

Research Students guided by Dr. Anirban Chowdhury

PhD (**solo guidance**) → 2 (completed) + 4 (ongoing)

Masters → 3 (completed) +3 (as co-supervisor, completed) + 3 (ongoing)

Ongoing PhD students:



Aditya Arun



**Lakshaman
Kumar**



**Sravan Bokka
(JRF BRNS Project)**



**Annu Kumar
Lakshya**

PhD Completed:



Kundan Kumar



Kushal Singh

Thesis titles of PhD completed students:

- ❖ **Kushal Singh** - *Process Structure Property Correlations in La³⁺ and Zr⁴⁺ Doped Ceria Nanoparticles*
- ❖ **Kundan Kumar** - *Process-Structure Correlationships in High Temperature Doped-Oxide Systems*

M.Tech. Students

Ongoing:



Rishav Raj



Pappu Kumar



Akash Kumar

Completed:



**Rishu
Kumar**



**Saurabh
Srivastava**



Hamza Ali



**Amarjeet
Kumar**



**Nitish
Kumar**



**Sushant
Shiv**

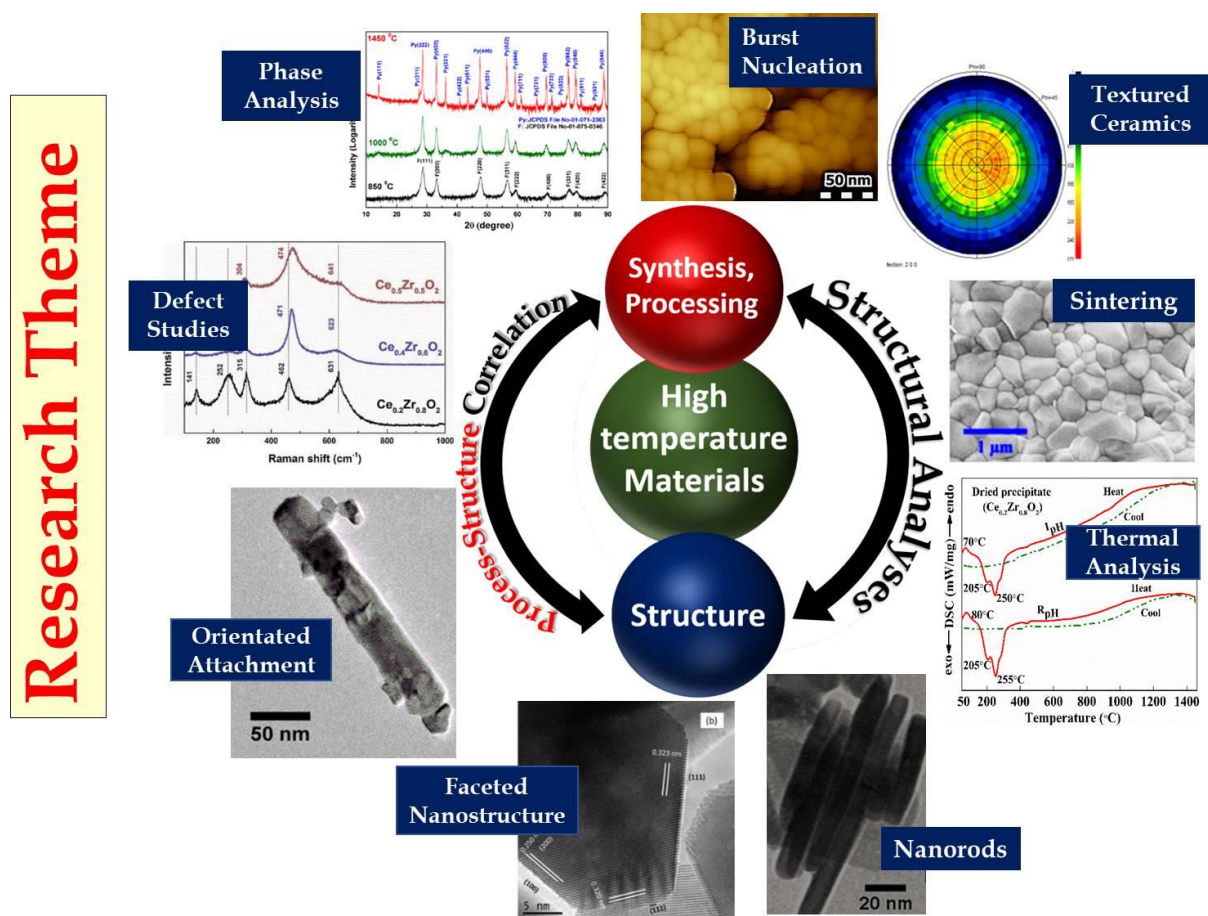
Thesis titles of M.Tech. completed students:

- ❖ **Rishu Kumar** - Synthesis and Characterization of Lanthnum Zirconate (LZ) Ceramic for Advanced Technological Applications
- ❖ **Saurav Srivastava** - Structure Property Correlations in La₃₊ doped Ceria System
- ❖ **Nitish Kumar** - Study the Effect of Annealing on Structural and Magnetic Properties of Strontium Hexaferrite
- ❖ **Hamza Ali** - Effect of Cryogenic Treatment on Shear Transformation Zones of Bulk Metallic Glasses
- ❖ **Amarjeet Kumar** - Synthesis and Characterization of Fe-based Nanocrystalline/Amorphous Metallic Glasses for Soft Magnetic Application
- ❖ **Sushant Shiv** - Studies on the effects of thermal cycling and hydrothermal treatments on doped-ZrO₂ ceramics

Research Guidance

S.No.	PhD		M.Tech.	
	Name	Thesis Status	Name	Thesis Status
1.	Kushal Singh	Completed	Rishu Kumar <i>(Presently pursuing PhD at UBC Canada)</i>	Completed
2.	Kundan Kumar	Completed	Nitish Kumar	Completed <i>(Co-supervised)</i>
3.	Aditya Arun	Ongoing	Amarjeet Kumar	Completed <i>(Co-supervised)</i>
4.	Lakshaman Kumar	Ongoing	Hamza Ali	Completed <i>(Co-supervised)</i>
5.	Sravan Bokka	Ongoing (BRNS-JRF)	Saurav Srivastava <i>(Presently pursuing PhD at IIT Kanpur)</i>	Completed
6.	Annu Kumar Lakshya	Ongoing	Sushant Shiv	Completed
7.	-	-	Rishav Raj	Ongoing
8.	-	-	Akash Kumar	Ongoing
9.	-	-	Pappu Kumar	Ongoing

Research Theme



Invited book chapters:

1. Chowdhury A, *Recent Developments in the area of Sodium Potassium Niobate (NKN) Thin Films by Chemical Solution Deposition Methods*, in: "Ferroelectrics: New Research", Chapter 8, p.247-260, Nova Science Publishers, Inc (Hauppauge, NY).
2. Kumar K, Chowdhury A, *Use of Novel Nanostructured Photocatalysts for the Environmental Sustainability of Wastewater Treatments*, in: "Reference Module in Materials Science and Materials Engineering", Elsevier, Reference Module in Materials Science and Materials Engineering, Encyclopedia of Renewable and Sustainable Materials, Volume 1, 2020, Pages 949-964 [<https://doi.org/10.1016/B978-0-12-803581-8.11149-X>]
3. Kumar K, Chowdhury A, Chapter 21: *Pushing the Limits of Analytical Characterization Tools: How Much is too much?* in: "Handbook on Miniaturization in Analytical Chemistry: Application of Nanotechnology", (Ed. C M Hussain), Elsevier, ISBN: 978-0-12-819763-9, Chapter 11, Pages-239-275, August, 2020 [<https://www.elsevier.com/books/handbook-on-miniaturization-in-analytical-chemistry/hussain/978-0-12-819763-9>]
4. Bokka S, Chowdhury A, *Reviewing the Potential of Novel Nanofillers in Polymer Matrices for Advanced Technological Applications*, in Encyclopedia of Materials: Plastics and Polymers, Elsevier (Editor-in-Chief: Prof. Saleem Hashmi) [Status: Submitted]

