Projects Carried out	National Conference – 7	International Conference – 12	
Patents	2 US Patents		
Technology Transfer	1 DST project of Rs. 95 lakhs as PI on 'Conversion of Anthropogenic CO <sub>2</sub> to Methanol', 1 Project of Rs 62,000 as PI on PET Glucolysis		

Invited Speaker

No. of Books/Chapter Published with details

Process Plant Utilities, Vipul Publications, Bombay (1999)

1. **Advanced Instructional Strategies in the Virtual Classroom**, Coursera online with University of California, Irvine, USA. (2020)  
<https://www.coursera.org/account/accomplishments/verify/NWQ2RM4QN2LU>
2. **Advanced Emerging Trends & Technologies in the Virtual K-12 Classroom**, Coursera online with University of California, Irvine, USA. (2020)  
<https://www.coursera.org/account/accomplishments/verify/GWP9Z7XAJKCY>
3. **Foundations of Virtual Instruction**, Coursera online with University of California, Irvine, USA, (2020)  
<https://www.coursera.org/account/accomplishments/verify/NWQ2RM4QN2LU>
4. **Performance Assessment in the Virtual Classroom**, Coursera online with University of California, Irvine, USA. (2020)  
<https://www.coursera.org/account/accomplishments/verify/TUGW9P2E5JUS>
5. **Virtual Teacher**, Coursera online with University of California, Irvine, USA. (2020)  
<https://www.coursera.org/account/accomplishments/specialization/AZU2ZPW6SFTG>

Details of Short-Term Training Programs/Faculty Development Programs/Seminars/Workshops, Other Trainings (**Attended and/or Organized**).

Details of Journal Publications/ Conferences (**National and International**)

Intl Journal -15, Intl Conferences-12, National Conference-7

#### **Selected International Journal Publications**

1. A Rapid Py-GC/MS Study for Linear Alpha Olefin Production from Fast Pyrolysis of Wax and Waste Polyethylene, Bojja Ramachandrarao, Kottari Naresh, Ashoutosh Panday, Nettem Venkateswarlu Choudary. ChemistrySelect, Volume 4, Issue 45, Pages 13245-13249, (2019). Wiley Online Library, <https://doi.org/10.1002/slct.201903371>
2. A Dual Functional Tuneable-Lewis Acid/Sulfur Scavenging Catalyst System for Alpha Olefin Oligomerization, Bojja Ramachandrarao, Kottari Naresh, Ashoutosh Panday, Nettem Venkateswarlu Choudary. ChemistrySelect, Volume 4, Issue 36, Pages 10688-10693, (2019). Wiley Online Library, Year: 2019.  
<https://doi.org/10.1002/slct.201902008>
3. Hydrogen induced cracking of pipeline and pressure vessel steels: A review, Goutam Ghosh, Paul Rostron, Rajnish Garg, Ashoutosh Panday, Engineering Fracture Mechanics, Volume 199, Pages 609-618, (2018). Publisher: Pergamon, Year: 2018.  
<https://doi.org/10.1016/j.engfracmech.2018.06.018>
4. A Review: State-of- the-Art LPG Sweetening Process, K Jayakumar, RamesC Panda, Panday Ashoutosh, International Journal of Applied Engineering Research, Volume 13, Issue 11, Pages 9053-9059, (2017). Year: 2017. Publisher: Research India Publications,  
[https://www.ripublication.com/ijcher17/ijcherv9n2\\_05.pdf](https://www.ripublication.com/ijcher17/ijcherv9n2_05.pdf)
5. Salt diffusion coefficients in block copolymer electrolytes, Scott A Mullin, Gregory M Stone, Ashoutosh Panday, Nitash P Balsara, Journal of the Electrochemical Society, Volume 158, Issue 6. Pages A619, (2011). Publisher: IOP Publishing; Year: 2011.  
<https://iopscience.iop.org/article/10.1149/1.3563802/meta>

