


# Sri Sai Ram Engineering College

## Department Of Humanities And Sciences

<p>Name: <b>Dr. N. SRINIVASAN @</b></p> <p><b>ARUNSANKAR</b></p>	
<p><i>Designation:</i></p>	<p><i>Associate Professor</i></p>
<p><i>Qualification:</i></p>	<p><i>M.Sc., M. Phil., Ph.D.</i></p>
<p><i>Area of Specialisation</i></p>	<p><i>Crystallography &amp; Nanomaterials and their applications</i></p>
<p><i>Experience :</i></p>	<p><i>Teaching :</i></p> <p><i>UG : 20 Yrs 1 Month</i></p> <p><i>PG : 1 Yr 8 Months</i></p> <p><i>Industry: -</i></p>
<p><i>No. of Workshop / Conferences / FDP attended</i></p>	<p><i>21 / 36 / 30</i></p>
<p><i>Publication :</i></p>	<p><i>Journal</i></p> <p><i>National : 2</i></p> <p><i>International : 10</i></p>

	<p><i>Conference</i></p> <p><i>National : 4</i></p> <p><i>International : 12</i></p>
<i>Research Guidance :</i>	<i>Guided UG and PG projects for B.Sc and M.Sc students.</i>
<i>General:</i>	<p><i>Coordinated as cultural coordinator for S&amp;H cultural activities (2017).</i></p> <p><i>More than 5 times as time table committee member.</i></p> <p><i>Active member in S2T Mega event.</i></p>

<i>Staff Achievements</i>	<p><i>17 times 100 % and 14 times more than 95 % result in Engineering Physics I &amp; II.</i></p> <p><i>Prepared simplified “Notes of Lesson” for students.</i></p> <p><i>Best Poster Presentation “Second Prize” in International Conference on 21<sup>st</sup> Jan 2020.</i></p> <p><i>Best Poster Presentation “Second Prize” in International Conference on 18<sup>th</sup> -20<sup>th</sup> Jan 2021.</i></p> <p><i>Best Paper Presentation in International Conference on 15<sup>th</sup> &amp; 16<sup>th</sup> Sep 2022.</i></p> <p><i>Organizing Secretary in International Conference on Modern Functional Materials – ICMFM 2021.</i></p> <p><i>Session chair for Technical Events in International Conference on Modern Functional Materials – ICMFM 2021.</i></p>
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**Educational Qualification:**

<b>Category</b>	<b>Name of the Degree</b>	<b>Specialization</b>	<b>Year of Passing</b>	<b>Name of the College</b>	<b>Name of the University</b>	<b>% of Marks / Grades obtained</b>	<b>Class obtained</b>
<i>UG</i>	<i>B.Sc</i>	<i>Physics</i>	<i>2001</i>	<i>Sri Paramakalyani College</i>	<i>M.S. University</i>	<i>77.5%</i>	<i>I Class</i>
<i>PG</i>	<i>M.Sc</i>	<i>Physics</i>	<i>2003</i>	<i>Sri Paramakalyani College</i>	<i>M.S. University</i>	<i>64.5%</i>	<i>I Class</i>
	<i>M.Phil</i>	<i>Physics</i>	<i>2005</i>	<i>M.S. University</i>	<i>M.S. University</i>	<i>67%</i>	<i>I Class</i>
<i>Ph.D.</i>		<i>Physics</i>	<i>2020</i>	<i>SRM VEC</i>	<i>Anna University</i>	<i>Highly Commended</i>	

## Academic Experience:

Name of the College	Designation	Joining Date	Relieving Date	Experience		
				Years	Months	Days
<i>Sri Paramakalyani College</i>	<i>Lecturer</i>	<i>20.08.2003</i>	<i>16.08.2005</i>	<i>1</i>	<i>11</i>	<i>28</i>
<i>V.K.K.Vijayan Engineering College</i>	<i>Senior lecturer</i>	<i>18.08.2005</i>	<i>13.08.2008</i>	<i>2</i>	<i>11</i>	<i>27</i>
<i>Srinivasa Institute of Engineering &amp; Technology</i>	<i>Lecturer</i>	<i>14.08.2008</i>	<i>05.02.2010</i>	<i>1</i>	<i>5</i>	<i>23</i>
<i>Sri Sai Ram Engineering College</i>	<i>Assistant Professor</i>	<i>08.02.2010</i>	<i>31.12.2021</i>	<i>11</i>	<i>10</i>	<i>20</i>
<i>Sri Sai Ram Engineering College</i>	<i>Associate Professor</i>	<i>01.01.2022</i>	<i>Till date</i>	<i>2</i>	<i>1</i>	<i>0</i>
<b>Total</b>				<b>20</b>	<b>1</b>	<b>0</b>

## PUBLICATIONS

### Journals:

1. *Begene Prince, N. Srinivasan Arunsankar, R. Jayaraman, S. Jeyaram, P. Saravanan, M. Vimalan, T. Rajesh Kumar, Investigating the Influence of Shock Waves on the Dielectric Characteristics of ZMTC Crystals, Journal of Polymer and Composites, (WoS indexed) (2023).*
2. *N Srinivasan Arunsankar, A Prabakaran, P Saravanan, M Vimalan, S Jeyaram, Solvent Media on Nonlinear Optical Properties of Triarylmethane Dye via Facile Z-Scan Method, Journal of Fluorescence, (SCI and Scopus indexed) (2023). (IF:2.7)*
3. *N Srinivasan Arunsankar, A Prabakaran, P Saravanan, M Vimalan, S Jeyaram, Saturable and Reverse Saturable Absorption Features of Lissamine Green Dye in Different Solvent Media, Journal of Fluorescence, (SCI and Scopus indexed) (2023). (IF:2.7)*
4. *G. Ramanathan, N. Srinivasan, K.R. Murali, Detection of H<sub>2</sub>S gas sensing performance of sol gel prepared metal oxide (In<sub>2</sub>O<sub>3</sub>, SnO<sub>2</sub>, Sn doped In<sub>2</sub>O<sub>3</sub>) thin films, Materials Today:Proceedings, (Scopus indexed) 92, 1218-1224 (2023).*
5. *N.Srinivasan alias Arunsankar, C.Deepa, M.Anbuezhian, K.Dhanalakshmi,*

*Molecular Interaction and Physico-Chemical and Docking Analysis in Binary Organic Molecules at Various Temperatures*, *Jundishapur Journal of Microbiology*, (**SCI and Scopus indexed**), **15**, 5097-5109 (2022). (IF:0.82)

