

1. Name	Dr. PANKAJ KALRA	
2. Designation	Associate Professor	
3. Date of Birth	Sept.08,1975	
4. Present Pay Scale	37400-67000+ 9000 AGP (Unrevised)	pankajkalra75@gmail.com

5. **Educational Qualifications**

- ✓ Ph.D (ChemicalEngg),
IKG Punjab Technical University,
Jalandhar
- ✓ M.Tech.(Chemical Engg)
IKG Punjab Technical University,
Jalandhar
- ✓ B.E. (Chemical Engg.),
Panjab University
Chandigarh

6. **Work Experience**

Teaching & Administrative Experience:26 years

Teaching Experience:

- ❖ Assoc. Prof. at S.B.S. State University, Ferozepur (formerly SBSSTC) 18.07.2014 to till date
- ❖ Assistant Prof.at S.B.S.State University, Ferozepur 17.07.2000 to 17. 07.2014
- ❖ Lecturer (Adhoc) at S.B.S. State University, Ferozepur (formerly SBSSTC) 13.10.1999 to 05.05.2000

Industrial Experience:

Management Trainee in Nahar Sugar And Allied Industries Ltd., Khanna	1 year
Shift Engineer in Pure Foods Ltd., Abohar	1 year

Administrative Responsibilities (Institute Level):

- Director IQAC, SBSSU, Ferozepur:27/08/2022 to till date
- Head of Deptt. (Chemical Engg.):27/01/2025 to till date
- Chairperson Institute Souvenir Committee.: 13 years (Sept.2006 to Sept. 2019)
- Group Photograph for final year students : Organization of Photo-Session : 13 years
- Warden Yamuna Bhawan Boys Hostel: 3 years
- Convocation committee: Representative Member of Chemical Dept. : 2 years
- Co-ordinator NAAC Committee for AQAR submission : 2 years
- Block Incharge: C- Block Ground floor: 4 years

Administrative Responsibilities (Department level):

- Deptt. Academic Incharge:10years
- TPI CHE: worked for four terms (total 8 years).
- Teacher-Incharge of Chemical Engg. Students Society (ChESS) : 4 years.
- Lab Development: Instrumental in development of dept. Process Instrumentation Dynamics & Control lab: 3 years
- Editor Department Newsletter(Catalysis):3years
- Deptt. TEQIP Purchase :2years
- NBA accreditation work: Incharge of the Chemical Dept.: 3 years
- Deptt. Students Counselor: 5 years
- Lab Incharge: has been deployed as lab incharge for PIDC lab, Computation lab, Mass transfer lab, CRE & Environmental lab, Waste Management research lab

Research / Practical Experience:

- Worked on multiple interdisciplinary projects involving advanced Modeling and Simulation techniques, with a strong focus on Energy Systems and Environmental Studies. These projects included system-level modeling, scenario analysis, and performance evaluation to assess energy efficiency, emissions, and environmental impacts.
- Carried out research on Modeling and Simulation of a high temperature Solid oxide fuel cell and on Nano Combustion Synthesis of Nickel oxide - Gadolinia doped Ceria-a precursor to SOFC Anode

7. **Area of
Specialization**

- Solid oxide fuelcells
- Nano-Synthesis
- Modeling & Simulation
- Alternate EnergySources