6. Ionic conductivity of block copolymer electrolytes in the vicinity of order– disorder and order–order transitions, Nisita S Wanakule, Ashoutosh Panday, Scott A Mullin, Eliot Gann, Alex Hexemer, Nitash P Balsara. *Macromolecules*, Volume 42, Issue 15, Pages 5642-5651, (2009). Publisher: American Chemical Society; Year: 2009.  
<https://pubs.acs.org/doi/abs/10.1021/ma900401a>
7. Effect of molecular weight and salt concentration on conductivity of block copolymer electrolytes, Ashoutosh Panday, Scott Mullin, Enrique D Gomez, Nisita Wanakule, Vincent L Chen, Alexander Hexemer, John Pople, Nitash P Balsara, Publisher: American Chemical Society Journal: *Macromolecules*, Volume 42, Issue 13, Pages 4632-4637, (2009). ; Year 2009  
<https://pubs.acs.org/doi/abs/10.1021/ma900451e>
8. Azimuthal orientational correlations due to excluded volume epitaxy in growing anisotropic grains, Authors: SP Gido, A Panday, *Philosophical Magazine*, Volume 89, Issue 9, Pages 771-787 (2009). Taylor & Francis Group, <https://doi.org/10.1080/14786430802629527>
9. Effect of ion distribution on conductivity of block copolymer electrolytes, Enrique D Gomez, Ashoutosh Panday, Edward H Feng, Vincent Chen, Gregory M Stone, Andrew M Minor, Christian Kisielowski, Kenneth H Downing, Oleg Borodin, Grant D Smith, Nitash P Balsara, *Nano letters*, Volume 9, Issue 3, Pages 1212-1216. (2009). American Chemical Society.; Year 2009.  
<https://pubs.acs.org/doi/abs/10.1021/nl900091n>
10. Effect of microdomain structure and process conditions on the mechanical behavior of cylindrical block copolymer systems, Mohit Mamodia, Ashoutosh Panday, Samuel P Gido, Alan J Lesser, *Macromolecules*, Volume 40, Issue 20, Pages 7320-7328 (2007), American Chemical Society; Year: 2009. <https://pubs.acs.org/doi/full/10.1021/ma070006+>

#### **Selected International Conferences**

1. A complete set of ion transport properties in a microstructured electrolyte, Scott Mullin, Ashoutosh Panday, Greg Stone, Nitash Balsara, *American Physical Society, APS March Meeting Abstracts*, Volume 2010, Pages Q16. 004 (2010). American Physical Society; Year: 2010.  
<http://meetings.aps.org/link/BAPS.2010.MAR.Q16.4>
2. Ionic Conductivity Trends with Molecular Weight in PEO and PEO-Based Solid Polymer Electrolytes, Alexander Teran, Scott Mullin, Nisita Wanakule, Ashoutosh Panday, Nitash Balsara, *American Physical Society, APS March Meeting Abstracts*, Volume 2010, Pages Z17. 004 (2010). American Physical Society; Year: 2010. <http://meetings.aps.org/link/BAPS.2010.MAR.Z17.4>
3. POLY 500-Block copolymer electrolytes for lithium batteries, Nitash P Balsara, Ashoutosh Panday, Nisita S Wanakule, *American Chemical Society*, Volume 238, Pages 1111, (2009). Publisher: Year: 2009, Balsara, N. P., Panday, A., & Wanakule, N. S. (2009, August). POLY 500-Block copolymer electrolytes for lithium batteries. In *ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY* (Vol. 238). 1155 16TH ST, NW, WASHINGTON, DC 20036 USA: AMER CHEMICAL SOC.
4. Nisita Wanakule, Ashoutosh Panday, Scott Mullin, Nitash Balsara, *American Physical Society, APS March Meeting Abstracts*, Volume 54, Number 1, Pages X19. 005, (2009).; Publisher: American Physical Society; Year: 2009. <http://meetings.aps.org/link/BAPS.2009.MAR.X19.5>
5. Electrochemical Characterization of poly (styrene-b-ethylene oxide)/LiTFSI Lamellar Diblock Copolymer Electrolyte System, Nitash Balsara, Ashoutosh Panday, Scott Mullin, Nisita Wanakule, *American Physical Society, APS March Meeting Abstracts*, Volume 54, Number 1, Pages X D20.011 (2009).; Publisher: American Physical Society; 2009.  
<http://meetings.aps.org/link/BAPS.2009.MAR.D20.11>
6. Broadband dielectric spectroscopy and quasi-elastic neutron scattering on single-ion polymer conductors, Hua Gen Peng, Kirt A Page, Chad R Snyder, Christopher Soles, Ashoutosh Panday, Youmi Jeong, James Patrick Runt, *ACS National Meeting Book of Abstracts*, 241st ACS National Meeting and Exposition Anaheim, CA, United States (2011). Publisher: American Chemical Society  
<https://pennstate.pure.elsevier.com/en/publications/broadband-dielectric-spectroscopy-and-quasi-elastic-neutron-scatt/fingerprints/>