6. K. Selvarani, R. Mahalakshmi, N. Srinivasan, *Growth and characterization of nonlinear optical crystal glycine sodium nitrate and its biological activity*, **Journal of Materials Science:Materials in Electronics (Springer - SCI and Scopus indexed)**, **33**, 13408–13417 (2022). (IF:2.779)
7. B. Anusha, M. Anbuezhhiyan, Rajendran Sribalan, N. Srinivasan alias Arunsankar, *Synergistic effect of TiO<sub>2</sub>-rGO nanocomposites with Fenton's reagent for the enhanced photocatalytic degradation of nitrophenols in solar light*, **Applied Physics A (Springer - SCI and Scopus indexed)**, **128**:411 (2022). (IF:2.983)
8. N.Srinivasan alias Arunsankar, M.Anbuezhhiyan, S.Harish, "Investigation of C-ZnO/V<sub>2</sub>O<sub>5</sub> nanocomposite for organic compound decomposition under visible light", **Journal of Materials Science:Materials in Electronics (Springer - SCI and Scopus indexed)**, **33**, 9743–9754 (2022). (IF:2.779)
9. N.Srinivasan alias Arunsankar, M.Anbuezhhiyan, S.Harish and S.Ponnusamy, "Efficient catalytic activity of BiVO<sub>4</sub> nanostructures by crystal facet regulation for environmental remediation", **Chemosphere (Elsevier - SCI and Scopus indexed)**, **289** (2022) 133097. (IF: 8.943)
10. N.Srinivasan alias Arunsankar, M.Anbuezhhiyan, "Photocatalytic activity of hydrazine hydrate passivated ZnO nanostructures synthesized by hydrothermal method" *i-manager's Journal of Materials Science*, **9**, (2021) 1-6.
11. N.Srinivasan alias Arunsankar, M.Anbuezhhiyan, S.Padmaja, "Enhanced photocatalytic mineralization efficiency of anionic element doped ZnO by improving separation of excitons", **Journal of Materials Science:Materials in Electronics (Springer - SCI and Scopus indexed)**, **32** (2021) 12631 - 12647. (IF:2.779)
12. N.Srinivasan Alias Arunsankar, M.Anbuezhhiyan, S.Harish and S.Ponnusamy "Hydrothermal synthesis of C doped ZnO nanoparticles coupled with BiVO<sub>4</sub> and their photocatalytic performance under the visible light irradiation", **Applied Surface Science (Elsevier - SCI and Scopus indexed)**, **494** (2019) 771 -782. (Impact Factor: 7.392)
13. M. Rajamoorthy, P. Selvarajan, N. Srinivasan and A. Sivadas, *XRD, FTIR, thermal and dielectric studies of Barium Oxalate crystals grown by gel technique*", *Bulletin of Pure and Applied Sciences*, Vol.24D, 2005.

## Patents

**1. Preparation method and application of polyaniline-nano gold composite material.**

*Application Number: 202231016303*

**2. Advanced therapeutic molecules for tissue regeneration using carbon nanotubes.**

*Application Number: 202241019833*

*Grant: Awaiting for grant*

**3. Non-invasive targeted delivery of drug molecules for breast cancer using carbon nanotubes and Artificial Intelligence.**

*Application Number: 202241023425*

*Grant: Awaiting for grant*

**4. Implementation of novel techniques to Measure the Efficiency Photovoltaics of Nanostructured Solar Cells.**

*Application Number: 202241073253*

**5. Bio-functional Iron Oxide Nanoparticles for Efficient Water Purification.**

*Application Number: 202341027843*

**6. One-Pot synthesis of Porous Gold Nanoparticles for Enhanced Catalytic Activity.**

*Application Number: 202341028534*

## **Book Publications**

1. Dr. A. Venkatesan, Mr. B. Sreenivas, Dr. N. Srinivasan Arunsankar, Dr. Sharique S. Shaikh, "Nano Science and Technology" RK Publications, November 2022.

**ISBN No: 978-93-95331-66-1**

2. Dr. M. Anusuya, Dr. K. Kathiresan, Dr. N. Srinivasan Arunsankar, Dr. V. Saravanan, "Engineering Physics" GCS Publishers, November 2022.

**ISBN No: 978-93-94304-98-7**

3. Dr. P. Udhayakumar, Dr. A. Hemalatha, Dr. N. Srinivasan Arunsankar, Mr. R. Venkateswara Rao, "Testing of Materials" RK Publications, July 2022.

**ISBN No: 978-93-95331-02-9**

## **Papers presented in International / National Conferences:**

1. "g-C<sub>3</sub>N<sub>4</sub> decorated SnO<sub>2</sub> composite with enhanced visible-light photocatalytic activity" 4th **International** Conference on Advanced Functional Materials for Sustainable Energy Applications (ICAFMSA) organized by Department of Physics, Koneru Lakshmaiah Education Foundation (Deemed to be University) Vaddeswaram, Guntur, Andhra Pradesh, India from 6<sup>th</sup> to 8<sup>th</sup> December, 2023. **(ORAL)**
2. "Enhanced photocatalytic performance of C-ZnO/BiVO<sub>4</sub> nanocomposite" in the Indo-South Korea - Thailand 2nd **International** e-Conference on "Nanoscience and Nanotechnology for Energy, Environment and Biomedical Applications" (iNEEBA2022), organized by Vinayaka Missions Kirupananda Variyar Arts and Science College, India in association with Gyeongsang National University, Republic of Korea and Chulalongkorn University, Thailand during on 24<sup>th</sup> and 25<sup>th</sup> November, 2022. **(ORAL)**
3. "Synergistic photocatalytic performance of CeO<sub>2</sub>/ZnO/g-C<sub>3</sub>N<sub>4</sub> ternary nanocomposite for the degradation of organic compounds" in the 3<sup>rd</sup> **International** Virtual Conference on Recent Trends in Clean Technologies for Sustainable Environment (CTSE-2022) organized by the Center of Excellence in Water Research (CEWAR) in Association with the Department of Chemical Engineering, Sri Sivasubramaniya Nadar College of Engineering, Chennai, India held on 15 and 16th September 2022. **(ORAL)**
4. Photocatalytic activity of hydrazine hydrate Passivated ZnO nanostructures synthesized by hydrothermal method" in the 2<sup>nd</sup> **International** Conference on Smart Automation in Computer, Electrical, Electronics and Communication Engineering organized by SRM Valliammai Engineering College on 10<sup>th</sup> April 2021. **(ORAL)**
5. "Synthesis of Ag/ZnO and Cu/ZnO nanocomposites and their photocatalytic performances for the environmental remediation" in in the "6<sup>th</sup> **International** Conference on Nanoscience and Nanotechnology" organized by Department of Physics and Nanotechnology, SRM Institute of Science and Technology on 1<sup>st</sup> - 3<sup>rd</sup> February 2021. **(POSTER)**
6. "Hydrothermal synthesis of C-ZnO/BiVO<sub>4</sub> nanocomposites and their photocatalytic activities" in the "**International** E - Conference on Recent trends in Nanotechnology and Material Science" Organized by P.G & Research Department of Physics, St. Joseph's College for Women Alappuzha, Kerala on 18<sup>th</sup> - 20<sup>th</sup> January 2021. **(POSTER)**