Sponsored project and Consultancy:

Project Title	Fund Value (Lacs)	Funding Agency /Organisation	Role	Status	Duration
Fire Retardant Materials: Investigation on Mechanistic & Thermo-physical props. & synthesis process	Rs. 31.93 (43600 USD)	BRNS	PI	On-going	3 years from Jul., 2019
Development and optimization of cost effective and scalable near net shape plasma sprayed membrane with graded porosity for microfiltration application	Rs. 68 (92840 USD)	IMPRINT, SERB-DST	Co-PI	On-going	3 years from Dec., 2018
Synthesis & characterisation of faceted nanocrystalline powders of Ceria-Zirconia and related systems**	Rs. 26.75 (36520 USD)	SERB-DST	PI (Co-PI: Nil)	Completed	3 years from July, 2015
Consultancy Project: Analysis of material compositions of investment casting powders	Rs. 0.3 (410 USD)	Maharashtra Jewelry Tools	PI (Co-PI: Nil)	On-going	1 year from Dec, 2019

**Based on performance, the DST-SERB project was selected (out of a total of 53 Nationwide projects in the category of Engineering Science) for the compendium of Research Highlights in YSS (Start-up grant for Young Scientists) Engineering Sciences programme and was released on first conclave of National Postdoctoral Fellowship awardees on 25th July 2018 by Secretary, DST and Secretary, SERB.

Peer-Reviewed articles in journals:

2021

- [42] Lakshaman Kumar, Aditya Arun, Anirban Chowdhury *Can a shape factor in bulk ceramics mitigate unwanted phase transformations?*, **Scripta Materialia** 190, 52-56, 2021.

[Link: <https://www.sciencedirect.com/science/article/pii/S1359646220305650>]

2020

- [41] Shramana Mishra, Kundan Kumar, Atanu Patra, Anirban Chowdhury, Anushree Roy, *Phase integrity of zinc oxide doped zirconia under low compacting pressure*, **Journal of Alloys and Compounds**, Volume 843, 155927, P: 1-10, 2020.

[Link: <https://www.sciencedirect.com/science/article/pii/S092583882032291X>]

- [40] Kundan Kumar, Saurabh Srivastava, Anirban Chowdhury, *Role of various alcohol washing media in obtaining a remarkable texture for La₂Ce₂O₇ powders and ceramics*, 2019, **Journal of the American Ceramic Society**, 103 (3), 1563-1574, 2020.

[Link: <https://ceramics.onlinelibrary.wiley.com/doi/abs/10.1111/jace.16880>]

2019

- [39] Aditya Arun, Anirban Chowdhury, *Reaping the remarkable benefits of a 'burst nucleation' approach for a ceria doped zirconia system*, **Journal of Alloys and Compounds**, 802, 318-325, 2019.

[Link: <https://www.sciencedirect.com/science/article/abs/pii/S0925838819322686>]

