

# Curriculum Vitae

## **Dr. D. Vishnu Shankar,**

84, Aathukkalputhur,  
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Dharapuram-Taluk,  
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### **+Personal Details**

Date of Birth	September 07, 1985
Marital Status	Single
Gender	Male

### **+ Educational Qualifications**

- **Post-Doctoral Research Fellow** (BK21 Plus), Center for Nano-Wear, Department of Mechanical Engineering, Yonsei University, Seoul, South Korea (8<sup>th</sup> August 2016–31<sup>st</sup> August 2018), Advisors: **Professor Dae-Eun Kim**.
- **Doctor of Philosophy** (Ph.D - Physics), PSG College of Arts & Science, Coimbatore, Tamil Nadu-641014, INDIA (October 2009–July 2015), Affiliated to Bharathiar University, Coimbatore, Tamil Nadu, INDIA.  
Research Supervisor: **Dr. V.Veeravazhuthi**  
Title: ‘Characterization, Tribological Behaviour and Biomedical Applications of RF Sputtered a-C:Me Coatings’
- **Master of Science** (M.Sc.) in Physics, PSG College of Arts & Science, Coimbatore, Tamil Nadu-641014, INDIA, Affiliated to Bharathiar University, Coimbatore, Tamil Nadu, INDIA (2007 – 2009).  
**Mark Scored: 64%**
- **Bachelor of Science** (B.Sc.) in Physics, Kongunadu Arts and Science College, Coimbatore, Tamil Nadu, INDIA, Affiliated to Bharathiar University, Coimbatore, Tamil Nadu, INDIA (2003 – 2006).  
**Mark Scored: 58.45%**

### **+ Research Experience**

- **Post-Doctoral Research Fellow** (8<sup>th</sup> August 2016 – 31<sup>st</sup> August 2018)  
Center for Nano-Wear, Department of Mechanical Engineering, Yonsei University, Seoul, South Korea.
- **Visiting Ph.D Fellow** (November 2012–February 2013)  
Center for Nano-Wear, Department of Mechanical Engineering, Yonsei University, Seoul, South Korea.



## **+ Teaching Experience**

- ❖ **Assistant Professor (Sr. Gr.)**, Department of Physics, PSG College of Arts & Science from 12<sup>th</sup> September 2018 to till date.
- ❖ **Assistant Professor**, Department of Physics, PSG College of Arts & Science from June 2016 to July 2016.
- ❖ **Assistant Professor**, Department of Physics, PSG College of Arts & Science from August 2015 to April 2016.

## **+ Awards and Prizes**

1. **Resource Person** in the “In-Service Training Programme for Science Teachers of Coimbatore District” Organized by PSG College of Arts & Science, Coimbatore from 18 – 22 February 2019
2. **Post-Doctoral Research Fellow** (BK21 Plus: 8<sup>th</sup> August 2016 – 31<sup>st</sup> August 2018), Center for Nano-Wear, Department of Mechanical Engineering, Yonsei University, Seoul, South Korea.
3. **Outstanding achievements** from 2012 to 2014, award for “Publications and Visiting Ph.D Student to Korea” during “Awards day” on 11<sup>th</sup> March, 2015 held at PSG College of Arts & Science, Coimbatore-14.
4. **Resource Person** in the “Young Student Scientists Programme” Sponsored by Tamil Nadu State Council for Science and Technology (TNSCST) Organized by PSG College of Arts & Science, Coimbatore, from 27<sup>th</sup> April to 11<sup>th</sup> May 2015.
5. **Resource Person** in the “INSPIRE Internship Science Camp” Sponsored by the DST, Organized by the Department of Biochemistry, PSG College of Arts & Science, Coimbatore, from 24<sup>th</sup> – 28<sup>th</sup> November 2015.
6. **Visiting Ph.D Fellow** (November 2012–February 2013), Center for Nano-Wear, Department of Mechanical Engineering, Yonsei University, Seoul, South Korea.

## **+ Research Interests**

-  Mechanical and tribological properties of amorphous metal-DLC coatings
-  Structural analysis of materials
-  Tribology of biomaterials

## **+ List of Patents**

1. Dae-Eun Kim, **Vishnu Shankar Dhandapani**, Kuk-Jin Seo, 금속함유DLC막및이의제조방법 (Diamond like carbon films implant metal and method for manufacturing the same) **Korean Patent** Registration No. 10-2081264 Dated: 19-02-2020.