7. "CTAB surfactant assisted hydrothermal synthesis of  $\text{BiVO}_4$  nanostructures and their catalytic activity for the degradation of MB dye" in the "**International** Conference on Recent Advancements In Materials Science" organized by the P.G & Research Department of Physics, The New College, Chennai on 21<sup>st</sup> January 2020. **(POSTER)**
8. "Novel transition bimetallic alloy loaded  $\text{BiVO}_4$  for photocatalytic degradation of MB dye by the visible light irradiation" in the "5<sup>th</sup> **International** Conference on Nanoscience and Nanotechnology" organized by Department of Physics and Nanotechnology, SRM University on 28<sup>th</sup> -30<sup>th</sup> January 2019. **(POSTER)**
9. "Enhanced photocatalytic activity and inhibition of photocorrosion of ZnO by doped with fullerene  $\text{C}_{60}$  via hydrothermal method" in the "**International** Seminar on Advanced Nanomaterials" organized by National Centre for Nanoscience and Nanotechnology, University of Madras on 27<sup>th</sup> - 28<sup>th</sup> February 2018. **(POSTER)**
10. "Hydrothermal synthesis of  $\text{BiVO}_4$  photocatalysts from different precursors and their catalytic performances under the visible light irradiation" in the "4<sup>th</sup> **International** Conference on Nanoscience and Nanotechnology" organized by Department of Physics and Nanotechnology, SRM University on 09<sup>th</sup> -11<sup>th</sup> August 2017. **(POSTER)**
11. Hydrothermal synthesis of ethylenediamine passivated ZnO nanostructures and their photocatalytic activity" in the 1<sup>st</sup> **International** Conference on Emerging Trends in Nanoworld (ICETN 2017) organized by Vels University, Pallavaram, Chennai on 27<sup>th</sup> and 28<sup>th</sup> February 2017. **(ORAL)**
12. "Synthesis and Characterization of PVP passivated ZnO structures by hydrothermal method" in the **National** Symposium on Nano Science and Technology organized by Centre for Nano Science and Engineering, IISC Bangalore on 29<sup>th</sup> and 30<sup>th</sup> June 2016. **(POSTER)**
13. "Solvochemical synthesis of ZnO microstructures by using mixed solvent and their photocatalytic activity" in the 4<sup>th</sup> **National** Conference on Hierarchically Structured Materials organized by SRM University, Ramapuram Campus on 4<sup>th</sup> and 5<sup>th</sup> March 2016. **(ORAL)**
14. "Synthesis and Characterization of amine passivated ZnO nanostructures" in the 3<sup>rd</sup> **International** Workshop on Advanced Functional Materials organized by Centre for Nanoscience and Technology, Anna University, Chennai on 16<sup>th</sup> and 18<sup>th</sup> December 2015. **(ORAL)**
15. "Solvochemical synthesis of ZnO nanostructures and their photocatalytic activity" in the **National** Conference on Science and Technology for indigenous Development in India organized by Indian Science Congress Association (ISCA) – Chennai Chapter in association with SRM university, Kattankulathur on 26<sup>th</sup> – 28<sup>th</sup> November 2015. **(ORAL)**
16. "Hydrothermal synthesis of ZnO nanostructures and their photocatalytic activity" in the **International** Conference on Frontiers in Nanoscience, Technology and



*Applications organized by Sri Sathya Sai Institute of Higher Learning, Prasanthinilayam on 20<sup>th</sup> – 22<sup>nd</sup> December 2014. (POSTER)*

17. *“Hydrothermal synthesis of uncapped ZnO nanostructures” in the 2<sup>nd</sup> National Conference on Hierarchically Structured Materials organized by SRM University, Ramapuram Campus on 24<sup>th</sup> and 25<sup>th</sup> March 2014. (ORAL)*
18. *“Role of amine based solvent for the synthesis of ZnO Nanostructures using hydrothermal method” in the International conference on Advances in Civil Engineering and Chemistry of Innovative Materials organized by SRM University, Ramapuram Campus on 13<sup>th</sup> and 14<sup>th</sup> March 2014. (POSTER)*
19. *“Synthesis and Characterization of ZnO Nanostructures via hydrothermal method” in the International Conference on Emerging Frontiers and Challenges in Chemistry organized by All Saints’ College, Thiruvananthapuram on 17<sup>th</sup> and 18<sup>th</sup> February 2014. (POSTER)*

## **Workshops:**

1. *Two days National Level workshop on “Recent Trends and Opportunities in Physics” organized by the Department of Physics, School of Advanced Sciences, VIT-AP University, Andhra Pradesh on 10<sup>th</sup> and 17<sup>th</sup> April 2021.*
2. *Three days Online Workshop on “Rietveld Refinement Method” organized by UGC-DAE Consortium for Scientific Research, Mumbai Centre in association with Indore Centre during 22<sup>nd</sup> – 24<sup>th</sup> September 2020.*
3. *One day Pre-Conference International Workshop on “Ferroelectric & Piezoelectric Nanomaterials and Devices for Young Researchers” organized by the Department of Physics, School of Applied Sciences, Kalinga Institute of Industrial Technology, Bhubaneswar, Odisha on 26<sup>th</sup> August 2020.*
4. *Two day National online workshop on “Research Tools and Techniques for Materials Characterization” organized by the PG & Research Department of Physics jointly with Internal Quality Assurance Cell (IQAC), The Madurai Diraviyam Thayumanavar Hindu College, Tirunelveli on 31.07.2020 & 01-08-2020.*
5. *Two day National E - Workshop on “Virtual Labs in Physics and Electronics” organized by Aurora's Degree & PG College, Hyderabad on 3<sup>rd</sup> and 4<sup>th</sup> July 2020.*
6. *Six days International Virtual Workshop on “Smart Materials and Energy Devices” organized by the Department of Electronics & Communication Engineering, SSN College of Engineering, Chennai on 25<sup>th</sup> – 30<sup>th</sup> May 2020.*
7. *Two day National Virtual Workshop on “Advanced Materials Characterization Tools” organized by Research Institute, SRM Institute of Engineering and Technology, Kattankulathur on 20<sup>th</sup> and 21<sup>st</sup> May 2020.*
8. *One day National Virtual Workshop on “Enhancing Research Communication Skills*

through Science Direct and Mendeley” organized by Dayalbagh Educational Institute, Agra on 3<sup>rd</sup> May 2020.