- [38] Kundan Kumar, Anshu Priya, Aditya Arun, Subrata Hait, Anirban Chowdhury, *Antibacterial and Natural Room-light driven Photocatalytic Activities of CuO Nanorods*, *Materials Chemistry and Physics*, 226, 106-112, 2019.
[Link: <https://www.sciencedirect.com/science/article/pii/S0254058419300240>]
- [37] Srivastava, S., Kumar, K., Singh, K. *Functional properties of $La_xCe_{1-x}O_{2-\delta}$ nanocrystals and their bulk ceramics*, *Journal of Materials Science: Materials in Electronics*, 30 (3), 2096–2106, 2019.
[Link: <https://link.springer.com/article/10.1007/s10854-018-0481-3>]
- [36] Kumar K, Dutta H, Pradhan SK, Chowdhury A. *Stabilization of ZrO_2 matrix: Revisiting the 'archaic' issue with a peculiar example*, **Scripta Materialia** 162, 408-411, 2019.
[Link: <https://www.sciencedirect.com/science/article/pii/S1359646218307346>]
- [35] Singh K, Kumar K, Ojha P K, Chowdhury A. *Structure-property correlations for the surfactant-free faceted nanocrystals of $Ce_{1-x}Zr_xO_2$ and their bulk ceramics*, *Materials Research Bulletin*. 2019; 112, 38-45.
[Link: <https://www.sciencedirect.com/science/article/pii/S0025540818326886>]
- [34] Islam A, Kumar K, Pandey K K, Mukherjee B, Rahman OSA, Chowdhury A, Keshri A K. *Exceptionally high fracture toughness of carbon nanotube reinforced plasma sprayed lanthanum zirconate coatings*, **Journal of Alloys and Compounds**. 2019; 777, 1133-1144.
[Link: <https://www.sciencedirect.com/science/article/abs/pii/S0925838818342488>]

2018

- [33] Singh K, Kumar R, Chowdhury A. *Lanthanum doped Ceria Nanoparticles: a Promising Material for Energy Applications*, *Materials Today: Proceedings*. 2018; 5(11): 22993-22997.
[Link: <https://www.sciencedirect.com/science/article/pii/S2214785318327627>]
- [32] Kumar K, Srivastava S, Chowdhury A. *La^{3+} -doped CeO_2 system: Negating the myths with a tailor-made ceramic*, **Scripta Materialia**. 2018; 157, 138-141.
[Link: <https://www.sciencedirect.com/science/article/pii/S1359646218304895>]
- [31] Chowdhury, A., *Constitutive modelling and Weibull statistical analysis for the porosity-Mechanical property correlations in 3% yttria-stabilized zirconia system*. *International Journal of Refractory Metals and Hard Materials* 2018; 70(1): p.246–252.
[Link: <https://www.sciencedirect.com/science/article/pii/S026343681730611X>]

2017

- [30] Singh, K., Kumar, K., Nayak, S., Joshi, D. C., Alom, M. M, Thota, S., Chowdhury, A., *Structural and Dielectric Properties of the Fluorite-Type $La_xCe_{1-x}O_{2-\delta}$ Ceramics*. *Journal of Physics D: Applied Physics*, 2017, 50: p.495601.
[Link: <http://iopscience.iop.org/article/10.1088/1361-6463/aa939d/meta>]

- [29] Paul, B., Kumar, K., Chowdhury, A., Roy, A., *Appearance of Fröhlich-like phonon mode and defect dynamics in La³⁺-doped ceria*. Journal of Applied Physics, 2017, 122(13): p.135108.
[Link: <http://aip.scitation.org/doi/abs/10.1063/1.4993522>]
- [28] Singh, K., Kumar, K., Srivastava, S., Chowdhury, A., *Effect of rare-earth doping in CeO₂ matrix: Correlations with structure, catalytic and visible light photocatalytic properties*, Ceramics International. 2017, 43: p. 17041-17047.
[Link: <http://www.sciencedirect.com/science/article/pii/S0272884217320461>]
- [27] Kumar, K., Chowdhury, A., *Facile Synthesis of CuO Nanorods Obtained Without Any Template and/or Surfactant*, Ceramics International, 2017; 43: p.13943–13947.
[Link: <https://www.sciencedirect.com/science/article/pii/S0272884217315687>]
- [26] Kumar, K., Jaroń, T., Chowdhury, A., *On the peculiarities of phase developments involving Zn²⁺-doped ZrO₂ system*, **Scripta Materialia**, 2017, 138: p.71–74 .
[Link: <http://www.sciencedirect.com/science/article/pii/S1359646217302920>]
- [25] Kumar, R., Kumar K., Chowdhury, A., *Discrepancies in the hardness data and the role of grinding induced surface effects for a porous zirconate ceramic*, **Journal of American Ceramic Society**, 2017, 100: p.1717–1723.
[Link: <http://onlinelibrary.wiley.com/doi/10.1111/jace.14773/abstract>]
- [24] Singh, K., Kumar, R., Chowdhury, A., *Synergistic effects of ultrasonication and ethanol washing in controlling the stoichiometry, phase-purity and morphology of rare-earth doped ceria nanoparticles*, **Ultrasonics Sonochemistry**, 2017, 36: p. 182-190
[Link: <http://www.sciencedirect.com/science/article/pii/S1350417716304175>]