## **+ List of Papers Published**

1. Mahdi Khadem, Oleksiy V. Penkov, Jibi Jais, Su-Min Bae, **Vishnu Shankar Dhandapani**, Bongchul Kang, Dae-Eun Kim, “Formation of discrete periodic nanolayered coatings through tailoring of nanointerfaces—Toward zero macroscale wear” **Science Advances** 7(47) (2021) eabk1224. Citations –01; Impact Factor – 14.136
2. **Vishnu Shankar Dhandapani**, Kyung-Mo Kang, Kuk-Jin Seo, Chang-Lae Kim, Dae-Eun Kim. “Enhancement of tribological properties of DLC by incorporation of amorphous titanium using magnetron sputtering process” **Ceramics International** 45 (2019) 11971-11981. Citations – 17; Impact Factor – 4.527
3. Elangovan Thangavel, **Vishnu Shankar Dhandapani**, Karthigaimuthu Dharmalingam, Mohana Marimuthu, Murugan Veerapandian, Madhan Kumar Arumugam, Sanghyo Kim, Byungki Kim, Subramaniyan Ramasundaram, Dae-Eun Kim. “RF magnetron sputtering mediated NiTi/Ag coating on Ti-alloy substrate with enhanced biocompatibility and durability” **Materials Science and Engineering: C** 99 (2019) 304-314. Citations – 10; Impact Factor – 7.328
4. **Vishnu Shankar Dhandapani**, Ramesh Subbiah, Elangovan Thangavel, Madhankumar Arumugam, Kwideok Park, Zuhair M Gasem, Veeravazhuthi Veeraragavan, Dae-Eun Kim. “Tribological properties, corrosion resistance and biocompatibility of magnetron sputtered titanium-amorphous carbon coatings” **Applied Surface Science** 371 (2016) 262-274. Citations – 47; Impact Factor – 6.707
5. R Sanjeev Kumar, V Veeravazhuthi, N Muthukumarasamy, M Thambidurai, **D Vishnu Shankar** “Effect of nickel doping on structural and optical properties of ZnS nanoparticles”, **Superlattices and Microstructures** 86 (2015) 552-558. Citations – 25; Impact Factor – 2.658
6. R Sanjeev Kumar, V Veeravazhuthi, **D Vishnu Shankar**, N Muthukumarasamy, M Thambidurai “Influence of cobalt concentration on structural and optical properties of ZnS quantum dots”, **Journal of Sol-Gel Science and Technology** 71(1) (2014) 152-158. Citations – 04; Impact Factor-2.326
7. **Vishnu shankar Dhandapani**, Elangovan Thangavel, Madhankumar Arumugam, Kwang Seon Shin, Veeravazhuthi Veeraraghavan, Su Yee Yau, Changlae Kim, Dae-Eun Kim. “Effect of Ag content on the microstructure, tribological and corrosion properties of amorphous carbon coatings on 316L SS” **Surface and Coatings Technology** 240 (2014) 128–136. Citations – 48; Impact Factor – 4.158
8. **V. S. Dhandapani**, D. E. Kim, K. H. Kang, K.J. Seo. “Mechanical and Tribological Properties of Metal-DLC Coatings”, **Korean Lubricant Society Conference**, 2018.04, 107.
9. **Vishnu Shankar Dhandapani**, K. M. Kang, K. J. Seo, D. E. Kim. “Tribological properties of carbon-based multilayer coatings”, **Korean Lubricant Society Conference**, 2017.10, 33.

10. S Kanimozhi, **Dhandapani Vishnushankar**, V Veeravazhuthi. “Structural properties of PbS nanoparticles Prepared by photo chemical synthesis”, **Advanced Materials Research 678 (2013) 136-139**. Citations – 02
11. K Kavi Rasu, **Dhandapani Vishnushankar**, V Veeravazhuthi. “Optical and structural properties of PVP/Bi<sub>2</sub>S<sub>3</sub> nanoparticles by chemical method”, **Advanced Materials Research 678 (2013) 248-252**. Citations – 01