9. Two day **National** workshop on “Advanced Characterization of Materials and Devices” organized by the Nanotechnology Research Center, SRM Institute of Engineering and Technology on 13<sup>th</sup> and 14<sup>th</sup> August 2019.
10. Two day **National** workshop on “Advanced Characterization of Materials and Devices” organized by the Nanotechnology Research Center, SRM Institute of Engineering and Technology on 13<sup>th</sup> and 14<sup>th</sup> August 2019.
11. Two day **National** workshop on “Materials Characterization” organized by the Department of Chemistry, SRM Institute of Engineering and Technology on 26<sup>th</sup> and 27<sup>th</sup> July 2018.
12. Two day **National** workshop on “Revealing the Advances in Material Science” organized by the Department of Physics, Sri Sairam Institute of Technology on 19<sup>th</sup> and 20<sup>th</sup> 2016.
13. One day **National** workshop on “Analytical Instrumentation Techniques” conducted by Science and Humanities Association in collaboration with the Indian Spectroscopy Association, St. Peter’s University, Chennai on 25<sup>th</sup> September 2015.
14. Three day workshop on “INUP Familiarization Workshop on Nanofabrication Technologies” organized by IIT Bombay on May 27<sup>th</sup> – 29<sup>th</sup> 2015.
15. Two day workshop on “Advanced Characterization Techniques of Materials” conducted by the Department of Mechanical Engineering, College of Engineering, Guindy on 23<sup>rd</sup> and 24<sup>th</sup> February 2015.
16. One day **National** workshop on “ Materials in Research and Development” organized by Department of Physics, Jeppiaar Engineering College, Chennai on 28<sup>th</sup> July 2014.
17. Two day workshop on “Materials Characterization Techniques” organized by the Department of Physics, SSN College of Engineering, Chennai on 3<sup>rd</sup> and 4<sup>th</sup> January 2014.
18. One day workshop on “Titanium Matrix Composites” organized by IIT Madras on 30<sup>th</sup> August 2013.
19. Two day workshop on “Introduction to Nanotechnology” organized by the Department of Electrical and Electronics Engineering, Regional Centre of Anna University, Tirunelveli on 8<sup>th</sup> and 9<sup>th</sup> March 2013.
20. One day **National** workshop on “Recent Trends in materials science” organized by the Department of Physics, Hindustan University, Chennai on 1<sup>st</sup> March 2013.
21. Two day workshop on “Advanced Analytical Techniques for Materials Characterization” organized by SRM University, Kattankulathur on 19<sup>th</sup> to 20<sup>th</sup> July 2011.

## **Attended in International / National Conferences:**

1. *One day **International** Conference on “Materials Science and Nanotechnology” organized by the Department of Physics, St. Joseph College of Arts and Science for Women, Salem on 28<sup>th</sup> February 2022.*
2. *Three days Indo-Norwegian **International** Online Conference on “Functional mAterials for eneRgy, environment, And biOmedical applicatioNs” “FARAON - 2022” organized by Institute for Energy Technology (IFE), University of Oslo (UiO), Norway and Madurai Kamaraj University (MKU) India during 02 - 04, February 2022.*
3. *Two days **National** Conference on “Materials for Energy and Environment” organized by the Department of Physics, Academy of Maritime Education and Training (AMET), Chennai on 27<sup>th</sup> and 28<sup>th</sup> January 2022.*
4. *One day **International Virtual Seminar** on “Design of Metallic Nanocomposites for Multifunctional Applications” organized by the Department of Chemical Engineering, SSN College of Engineering, Chennai on 14<sup>th</sup> May 2021.*
5. *One day **International Virtual Seminar** on “Advances in Chemical Sciences” organized by PG & Research Department of Chemistry, Vivekanandha College of Arts and Sciences for Women, Elayampalayam, Tiruchengode on 8<sup>th</sup> March 2021.*
6. *Two day **International Virtual Conference** on “Physics of Solid State Materials” organized by the Department of Physics, St Aloysius College, Mangaluru on 2<sup>nd</sup> and 3<sup>rd</sup> September 2020.*
7. *Two day **International Virtual Conference** on “Advances in Functional Materials” organized by the Department of Physics, School of Applied Sciences, Kalinga Institute of Industrial Technology, Bhubaneswar, Odisha on 27<sup>th</sup> and 28<sup>th</sup> August 2020.*
8. *Two day **International Virtual Conference** on “Cutting edge Smart Materials & Nanotechnology” organized by the Department of Physics, Sadguru Gadage Maharaj College, Maharashtra on 20<sup>th</sup> and 21<sup>st</sup> August 2020.*
9. *Two day **International Virtual Conference** on “Modern Instrumental and Characterization Techniques in Applied Sciences” organized by MIET Kumaon Haldwani & Department of Chemistry, H.N.B. Govt. P. G. College, Khatima, Uttarakhand in collaboration with USERC DST Dehradun & Department of Chemistry, R.H. Govt. P. G. College, Kashipur, Uttarakhand, India on 5<sup>th</sup> and 6<sup>th</sup> July 2020.*
10. *Two day **International Virtual Seminar** on “Materials and their Applications” organized by the Department of Chemistry and Physics, SSM Institute of Engineering and Technology, Dindigul on 18<sup>th</sup> and 19<sup>th</sup> June 2020.*
11. *One day **National** Seminar on “New Engineering Materials and their Applications” organized by the Department of Physics, Valliammai Engineering College on 23<sup>th</sup> March 2019.*

12. One day "**National Seminar on Renewable Energy**" organized by the Department of Physics, Valliammai Engineering College on 10<sup>th</sup> March 2018.
13. Two day **International** conference on Mechanical, Materials and Manufacturing systems (ICMMMS'16) organized by the Department of Mechanical Engineering, Sri Sairam Engineering College, Chennai on 24<sup>th</sup> & 25<sup>th</sup> February 2016.
14. Two day **International** Indo – Sweden Clean Energy Symposium on Materials for Energy Harvesting and Storage organized by Centre for Clean Energy & Nanoconvergence (CENCON), Hindustan University on 21<sup>st</sup> – 22<sup>nd</sup> July 2015.
15. One day **National Seminar on "New Engineering Materials and their Applications"** organized by the Department of Physics, Valliammai Engineering College on 27<sup>th</sup> April 2015.
16. Three day "3<sup>rd</sup> **International** Conference on Nanoscience and Nanotechnology" organized by the Department of Physics and Nanotechnology, SRM University on 04<sup>th</sup> - 06<sup>th</sup> February 2015.
17. Two day "**National** Conference on Advanced Materials and its Applications" organized by the Department of Physics, Hindustan University, Chennai on 29<sup>th</sup> and 30<sup>th</sup> January 2015.
18. One day **CSIR sponsored the National Seminar on "Recent trends in Laser spectroscopy and its Applications"** organized by the Department of Physics, Sri Sairam Engineering College on 17<sup>th</sup> October 2013.