2016

- [23] Paul, B, Singh, K, Jaroń, T, Roy, A, Chowdhury, A, *Structural properties and the fluorite–pyrochlore phase transition in La₂Zr₂O₇: The role of oxygen to induce local disordered states*, **Journal of Alloys and Compounds**, 2016, 686: p. 130-136.
[Link: <https://www.sciencedirect.com/science/article/pii/S0925838816317078>]
- [22] Kumar, R., Singh, K., Chakravarty, D., **Chowdhury, A.**, *Attaining near-theoretical densification in nanograined pyrochlore La₂Zr₂O₇ (LZ) ceramic at 1150° C by spark plasma sintering*, **Scripta Materialia**, 2016, 117: p. 37-40
[Link: <http://www.sciencedirect.com/science/article/pii/S1359646216300586>]
- [21] Singh, K., Kumar, R., **Chowdhury, A.**, *Synthesis of La-doped ceria nanoparticles: impact of lanthanum depletion*, Journal of Materials Science, 2016, 51: p: 4134–4141
[Link: <https://link.springer.com/article/10.1007/s10853-016-9736-7>]

2015

- [20] Prusty, D., Pathak, A., Mukherjee, M., Mukherjee, B., **Chowdhury, A.**, *TEM and XPS Studies on the Faceted Nanocrystals of Ce_{0.8}Zr_{0.2}O₂*, Materials Characterization, 2015, 100: p. 31-35
[Link: <http://www.sciencedirect.com/science/article/pii/S1044580314003878>]

2014

- [19] **Chowdhury, A.**, Iyyappan, R., Majumdar, D., Singha, A., *Structural and spectroscopic characterisations of the surface oxide scales and inclusions present on edge-burst hot-rolled steel coils*, *Materials Chemistry and Physics*, 2014, 148 (1-2): p. 276-283
[Link: <http://www.sciencedirect.com/science/article/pii/S0254058414004842>]
- [18] Prusty, D., Pathak, A., Chintla, A.R., Mukherjee, B., **Chowdhury, A.**, *Structural Investigations on the Compositional Anomalies in Lanthanum Zirconate System Synthesized by Coprecipitation Method* **Journal of the American Ceramic Society**, 2014, 97 (3): p. 718-724
[Link: <http://onlinelibrary.wiley.com/doi/10.1111/jace.12741/full>]
- [17] **Chowdhury, A.**, Bijalwan, P. K., Sahu, R. K., *Investigations on the Role of Alkali to Obtain Modulated Defect Concentrations for Cu₂O Thin Films* **Applied Surface Science**, 2014, 289 (1): p. 430-436
[Link: <http://www.sciencedirect.com/science/article/pii/S0169433213020539>]

❖ Number of Peer-Reviewed articles (journal publications) before 2014 = 16

Patents filed:

1. “A process for obtaining shape and size controlled ceramic nanopowders” (patent numbered 201831006045 dated 16th February, 2018, Co-inventor: Kundan Kumar, Kushal Singh)
2. “A phase and stoichiometrically pure ceramic powder and a process for the preparation thereof” (Patent Application No. 201731019619 of 5th July, 2017)
3. “A method of preparation of monoclinic phase free doped zirconia powders with low temperature sinterability” (patent numbered 201931036371 dated 10th September, 2019, Co-inventor: Aditya Arun, Lakshaman Kumar)

Workshops organized:

- ❖ CEP Course on “Failure Analysis of Engineering Products”, May 10 – 11, 2019 at IIT Patna (joint co-ordinator: Mr. Sabyasachi Roy, Director, ANTS Ceramics Pvt. Ltd.)

Invited Teaching Activities:

Dr. A. Chowdhury has been invited numerous times to deliver expert lectures on different online courses as a part of faculty (from polytechnic and engineering institutes of all over the country) development program organised by "National Institute of Technical Teachers Training and Research (NITTTR)", Chandigarh (Apr.'20 onward)

Invited Presentation & Invited Chair at International Conferences:

1. Invited talk by **Anirban Chowdhury**: “*Pushing the Limits of Thermal Analyses Tools: Issues, Concerns and Possible Solutions*” in “THERMANS- 2020” (22nd DAE – BRNS Workshop & Symposium on Thermal Analysis) at **BARC, Anushaktinagar**, Mumbai, Jan. 30-Feb. 1, 2020.
2. Invited talk by **Anirban Chowdhury**: “*Insights into the Remarkable Ionic Conductivity obtained for a Textured $\text{La}_2\text{Ce}_2\text{O}_7$ Ceramic via Pressureless Sintering*” in an International Conference on Functional Materials from 06 - 08 Jan 2020 in **Indian Institute of Technology Kharagpur, India**
3. Invited talk by **Anirban Chowdhury**: “*Synthesis and Serendipity: How far can they collaborate?*” in **First Indian Materials Conclave (IndMaC)** by MRSI (Materials Research Society of India) at **IISc Bangalore** February 12-15, 2019. (Also acted as invited Co-chairman for the conference theme: “Nanomaterials Synthesis & Solutions Route”).
4. Invited talk by **Anirban Chowdhury**: “*High-temperature materials for defense & marine applications*” at the Workshop on Nanostructured & Smart Materials/ Coatings (WNMC2017) in the International Conference and Technology Meet on Military and Marine Applications (**IWCCEM 2017**) on 03 - 05 June 2017, Hotel Crowne Plaza, Jaipur
5. Invited talk by **Anirban Chowdhury**: “*Improving Metal-Rubber Adhesion via Multifunctional Oxide Coating*” at 8th International Conference on Advancements in Polymeric Materials (**CIPET APM 2017**), February 12-13, 2017 at **IISc Bangalore**.
6. Invited talk by **Anirban Chowdhury**: “*Compositional Anomalies in Oxide Nanoparticles: Impact on the Target Functional Properties*” at Fourth International Conference on Nanostructured Materials and Nanocomposites (ICNM 2017) 10-12 February 2017 at Mahatma Gandhi University, Kottayam, Kerala.
7. Invitation to **Dr. A. Chowdhury** for a lecture for TEQIP Short Term Course on, “*Strengthening of Institute-Industry Interaction*” at **NIT Patna**, 30th Jan. – 4th Feb., 2017
8. Invitation to **Dr. A. Chowdhury** to serve as a Co-chairman for the theme: “*Nanomaterials Devices & Applications*” in International Conference of Young Researchers on Advanced Materials (**IUMRS-ICYRAM 2016**), Dec. 11-15, 2016 at **IISc Bangalore**.