7. Ion transport through block copolymer electrolytes, Scott Mullin, Ashoutosh Panday, Nitash Balsara, American Physical Society, APS March Meeting Abstracts, Volume 54, Number 1, Pages A18.008 (2009).; Publisher: American Physical Society; Year: 2009. <http://meetings.aps.org/link/BAPS.2009.MAR.A18.8>
8. Scaling of Avrami Kinetics of Growing Anisotropic Grains, Samuel Gido, Ashoutosh Panday; Journal: American Physical Society, APS March Meeting Abstracts, Volume 2006, Pages; C1. 070 (2006).; American Physical Society; Year: 2006. <http://meetings.aps.org/link/BAPS.2006.MAR.C1.70>
9. Stability of Core-Shell-Cylinder Structure of Poly (styrene-b-1, 3-cyclohexadiene) Diblock Copolymers, Ashoutosh Panday, Samuel Gido, Kunlun Hong, American Physical Society, APS March Meeting Abstracts, Volume 2005, Pages A30. 015(2005).; Publisher: American Physical Society; Year: 2005. <http://meetings.aps.org/link/BAPS.2005.MAR.A30.15>
10. Manipulating Structures of Block Copolymers with Functionalized Layered Silicates, Liang Xu, Ashoutosh Panday, Devon A Shipp, SP Gido, Ramanan Krishnamoorti, Journal: AIChE The 2006 Annual Meeting, Volume 2006 Pages, P69917, (2006). <https://aiche.confex.com/aiche/2006/techprogram/P69917.HTM>

#### **National Journals/ Conferences**

1. Raney Nickel Catalyst for Liquid Phase Isopropanol Dehydrogenation in Chemical Heat Pump., Jainil Sudhakar Anchan, Panday Ashoutosh, KS Rajmohan, Publication date: 2016. Conference: CHEMCON, IIT Madras, Dec. 2016. Year: 2016.
2. Synthesis and Characterization of CZA Catalyst for Methanol Synthesis by CO<sub>2</sub> Hydrogenation. R Tiwari, S Kothari, G Joshi, A Panday; Year: 2014. Conference: Innovate India Conference 2014; Publisher: (Oral Presentation, won 3rd prize)
3. k-Carrageenan template based synthesis of nanoporous zinc oxide (ZnO) Authors: Ritesh Tiwari, S Kumar, G Joshi, Panday Ashoutosh, Publication date: 2014/1, Conference: International Conference on Challenges in Chemistry and Biology of Carbohydrates, CARBO-XXVIII; Volume: 28; Year: 2014.
4. Synthesis and Physicochemical Characterization of CZA Catalyst for Hydrogenation of CO<sub>2</sub> (Oral Presentation), Authors: R Tiwari, S Kumar, G Joshi, A Panday; Publication date: 2013/8, Conference: 1st International Seminar on Nanotechnology in Conventional and Alternate Energy Systems Global Status and Pathway, University of Petroleum and Energy Studies, Dehradun, Aug. 2013. Year: 2013.
5. Chemical Conversion of CO<sub>2</sub> to value-added product (Oral Presentation), Authors: S Tiwari, R, Kothari, Girdhar Joshi, A Panday; Publication date: 2013/3, Conference: National Conference on Ethno-pharmacology, 'Recent developments in biological and Chemical Science' LSM Government PG College Pithoragarh. Uttarakhand. March, 2013. Year: 2013.
6. Recent Developments on Heterogeneous Catalysis for Chemical Conversion of Carbon Di-Oxide to non- Conventional Fuel (Oral presentation), Authors: R Tiwari, S Kothari, G Joshi, A Panday; Publication date: 2013/3, Conference: National Conference on Ethno-pharmacology, 'Recent developments in biological and Chemical Science'. LSM Government PG College Pithoragarh. Uttarakhand
7. Strategies for Chemical Conversion/Utilization for CO<sub>2</sub> Capture & Storage (CCS) (Poster Presentation), Authors: Ritesh Tiwari, Sandeep Kothari, Girdhar Joshi, Ashoutosh Panday; Publication date: 2012/12; Conference: CHEMFERENCE '12, ICT-Mumbai and IIT Bombay. Dec. 2012.