### **Attended FDP Program:**

1. One week **International** Online Faculty Development Program on Recent Research in Materials Physics and Nano Devices, organized by Department of Physics, Rajus' College, Rajapalayam from 21<sup>st</sup> – 25<sup>th</sup> November 2022.
2. One week **International** Online Faculty Development Program on Current Scenario in Advanced Material Research and Nanotechnology, organized by Department of Physics, Rajus' College, Rajapalayam from 14<sup>th</sup> – 18<sup>th</sup> November 2022.
3. One week National Institute of Technical Teachers Training and Research, Chandigarh and AICTE recognized Short Term Course on 2D Nanomaterials: Potential & Applications through ICT organized by Applied Science Department, Sathyabama Institute of Science and Technology, Chennai from 17<sup>th</sup> – 21<sup>st</sup> October 2022.
4. Eight days **International** Faculty Development Programme on "Foremost Frontiers of Materials Science" organized by the Department of Physics, Sathyabama Institute of Science and Technology, Chennai from 12<sup>th</sup> - 20<sup>th</sup> September 2022.
5. One week **International** Faculty Development Programme on "Recent Trends in Applied Physics" organized by the Department of Physics, Easwari Engineering College, Chennai from 25<sup>th</sup> - 30<sup>th</sup> July 2022.

6. One week **National** level Faculty Development Programme on “Tools and Techniques in Characterization of Compounds”, organized by CSIR – Central Electrochemical Research Institute, Karaikudi and Dr. Umayal Ramanathan College for Women, Karaikudi on 17<sup>th</sup> – 21<sup>st</sup> January 2022.
7. One week **International** level Faculty Development Programme on “Synthesis, Characterization and Applications of Novel Materials” organized by Department of Physics and Chemistry, Ramco Institute of Technology, Rajapalayam on 2<sup>nd</sup> - 6<sup>th</sup> August 2021.
8. Five days AICTE Training and Learning (**ATAL**) Academy Faculty Development program on “Smart Materials for Energy and Environment-An Experimental and theoretical Perspectives' ' organized by the Department of Chemistry, University College of Engineering Villupuram on 26<sup>th</sup> – 30<sup>th</sup> July 2021.
9. Five days Faculty Development program on “Inculcating Universal Human Values in Technical Education” organized by AICTE on 12<sup>th</sup> – 16<sup>th</sup> July 2021.
10. One week AICTE sponsored Short Term Training Programme (STTP) on “Emerging Trends in Nanomaterials for Electronic and Optoelectronic Devices” [Series III: Fabrication and Characterization of Optoelectronic & Photonic Devices] organized by Department of Electronics and Communication Engineering, Swarnandhra College of Engineering and Technology, Kakinada during 24<sup>th</sup> – 29<sup>th</sup> May 2021.
11. One week AICTE sponsored Short Term Training Programme (STTP) on “Emerging Trends in Nanomaterials for Electronic and Optoelectronic Devices” [Series II: Fabrication and Characterization of Nanoelectronic Devices] organized by Department of Electronics and Communication Engineering, Swarnandhra College of Engineering and Technology, Kakinada during 17<sup>th</sup> – 22<sup>nd</sup> May 2021.
12. One week AICTE sponsored Short Term Training Programme (STTP) on “Emerging Trends in Nanomaterials for Electronic and Optoelectronic Devices” [Series I: Synthesis and Functionalization of Nanomaterials] organized by Department of Electronics and Communication Engineering, Swarnandhra College of Engineering and Technology, Kakinada during 10<sup>th</sup> - 15<sup>th</sup> May 2021.
13. One day **National** level Faculty Development Programme on “Advanced Science and Technology” organized by Department of Physics, SRM Institute of Science and Technology, Ramapuram Campus, Chennai on 5<sup>th</sup> May 2021.
14. Five days AICTE sponsored QIP – Short Term Course on “Advanced Materials Characterization:From fundamentals toward Applications” organized by Department of Ceramic Engineering and Department of Metallurgical Engineering, Indian Institute of Technology (BHU), Varanasi during 22<sup>nd</sup> – 26<sup>th</sup> February 2021.
15. Five days AICTE Training and Learning (ATAL) Academy Faculty Development program on “Novel Materials” organized by the Nanotechnology Research Centre, SRM Institute of Science and Technology, Kattankulathur on 09<sup>th</sup> – 13<sup>th</sup> November 2020.

16. Five days AICTE Training and Learning (ATAL) Academy Faculty Development program on “Energy Storage and Conversion with Efficient Nanomaterials” organized by the Department of Nanoscience and Technology, Bharathiar University, Coimbatore on 05<sup>th</sup> – 09<sup>th</sup> October 2020.
17. Five days Faculty Development program on “Smart and Nanomaterials” organized by the Department of Physics, SRM Easwari Engineering College, Chennai on 14<sup>th</sup> – 18<sup>th</sup> September 2020.
18. Seven days Faculty Development program on “Smart Technologies for Drug Design, Energy and Environment” organized by the Department of Science and Humanities (Chemistry), Kumaraguru College of Engineering, Coimbatore on 1<sup>st</sup> - 7<sup>th</sup> September 2020.
19. Three days Faculty Development program on “Recent Trends in Physics” organized by the Department of Science (Physics & Chemistry), St. Joseph’s College of Engineering, Chennai on 31<sup>st</sup> August - 2<sup>nd</sup> September 2020.
20. One week Faculty Development program on “Contemporary Amelioration of Nanostructured materials” organized by the Department of Physics and Chemistry, Jeppiaar Engineering College, Chennai on 21<sup>st</sup> - 27<sup>th</sup> August 2020.
21. Two weeks Faculty Development program on “Materials Science and Nanotechnology” organized by the Department of Chemistry, B.S.Abdur Rahman Crescent Institute of Science and Technology, Chennai on 3<sup>rd</sup> - 17<sup>th</sup> August 2020.
22. Five days Faculty Development program on “Advanced Materials for Energy Storage Applications” organized by the Department of Physics, Velammal Institute of Technology, Chennai on 18<sup>th</sup> - 22<sup>nd</sup> July 2020.
23. One day Faculty Development program on “Virtual Learning Platform for Experimental Science” organized by the Department of Physics, A.P.C. Mahalaxmi College for Women, Thoothukudi on 2<sup>nd</sup> July 2020.
24. Three days Faculty Development program on “Physics trends in Technology and Research” organized by C. Abdul Hakeem College of Engineering and Technology, Vellore on 26<sup>th</sup> - 28<sup>th</sup> June 2020.
25. Two day Faculty Development program on “Materials Science” organized by Thanthai Hans Roever College, Perambalur on 27<sup>th</sup> and 28<sup>th</sup> May 2020.
26. One week Faculty Development program on “Nanomaterials for Energy Harvesting and Biomedical Applications” organized by Godavari Institute of Engineering and Technology, Andhra Pradesh on 18<sup>th</sup> - 22<sup>nd</sup> May 2020.
27. Two day Faculty Development program on “Research trends in Nanoscience” organized by R.M.D Engineering College, Chennai on 13<sup>th</sup> and 14<sup>th</sup> May 2020.
28. Two day Faculty Development program on “NEXTGEN Teaching methodology” organized by Sri Sai Ram Engineering College on January 20<sup>th</sup> & 21<sup>st</sup> 2018.