Contributed Presentations in Conferences:

By Dr. A. Chowdhury:

1. **Oral**: “*Compositional Anomalies in Oxide Nanoparticles: Impact on the Target Functional Properties*” by Anirban Chowdhury, Kushal Singh, Rishu Kumar, Kundan Kumar, IUMRS-ICYRAM 2016 (International Conference of Young Researchers on Advanced Materials) at IISc, Bangalore, Dec 11-15, 2016.

2. **Oral:** “Attaining Near-theoretical Densification in $\text{La}_2\text{Zr}_2\text{O}_7$ (LZ) Ceramic at 1150 °C and Investigations on its Fluorite – Pyrochlore Transition” by Anirban Chowdhury, Kushal Singh, Rishu Kumar, Barnita Paul, Tomasz Jaroń, Anushree Roy, 6th International Congress on Ceramics (ICC-6) at Dresden, Germany, Aug. 21-25, 2016
3. **Oral:** “Studies on the Compositional Anomalies in Lanthanum Zirconate System Prepared by Co-Precipitation”, by Anirban Chowdhury, Debadutta Prusty, Abhishek Pathak, Appa Rao Chintla, Bratindranath Mukherjee, CIMTEC 2014 (13th International Ceramics Congress), Montecatini Terme, Tuscany, Italy, Jun. 8-13, 2014
4. **Oral:** “The Role of Alkali to Obtain Modulated Defect Concentrations for Cu_2O Thin Films on Steel”, by Anirban Chowdhury, Pavan Kumar Bijalwan, Ranjan Kumar Sahu, IUMRS-ICA 2013 (International Union of Materials Research Society - International Conference in Asia - 2013), Bangalore, 15 - 20 Dec, 2013.

By Ph.D. students:

1. **Oral:** Kundan Kumar and Anirban Chowdhury, (1) *Revisiting the Theories Involving Stabilization of Zirconia Matrix with a Peculiar Example*, (2) *Insights into the Remarkable Ionic Conductivity obtained for a Textured $\text{La}_2\text{Ce}_2\text{O}_7$ Ceramic via Pressureless Sintering*; 10th International Conference on Materials for Advanced Technologies, Singapore.
2. **Poster:** Kundan Kumar and Anirban Chowdhury, *Remarkable Ionic Conductivity in a Textured $\text{La}_2\text{Ce}_2\text{O}_7$ Ceramic made by a Conventional Sintering*, 1st Indian Materials Conclave and 30th Annual General Meeting of MRSI, IISc Bangalore (2019) [Best Poster awarded to Kundan Kumar]
3. **Poster:** Kundan Kumar and Anirban Chowdhury, *Remarkable ionic conductivity in a textured $\text{La}_2\text{Ce}_2\text{O}_7$ ceramic*, 7th Interdisciplinary Symposium on Materials Chemistry, BARC Mumbai, India (2018) [Best Poster awarded to Kundan Kumar]
4. **Poster:** Kundan Kumar and Anirban Chowdhury, *Peculiarities in phase development in the ZnO-stabilized ZrO_2 system*, 14th International Ceramics Congress, Perugia, Italy (2018)
5. **Oral:** Singh, K.; Kumar, R.; Chowdhury A., *Faceted Nanocrystals of $\text{Ce}_{1-x}\text{Zr}_x\text{O}_2$ ($x = 0.8, 0.6, 0.5$) for Catalytic Applications*, International Conference on Nanotechnology: Ideas, Innovation & Initiatives (ICN3I-2017); Indian Institute of Technology Roorkee, 2017. 4
6. **Oral:** Singh, K.; Kumar, K.; Chowdhury A., *Structural and Enhanced Catalytic Reduction Properties for $\text{La}_x\text{Ce}_{1-x}\text{O}_{2-\delta}$ ($x = 0.1, 0.2$ and 0.5) Nanoparticles along with the Additional Benefit of Photocatalytic activity*, Communicated for the “9th International Conference On Materials for Advanced Technologies, ICMAT 2017;18 - Suntec Singapore, 23 June 2017
7. **Oral:** Kumar, K; Chowdhury A., *Facile Surfactant-free Synthesis of CuO Nanorods and its Applications in Waste Water Treatment*, International Conference on Nanotechnology: Ideas, Innovation & Initiatives (ICN3I-2017); Indian Institute of Technology Roorkee, 2017
8. **Poster:** Kumar, K; Chowdhury A., *Phase Anomalies in the ZnO-stabilized ZrO_2 System*, National Metallurgical Day-Annual Technical Meeting (NMD-ATM); Birla Institute of Technology & Science Goa, 2017.
9. **Oral:** Singh, K.; Kumar, K.; Chowdhury A., *Catalytic Properties of Phase-pure La-doped CeO_2 Nanoparticles*, (NMD ATM); Indian Institute of Technology Kanpur, 2016