8.	Subjects teaching at	(a)Undergraduate level:	<ul style="list-style-type: none"> ➤ Chemical Process Simulation ➤ Chemical Reaction Engg. ➤ Petroleum RecoveryTechnology ➤ Alternative Energy Sources & Storage ➤ Energy Technology ➤ Chemical Process Instrumentation ➤ Heat Transfer ➤ Mass Transfer ➤ Energy Technology. ➤ Mechanical Operation ➤ Chemical Process Calculations ➤ Industrial Pollution Control ➤ Chemical Engg. Thermodynamics ➤ Air Pollution ➤ Environmental Toxicology ➤ Advanced Mass Transfer ➤ Chemical Reaction Engineering ➤ Chemical Engineering Thermodynamics ➤ Process Modelling & Simulation
9.	Total Number of Research Publications (Annexure-A)	Published	<ul style="list-style-type: none"> ➤ International Journals-10 ➤ International Conferences-07 ➤ National Conferences-
10.	No.of Students Guided		<ul style="list-style-type: none"> ➤ Ph. D : Nil ➤ Master's : 04 completed
11.	Academic Achievements and Awards	<ul style="list-style-type: none"> ➤ Merit Certificate of standing IIInd in Mtech. Examinations securing Ist division with distinction. ➤ Convenor of AICTE sponsored Short term training Programme on “Mathematical methods & Computations in Engineering- MMCE-2019” July1-6’2019, Dept. of Chem. Engg. SBSSTC, Ferozepur ➤ Co-ordinator of Faculty development programme on “Recent trends in Polymers composites & their Engg. Applications” in collaboration with CIPET Amritsar. ➤ AICTE Sponsored one day workshop on “Clean Energy Technologies” (2017). ➤ Member Board of Studies, Petroleum Engineering Department, Guru Gobind Singh College of Engineering and Technology, Guru Kashi University, Talwandi Sabo ➤ Member Board of Studies, Chemical Engineering MRSSTU, BATHINDA. ➤ Member Board of Studies, Chemical Engineering, SBSSTC, Ferozepur ➤ Presently the Chairman Board of Studies, Chemical Engineering, SBSSU, Ferozepur ➤ Session Chair in International Chemical Engg. Conference 2021 , organized by Dept. of Chemical Engg. & tech., Dr. B. R. Ambedkar NIT, Jalandhar. ➤ Published Newsletter for Dept. Of Chemical Engg. “Catalysis” for the Session July 2013-June 14 and July 2014-June15. ➤ Delivered an expert talk on “Alternative fuels” in Faculty Development 	

programme at AIET , Faridkot on 25th may 2015.

➤ Delivered an expert talk on “Modelling & Simulation of Engineering Systems” in STTP on Mathematical Methods & Computations in Engg.(MMCE-2019) on 4th July’2019.

12. **STC's organized as faculty**

➤ Convenor of AICTE sponsored Short term training Programme on “Mathematical methods & Computations in Engineering- MMCE-2019” July1-6’2019, Dept. of Chem. Engg. SBSSTC, Ferozepur

➤ Co-ordinator of Faculty development programme on “Recent trends in Polymers composites & their Engg. Applications” in collaboration with CIPETAmritsar.

➤ AICTE Sponsored one day workshop on “Clean Energy Technologies” (2017)

13. **Short-Term courses attended**

➤ Short term course on “**Total Quality management & ISO-9000 Quality Systems**” from July1, 2002 to july12, 2002 organized by Department of Mechanical & Production Engg. S.B.S.C.E.T., Ferozepur

➤ Short term course on “**Industry Institute Interaction: New Challenges**” from Dec.16 to 27, 2002 organized by Department of Mechanical & Production Engg. S.B.S.C.E.T., Ferozepur

➤ Short term course on “**Inculcating & Developing Entrepreneurial Attitude (Need of 21st century)**” from July19th to july23, 2004 organized by Department of Mechanical & Production Engg. S.B.S.C.E.T., Ferozepur

➤ Short term course on “**Autocad**” from 18th to 22nd April '05 organized by National Institute of Technical Teacher’s training & Research at S.B.S.C.E.T., Ferozepur

➤ Short term course on “**Matlab**” from 30thjan to 3rd Feb. '06 organized by National Institute of Technical Teacher’s training & Research at S.B.S.C.E.T., Ferozepur

➤ Short term course on “**Advanced Autocad**” from 27th Feb. to 3rd Mar.'06 organized by National Institute of Technical Teacher’s training & Research at S.B.S.C.E.T., Ferozepur

➤ Short term course on “**Bio-technology & Bio-chemical Engg.**” from 20th june. to 24th june.'11 organized by National Institute of Technical Teacher’s training & Research., Chandigarh

➤ Short term course on “**Renewable Energy based technologies**” from 18th july to 22nd july '11 organized by National Institute of Technical Teacher’s training & Research., Chandigarh

➤ Short term course on “**Intelligent Computational techniques**” from 4th July to 15th july '11 organized by National Institute of Technical Teacher’s training & Research., Chandigarh

➤ TEQIP sponsored Short term course on “**Applied Soft Computing**” from 26th Nov. to 30th Nov'12 at SBSSTC Ferozepur.