29. *Two day Faculty Development Program on “Characterization of Materials” organized by the Department of Physics, Sri Sairam Institute of Technology on 20<sup>th</sup> and 21<sup>st</sup> July 2017.*
30. *Staff Development Program on “Recent Developments in Computing” organized by Department of Computer Science and Engineering Sri Sai Ram Engineering College on April 2010.*

### **Attended in International / National Webinars:**

1. *Attended one day **International** Webinar on Chemical Science for Sustainability organized by PG Department of Chemistry, Gonzaga College, Kathampallam, Krishnagiri on 19<sup>th</sup> October 2022.*
2. *Attended one day **National** Level Webinar on Frontiers in Functional Materials held Organized by PG Department of Chemistry in Marudhar Kesari Jain College for Women, Vaniyambadi on 11<sup>th</sup> October 2022.*
3. *Attended one day **National** webinar on Battery Materials organized by Department of Physics, St. Joseph University, Dimapur, Nagaland on 10<sup>th</sup> March 2022.*
4. *Attended one day **National** webinar on “Advanced Materials for Various Technological Applications” organized by the Department of Physics, Vel Tech Rangarajan Dr.Sagunthala R&D Institute of Science and Technology, Chennai on 7<sup>th</sup> October 2021.*
5. *Attended one day **National** webinar on “Understanding of Program Outcome, Program Specific Outcome and Course Outcome” conducted by S. T. Co-Op. Education Society’s Ltd. Science Senior College, Shahada , Dist.- Nandurbar on 9<sup>th</sup> June 2021.*
6. *Attended Two day **National** webinar on “Research Methodology” organized by the Department of Physics, Academy of Maritime Education and Training, Chennai on 28<sup>th</sup> -29<sup>th</sup> May 2021.*
7. *Attended **National** webinar on “Art of writing papers for highly indexed Journals” organized by the Department of Information Technology, Rathinam Technical Campus on 14<sup>th</sup> May 2021.*
8. *Attended **National** webinar on “ Synthesis of Nanocomposite Materials and Recent Applications” organized by the Department of Physics, JP Engineering College on 10<sup>th</sup> May 2021.*
9. *Attended **National** Webinar on "Outcome Based Teaching Learning Process in Technical Education" conducted by National Institute of Technical Teachers Training and Research, Chennai on 06<sup>th</sup> May 2021.*
10. *Attended **National** webinar on “Influence of Electromagnetic Theory in 5G Applications” organized by the Department of Electrical and Electronics Engineering, Sri Sai Ram Engineering College on 31<sup>st</sup> October 2020.*

11. Attended Three days **International** webinar on “Materials Science” organized by the Department of Physics, St. John’s College, Anchal, Kerala from 23<sup>rd</sup> – 25<sup>th</sup> September 2020.
12. Attended **National** webinar on “Great contribution of Physics to Chemistry and Life Sciences for structural Engineering: XRD” organized by the Department of Physics, C. Abdul Hakeem College of Engineering and Technology, Vellore on 10<sup>th</sup> September 2020.
13. Attended **National** webinar on “Current and Future aspects of Electro-organic Synthesis” organized by the Department of Physics, Saveetha Engineering College, Chennai on 7<sup>th</sup> September 2020.
14. Attended **International** webinar on “Nanotechnology” organized by the Department of Chemistry, Vignana Bharathi Institute of Technology, Hyderabad on 5<sup>th</sup> September 2020.
15. Attended **National** webinar on Plasma for Material Processing And Green Environment”  
organized by the Department of Physics, Guru Nanak College, Chennai on 5<sup>th</sup> September 2020.
16. Attended two days **National** webinar on “Research Methodology” organized by the Department of Physics, New College, Chennai on 2<sup>nd</sup> and 3<sup>rd</sup> September 2020.
17. Attended **National** webinar on “Visualizing Quantum Mechanics” organized by Edu-i-Academy on 30<sup>th</sup> August 2020.
18. Attended three day **International** webinar on “Synthesis, Characterization of Nano-materials and their Novel Applications” organized by the Department of Physics, Rajiv Gandhi University of Knowledge Technologies, Andhra Pradesh on 17<sup>th</sup> - 19<sup>th</sup> August 2020.
19. Attended one day **International** webinar on “Advances in Chemical and Material Sciences” organized by the Department of Chemistry and Association of Chemistry Teachers, Annamalai University, Chidambaram on 20<sup>th</sup> August 2020.
20. Attended one day **International** webinar on “Emerging Materials and Technology for Water Purification” organized by the Department of Physics in collaboration with IQAC, Jawaharlal Nehru College, Arunachal Pradesh on 12<sup>th</sup> August 2020.
21. Attended **National** webinar on “Cost effective Thin film technology for Environmental Application” organized by the Department of Physics, C. Abdul Hakeem College of Engineering and Technology, Vellore on 11<sup>th</sup> August 2020.
22. Attended **International** webinar on “Scientific Advancements on solutions and Testings in Industry” organized by the Department of Physics, University College of Engineering Nagercoil on 10<sup>th</sup> August 2020.