10. **Poster:** Kumar, K; Chowdhury A., *ZnO-stabilized Cubic ZrO₂ at Room Temperature and the Additional Benefit of Photocatalytic Property*, International Conference on Functional Material (ICFM-2016); Indian Institute of Technology Kharagpur, 2016. [Best Poster awarded to Kundan Kumar]
11. **Poster:** Singh, K.; Kumar, R.; Chowdhury A., *Lanthanum-doped Ceria Nanoparticles: a Promising Material for Energy Applications*, “International Conference on Advances in Energy Research (ICAER-2015)” at Indian Institute of Technology Bombay, 2015
12. **Oral:** Singh, K.; Kumar, R.; Chowdhury A., *Structural and Catalytic Properties of Ce_{0.8}La_{0.2}O_{2-x} Nanoparticles*, International Conference on Multifunctional Materials for Future Application (ICMFA-2015); Indian Institute of Technology (BHU), 2015
13. **Poster:** Singh, K.; Kumar, R.; Chowdhury A., *Lanthanum doped Ceria Nanoparticles: A Promising Material for Energy Applications*, Accepted for the “International Conference on Advances in Energy Research (ICAER-2015), Indian Institute of Technology Bombay, Dec., 2015

By M.Tech. students:

1. **Poster:** Srivastava, S; Chowdhury A., Structure- property correlations for LaXCe_{1-X}O_{2-δ} (X= 0.05, 0.15) system, National Metallurgical Day-Annual Technical Meeting (NMDATM); Birla Institute of Technology & Science Goa, 2017.
2. **Poster:** Kumar, R.; Singh, K; Chowdhury A., “Densification of Phase Pure La₂Zr₂O₇ Nano-Powders by Spark Plasma Sintering”, International Conference on Multifunctional Materials for Future Application (ICMFA-2015); Indian Institute of Technology BHU, 2015
3. **Poster:** Kumar A.; Premkumar M.; Chowdhury A.; Panda Ashis K.; Roy Rajat K., “Effect of size on structures and properties of Fe-based metallic glasses”, 26th International Symposium on Metastable, Amorphous and Nanostructured Materials, 08-12 July 2019, Chennai, India.

Awards/Accolades received:

By PhD students:

1. 8th Research Scholars Day, IIT Patna- 2019 [Best Poster awarded to Kundan Kumar]
2. 8th Research Scholars Day themed presentation, “My Research in 3 minutes”, IIT Patna- 2019 [2nd position awarded to Kundan Kumar]
3. 1st Indian Materials Conclave and 30th Annual General Meeting of MRSI, IISc Bangalore (2019) [Best Poster awarded to Kundan Kumar]
4. 7th Interdisciplinary Symposium on Materials Chemistry (ISMC), BARC Mumbai, India (2018) [Best Poster awarded to Kundan Kumar]
5. International Conference on Functional Material (ICFM-2016); Indian Institute of Technology Kharagpur, 2016. [Best Poster awarded to Kundan Kumar]

By M.Tech. students:

- ❖ Institute Silver Medal [Rishu Kumar]

◁…………Last updated on **September 15, 2020**…………▷