➤ TEQIP sponsored Short term course on “**Research Methodology tools & techniques**” from 26th Nov. to 30th Nov'12 at SBSSTC Ferozepur.

➤ TEQIP sponsored Short term course on “**Engineering Materials**” from 17th Dec. to 21st Dec'12 at SBSSTC Ferozepur.

➤ AICTE- TEQIP sponsored Short term course on “**Nature inspired computational intelligence**” from 6th May to 17th May'13 at SBSSTC

Ferozepur.

14. **FDPs organized in the institute**

- ❖ Convenor of AICTE Sponsored STTP on “Mathematical Methods and Computations in Engineering (MMCE-2019)”.
- ❖ Co-ordinator of Faculty development programme on “Recent trends in Polymers composites & their Engg. Applications” in collaboration with CIPETAmritsar.
- ❖ AICTE Sponsored one day workshop on “Clean Energy Technologies” (2017).

15. **Membership** Life Member of ISTE

(AnnexureA)

A. Papers Published in International Referred Journals

1. **Pankaj Kalra**, Rajeev Garg, Ajay Kumar, A. P. Singh; “**Electrical characterization of NiO-CGO composites- SOFC anode precursor- prepared via combustion synthesis route**”, International Journal of Innovative research in Science, Engineering & Technology, ISSN 2319-8753 Volume 3, Issue 5, May2014.
2. **Pankaj Kalra**, Rajeev Garg, Neel Kanth Grover and Ajay Kumar; “**Structural Properties of Anode Composites Precursor of A Solid Oxide Fuel Cell Prepared Via Combustion Synthesis Route**”, Asian Journal of Engineering and applied Technology, ISSN 2249-068X, Pg 36-39(2012).
3. **Pankaj Kalra**, A. P. Singh, Ajay Kumar; “**Structural Properties of NiO-CGO Composites precursor prepared via Combustion Synthesis Route**” Asian Journal of Chemistry, ISSN 0970-7077, Vol. 21, No. 10 (2009),S157-161.
4. **Pankaj Kalra**, Rajeev Garg and Ajay Kumar;“**Electrochemical Analysis of an Anode-Supported Axially Symmetrical one Dimensional Tubular Solid Oxide Fuel Cell**” , Indian Journal of Science and Technology, Vol 10(19), DOI: 10.17485/ijst/2017/v10i19/113661, May 2017.
5. **Pankaj Kalra**, Rajeev Garg and Ajay Kumar;“**DESIGN of a HIGH TEMPERATURE SOLID OXIDE FUEL CELL: A REVIEW**” , International Journal for Research in Applied Science and Engineering Technology, ISSN: 2321-9653Volume 5, Issue IX, September 2017.
6. **Pankaj Kalra**, Rajeev Garg and Ajay Kumar;“**Modeling of a one dimensional Anode supported high temperature tubular SOFC**” in International Journal of ChemTech Research. CODEN (USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555 Vol.10 No.6, pp 784-792, 2017.
7. **Pankaj Kalra**, Rajeev Garg and Ajay Kumar;“**Kinetics analysis of reactions at the triple phase boundaries of an anode supported Tubular SOFC**”, Asian Journal of Chemistry, 2018, Vol. 30 No. 3 pp 561-566.
8. **Pankaj Kalra**, Rajeev Garg and Ajay Kumar; “**Parametric Sensitivity Analysis for a Natural Gas Fueled High Temperature Tubular Solid Oxide Fuel Cell**” Heliyon, Cell Press, Elsevier.
9. **Balpreet Kaur, Pankaj Kalra**, Navneet Kaur, Prosopis Juliflora (Kikar) pods as adsorbent for removal of Cd(II) ions from aqueous streams” *Materials Today*

Proceedings, 2022,68, pp. 809-816

10. Balpreet Kaur, **Pankaj Kalra**, Navneet Kaur, Synthesis of Sugarcane Bagasse Fiber Reinforced PolymerComposite” AIP Conference Proceedings, 2025,2807,pp 050008 (1-8)

B. Book Chapters Published:

1. **Pankaj Kalra**, Rajeev Garg; Book Chapter titled "**Solid Oxide Fuel Cells- A Future Source of Power and Heat Generation**" in special edition of Material Science forum "**Engineering Applications of Nano-Science & Nano-Materials**", TransTech publications, ISSN print 0255-5476 Special edition of Material Science forum vol 757, pp 217-241 (2013).
2. Kamakshi Sharma, **Pankaj Kalra** and Balpreet Kaur Book Chapter titled "**Production of Bioplastics from Banana Peels**" in Book "**From Waste to Wealth**" Springer Nature Singapore (2024).