23. Attended **International** webinar on “Quantum materials and Nanoparticles for Advanced Applications” organized by the Department of Physics, Kamaraj College, Thoothukudi on 6<sup>th</sup> August 2020.
24. Attended **National** webinar on “Stochastic models of a Call Centre” organized by the Department of Mathematics in collaboration with Maths Club, Sri Sai Ram Engineering College, Chennai on 30<sup>th</sup> July 2020.
25. Attended **International** webinar on “Photocatalysts and Electrocatalysts” organized by the Department of Physics, Arul Anandar College, Madurai on 29<sup>th</sup> July 2020.
26. Attended **National** webinar on “Introduction to Nanotechnology and Nanomaterials” organized by the Department of Physics, Nehru Institute of Engineering and Technology, Coimbatore on 29<sup>th</sup> July 2020.
27. Attended **National** webinar on “Sensor materials and Applications” organized by the Department of Physics, B.S.Abdur Rahman Crescent Institute of Science and Technology, Chennai on 26<sup>th</sup> July 2020.
28. Attended **National** webinar on “Preparation methods and Deposition Techniques of Nanostructures” organized by the Department of Physics, National College, Tiruchy on 25<sup>th</sup> July 2020.
29. Attended **International** webinar on “Surface Analysis & Molecular Spectroscopy Characterization – An Introduction To Basics & Data Interpretation” jointly organized by Thermo Fisher Scientific and Department of Chemistry & Central Instrumentation Laboratory (CIL), Vels Institute of Science Technology and Advanced Studies (VISTAS), Chennai from 21<sup>st</sup> to 23<sup>rd</sup> July, 2020.
30. Attended **International** webinar on “Electrochemical Sensors and its Applications” organized by the Department of Physics, Sri Ramakrishna Institute of Technology, Coimbatore on 18<sup>th</sup> July 2020.
31. Attended **National** webinar on “Teach to Learn & Learn to Teach” organized by the Department of Physics, Jeppiaar SRR Engineering College, Chennai on 18<sup>th</sup> July 2020.
32. Attended **International** webinar on “Frontiers in Nanotechnology and its Applications” organized by the Department of Physics, St. Xavier's College, Tirunelveli on 15<sup>th</sup> July 2020.
33. Attended **National** webinar on “Magnetic Materials for Energy Storage Devices” organized by the Department of Physics, Dhaanish Ahmed Institute of technology, Coimbatore on 11<sup>th</sup> July 2020.
34. Attended **National** webinar on “Pytoremediation Technologies: An Overview” organized by the Department of Physics, A.P.C. Mahalaxmi College for Women, Thoothukudi on 11<sup>th</sup> July 2020.
35. Attended **International** webinar on “Time Resolved Raman Spectroscopy of Dynamically Shocked Materials” organized by the Department of Physics, Annai Vailankanni College of Engineering, Kanyakumari on 10<sup>th</sup> July 2020.

36. Attended **National** webinar on "Recent trends in Crystal Growth" organized by the Department of Physics, St. Xavier's College, Tirunelveli on 10<sup>th</sup> July 2020.
37. Attended **International** webinar on "Emerging Semiconductor Materials and its day-to-day Applications" organized by the Department of Physics, Sri Sarada College for Women, Tirunelveli on 9<sup>th</sup> July 2020.
38. Attended **National** webinar on "Spectroscopic Identification of Materials" organized by the Department of Physics, A.P.C. Mahalaxmi College for Women, Thoothukudi on 9<sup>th</sup> July 2020.
39. Attended **National** webinar on "Nano Carbon Molecules" organized by the Department of Physics, Perunthalaivar Kamarajar Institute of Engineering and Technology, Karikal on 4<sup>th</sup> July 2020.
40. Attended **International** webinar on "The Future of Digital Learning" organized by the Department of Physics, Immaculate College, Cuddalore on 3<sup>rd</sup> and 4<sup>th</sup> July 2020.
41. Attended **International** webinar on "Advanced Materials for Sustainable Development" organized by the Department of Physics, Kalasalingam Academy of Research and Education, Krishnankoil on 2<sup>nd</sup> and 3<sup>rd</sup> July 2020.
42. Attended **International** webinar on "Sample preparation for TEM and Data Analysis" Madurai Kamaraj University, Madurai on 30<sup>th</sup> June 2020.
43. Attended **National** webinar on "Future of Higher Education-Nine Mega trends" organized by ICT Academy on 30<sup>th</sup> June 2020.
44. Attended **International** webinar on "Research route from vertical Nanocomposites to Nanoporous Fibers" organized by the Department of Electrical and Electronics Engineering, Dr. M.G.R Educational and Research Institute, Chennai 26<sup>th</sup> June 2020.
45. Attended **National** webinar on "Recent Advancements in highly Fluorescent Carbon Quantum dots for Multi-Potential Applications" organized by the Department of Physics, Christian College of Engineering and Technology, Dindigul on 26<sup>th</sup> June 2020.
46. Attended **International** webinar on "Basics of IR and Raman Spectroscopy " organized by the Department of Physics, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore on 24<sup>th</sup> June 2020.
47. Attended **National** webinar on "Research and Innovations in Defence sectors" organized by R & D Sri Sai Ram Engineering College, Chennai 24<sup>th</sup> June 2020.
48. Attended **National** webinar on "Recent trends in Physics of Materials" organized by the Department of Physics, Pachaiyappa's College, Chennai 24<sup>th</sup> June 2020.
49. Attended **National** webinar on "Sharing the experiences of NAAC - Assessment & Accreditation Process" organized by IQAC cell, Dhaanish Ahmed College of Engineering, Chennai 24<sup>th</sup> June 2020.

50. Attended **International** webinar on “Nanomagnetism” organized by the Department of Physics, Vel Tech High Tech Dr.Rangarajan Dr.Sakunthala Engineering College, Avadi on 22<sup>nd</sup> and 23<sup>rd</sup> June 2020.
51. Attended **National** webinar on “An overview on characterization techniques of Crystal Growth” organized by the Department of Physics, Easwari Engineering College on 23<sup>rd</sup> June 2020.
52. Attended **National** webinar on “Innovation in Nanotechnology” organized by the Department of Physics, Jeppiaar SRR Engineering College, Chennai on 23<sup>rd</sup> June 2020
53. Attended **National** webinar on “Powder X-ray Diffraction patterns analysis using openwares” organized by the Department of Physics V.O.Chidambaram College, Thoothukudi on 22<sup>nd</sup> June 2020.
54. Attended **National** webinar on “Effective Virtual Classroom Teaching for Teachers” organized by Science Club, Sri Sai Ram Engineering College, organized by the Department of Physics, Chennai on 19<sup>th</sup> June 2020.
55. Attended **National** webinar on “Magnetocaloric Materials - Advanced Materials for Magnetic Cooling” Hindustan College of Engineering and Technology, Coimbatore on 19<sup>th</sup> June 2020
56. Attended **International** webinar on “Functional properties and Bandgap Engineering of ZnO-GaN Alloys” organized by the Department of Physics, Jayaraj Annapackiam College for Women, Coimbatore on 8<sup>th</sup> June 2020.
57. Attended **National** webinar on “Hybrid Nanocomposites for Energy Storage” organized by the Department of Physics, RVS Technical Campus, Coimbatore on 4<sup>th</sup> June 2020.
58. Attended **National** webinar on “Recent trends in Materials Science and Training on Related Software Tools” organized by the Department of Physics, Stella Maris College, Chennai on 1<sup>st</sup> - 3<sup>rd</sup> June 2020.
59. Attended **National** webinar on “Waste Water Treatment” organized by the Department of Chemistry, St. Joseph's Institute of Technology, Chennai on 30<sup>th</sup> May 2020.
60. Attended **National** webinar on “Molecular level Investigations on Organic Materials” organized by the Department of Physics, S.T. Hindu College, Nagercoil on 29<sup>th</sup> May 2020.
61. Attended **National** webinar on “Electron Microscopy: An essential tool for Nanomaterials Characterization” organized by the Department of Physics, Hindustan College of Arts and Science, Coimbatore on 29<sup>th</sup> May 2020.
62. Attended **National** webinar on “Advances in Materials Science” organized by the Department of Physics, Ethiraj College, Chennai on 29<sup>th</sup> May 2020

63. Attended **International** webinar on “MRI and Raman Spectroscopy” organized by the Department of Physics, Arulmigu Palaniandavar Arts College, Palani on 27<sup>th</sup> and 28<sup>th</sup> May 2020.
64. Attended **National** webinar on “Moodle LMS - Install, Create class, Add content and Enroll students” organized by the Department of Physics, Ethiraj College, Chennai on 28<sup>th</sup> May 2020.
65. Attended **National** webinar on “Art of Drafting Research Article” organized by the Department of Physics, K.Ramakrishnan College of Technology, Tiruchy on 25<sup>th</sup> June 2020.
66. Attended **National** webinar on “Research Paper Writing for Scientific Journals” organized by the Department of Mechanical Engineering, Kalaignar Karunanidhi Institute of Technology, Coimbatore on 22<sup>nd</sup> May 2020.
67. Attended **National** webinar on “Supercapacitors: New Age Energy Storage Devices” organized by the Department of Physics, Ayya Nadar Janaki Ammal College. Sivakasi on 19<sup>th</sup> May 2020.
68. Attended **National** webinar on “Satellites shaping the future of students” organized by the Department of Physics, Saveetha Engineering College, Chennai on 18<sup>th</sup> May 2020.
69. Attended **National** webinar on “Thin films and its Applications” organized by the Department of Physics, Sathyabama Institute of science and Technology, Chennai on 17<sup>th</sup> May 2020.
70. Attended **National** webinar on “ Stay Healthy and keep fit during Lockdown” organized by Tamilnadu Physical Education and Sports University, Chennai on 14<sup>th</sup> – 16<sup>th</sup> May 2020.
71. Attended **National** webinar on “The Future of Skills - Education, Employment and Entrepreneurship” organized by Season 5 Skycampus ICT Academy 13<sup>th</sup> May 2020
72. Attended **National** webinar on “R & D Proposal Writing for Faculties” organized by the Department of Mechanical Engineering, Sri Sai Ram Engineering College, Chennai on 12<sup>th</sup> June 2020.
73. Attended **National** webinar on “Intellectual Property Rights and Patent Practices in India - Innovation & Research into Patents” organized by the Department of Mechanical Engineering, Sri Sai Ram Institute of Technology, Chennai on 11<sup>th</sup> May 2020.
74. Attended **National** webinar on “Application of Natural Dyes” organized by the Department of Chemistry, Erode Sengunthar Engineering College on 11<sup>th</sup> May 2020.
75. Attended **National** webinar on “Crystallography and its Applications” organized by the Department of Physics, Er. Perumal Manimekalai College of Engineering, Hosur on 8<sup>th</sup> May 2020.

76. Attended **National** webinar on “How to get Published in Scientific Journal: From Research to Publication” organized by the Department of Mechanical Engineering, Sri Sai Ram Institute of Technology, Chennai 27<sup>th</sup> April 2020.

## **Online Certificate Courses:**

1. Completed Coursera online course of Air Pollution – a Global threat to our Health from University of Copenhagen on 7<sup>th</sup> August 2020.
2. Completed Coursera online course of Introduction to Molecular Spectroscopy from University of Manchester on 28<sup>th</sup> July 2020.
3. Completed Coursera online course of How Things Work: An Introduction to Physics from University of Virginia on 26<sup>th</sup> July 2020.
4. Completed Coursera online course of The Sustainable Development Goals – A global, transdisciplinary vision for the future from University of Copenhagen on 5<sup>th</sup> July 2020.
5. Completed Coursera online course of Introduction to Acoustics (Part 2) from Korea Advanced Institute of Science and Technology on 4<sup>th</sup> July 2020.
6. Completed Coursera online course of Beyond the Sustainable Development Goals (SDGs): Addressing Sustainability and Development from University of Michigan on 4<sup>th</sup> July 2020.
7. Completed Coursera online course of Create Informative Presentations with Google Slides from Coursera Project Network on 2<sup>nd</sup> July 2020.
8. Completed Coursera online course of Ferrous Technology I from Pohang University of Science and Technology on 1<sup>st</sup> July 2020.
9. Completed Coursera online course of Material Processing from Georgia Institute of Technology on 30<sup>th</sup> June 2020.
10. Completed Coursera online course of Ferrous Technology II from Pohang University of Science and Technology on 29<sup>th</sup> June 2020.
11. Completed Coursera online course of Materials Science: 10 Things Every Engineer Should Know from University of California on 28<sup>th</sup> June 2020.
12. Completed Guvi online course of Step into Robotic Process Automation on 3<sup>rd</sup> June 2020.
13. Completed Coursera online course of Introduction to Google Docs from Rhyme on 20<sup>th</sup> May 2020.
14. Completed Coursera online course of COVID-19: What You Need to Know from Osmosis on 10<sup>th</sup> may 2020.

15. *Completed Coursera online course of Spreadsheets for Beginners using Google Sheets from Rhyme on 9<sup>th</sup> May 2020.*
16. *Completed Coursera online course of Quantum Mechanics from University of Colorado on 5<sup>th</sup> May 2020.*
17. *Completed Udemery online course of Classical Physics: Journey through the Laws of the Universe on 31<sup>st</sup> March 2020.*
18. *Completed Udemery online course of Python for Data Science and Machine Learning Bootcamp on 14<sup>th</sup> November 2019.*