C. Papers published/presented in International/ National conferences

1. **Pankaj Kalra** and Dr. Rajeev Garg published a paper titled "**Modeling of a Solid oxide Fuel Cell with internal reforming**" in International conference on Frontiers of Material Research and Application (ISBN: 978-93-83842-92-6) held on Oct 30-31 2015 at SBSSTC,Ferozepur.
2. **Pankaj Kalra** and Dr. Rajeev Garg published a paper titled "**Advanced Materials for a Solid oxide Fuel Cell**" in International conference on Frontiers of Material Research and Application (ISBN: 978-93-83842-92-6) held on Oct 30-31 2015 at SBSSTC,Ferozepur.
3. **Pankaj Kalra** and Dr. Rajeev Garg published a paper titled "**Advanced synthesis techniques for various components of Solid oxide fuel cells- A Review**" in International conference on Frontiers of Material Research and Application held on Dec 2016 at SBSSTC,Ferozepur.
4. **Pankaj Kalra** and Dr. Rajeev Garg published a paper titled "**Advanced synthesis techniques for various components of Solid oxide fuel cells- A Review**" in International conference on Frontiers of Material Research and Application held on Dec 2016 at SBSSTC,Ferozepur.
5. **Pankaj Kalra** and Meenakshi Arora published a paper titled "**Removal of COD and color of Distillery waste water using low cost adsorbents**" in International conference on Frontiers of Material Research and Application held on Dec 2016 at SBSSTC, Ferozepur.
6. Ashima Arora and **Pankaj Kalra**, published a paper titled "**Water Melon waste - a potential adsorbent for removal of pollutants from Water**" in International conference on Frontiers of Material Research and Application held on Dec 2016 at SBSSTC, Ferozepur.

7. Pankaj Kalra, Anirudh P. Singh , Ajay Kumar : “Structural properties of NiO-CGO composites precursor prepared via combustion synthesis route” Advanced Materials & Radiation Physics, AMRP-2009, March 9-10, 2009, Dept. of Physics, SLIET Longowal
8. Pankaj Kalra, Anirudh P. Singh , Ajay Kumar : Combustion Synthesis and Characterization of Nano NiO-CGO composites – a precursor to SOFC Anode, Indo-Russian Workshop Nanotechnology and Laser Induced Plasma – 2009 (IRNANO-2009), Nov24-26th 2009, University of Delhi, Delhi, 2009
9. Balpreet Kaur, **Pankaj Kalra**, Navneet Kaur, Prosopis Juliflora (Kikar) pods as adsorbent for removal of Cd(II) ions from aqueous streams”, Indo-US International Conferences on Materials & Sustainable Engineering in Chemical and Allied Industry (MSECAI-2022), March 11-12, CU, Chandigarh.
10. Balpreet Kaur, **Pankaj Kalra**, Navneet Kaur, *Synthesis of Sugarcane Bagasse Fiber Reinforced Polymer Composite*”, Indo-US International Conferences on Materials & Sustainable Engineering in Chemical and Allied Industry (MSECAI-2022), March 11-12, CU, Chandigarh
11. **Pankaj Kalra** and Dr. Rajeev Garg published a paper titled “Modelling and Simulation of Multi-component Distillation Column,” In International Conference on Advances in Modelling, Optimization ND Computing (AMOC-2011), Dec 5-7th 2011, Dept. of Mathematics , IIT Roorkee

D. Invited Talks/ Lectures

- ❖ Delivered an expert talk on “Alternative fuels” in Faculty Development programme at AIET , Faridkot on 25th may 2015.
- ❖ Delivered an expert talk on “Modelling & Simulation of Engineering Systems” in STTP on Mathematical Methods & Computations in Engg.(MMCE-2019) on 4th July’2019.