#### **+ Papers Presented/Attend/ in National/International Conferences**

1. Participated in National IP literacy Week Organized under Kalam Program for IP Literacy and Awareness and Successfully Passed the Assessments for Sessions held from 15<sup>th</sup> to 23<sup>rd</sup> October 2020.
2. 2<sup>nd</sup> Korea-Tribology International Symposium (K-TRIB2020) Organized by Korean Tribology Society from November 29 – December 2, 2020. (**Presented One Papers**)
3. Participated in One Day Symposium on “An Overview of Revised NAAC Accreditation Process” Organized by PSG College of Arts & Science, Coimbatore, Tamil Nadu, India on 29 November 2019.
4. Participated in One Day Seminar on “Intellectual Property Rights” Organized by IPR Cell, Kovai Kalaimagal College of Arts and Science, on 28<sup>th</sup> September 2019.
5. Participated in One Day Regional Seminar on “IPR and Patents: Prospects and Challenges” Organized by Department of Zoology, Lady Doak College, Madurai, on 30<sup>th</sup> June 2019.
6. Participated in Three Day Workshop on “E-Content Development Organized by ICT Committee” Organized by PSG College of Arts & Science, Coimbatore, Tamil Nadu, India from 3 – 5 April 2019.
7. Short Term Course on “Intellectual Property Management of Academic & Research Institute (IPMARI 2019)” Organized by RGSOIPL, IIT Kharagpur, West Bengal with the Support of AICTE from 04 – 10 March, 2019.
8. 2018 Spring 65<sup>th</sup> Spring Conference, Korean Lubrication Society, Hanwha Resort Haeundae Valley Tivoli, April 26-27, 2018. (**Presented One Papers**)
9. International Conference on Nanomaterials for Frontier Applications, CIT, Coimbatore, INDIA, December 2 – 4, 2015. (**Presented One Papers**)
10. Participated in “One Day Science Symposium” held at Regional Science Centre, Coimbatore – 14, INDIA, November 18, 2015.
11. National Conference on Advanced Functional Materials (NCAFM-2014) Organized by Department of Physics, Bharathiar University, Coimbatore, INDIA, 31<sup>st</sup> January 2014. (**Presented One Paper**)
12. Participated in “Recent Trends and Development in Emerging Field of New Transparent Conductors and Device Applications Using Multidisciplinary approach” (RNTCDA-2012), Kongu Engineering College, Erode, INDIA, 19<sup>th</sup> June 2012

13. Participated in National Workshop on “Scientific/Research Paper Writing”, Organized by The National Academy of Sciences, INDIA (NASI), at Central Institute of Fisheries Education (CIFE), Mumbai, INDIA, June 08 – 10, 2012.
14. Participated in “Micro & Nanotechnology – Transforming the Market in Medical Applications” Kongu Engineering College, Erode, INDIA, May 18-19, 2012.
15. Participated in National Workshop on “Advance Instruments for Characterization” Organized by Department of Nanoscience and Technology, Bharathiar University, Coimbatore, INDIA, March 27<sup>th</sup> 2012.
16. International Conference on Recent Trends in Advanced Materials, VIT University, Vellore, INDIA, February 20 – 22, 2012. **(Presented One Paper)**
17. International Conference on Nanoscience and Nanotechnology, CIT, Coimbatore, INDIA, July 6 – 8, 2011. **(Presented Two Papers)**
18. Participated in “Second National Conference on Multifunctional Nanomaterials and Nanocomposites”, Organized by Department of Nanoscience and Technology, Bharathiar University, Coimbatore, INDIA, March 24-25, 2011.
19. Participated in National Workshop on “Nanomaterials in the Field of Engineering” Organized by Angel College of Engineering and Technology, P.K.Palayam, INDIA, March 06<sup>th</sup> 2010.
20. Participated in “National Conference on Multifunctional Nanomaterials and Nanocomposites”, Organized by Department of Nanoscience and Technology, Bharathiar University, Coimbatore, INDIA, February 4 – 5, 2010.

#### **+ Thesis Supervised**

S.No	Name	Title of Thesis	Course	Academic Year
1	S. Bagavathy	FTIR and XRD Analysis of Proton Conducting Bio-Polymer Electrolyte	M.Sc	2020-21
2	S. Umayal	Proton Conducting Polymer Electrolytes based on K-Carrageenan for Fuel Cell Applications	M.Sc	2020-21
3	K. Vishnu	Preparation and Conductivity Studies of Bio-Polymer K-Carrageenan with Magnesium Nitrate and Applications to its Electrochemical Studies	M.Sc	2020-21
4	G. Pavithra	Synthesis and Characterization of Magnesium Doped Tin Oxide Nanoparticles	M.Sc	2019-20
5	S. Praisudan	Synthesis and Characterization of Magnesium Doped Molybdenum Trioxide Nanoparticles	M.Sc	2019-20
6	V. Sreelakshmi	Synthesis and Characterization of Magnesium Doped Tungsten Trioxide Nanoparticles	M.Sc	2019-20
7	T. Kayathri	Optical and Structural Properties of Chemically Deposited SnS Thin Films by Varying Sulphur Concentration	M.Sc	2015-16
8	A. Sakthivel	Role of Mg on the Optical and Structural Properties of SnS Thin Films	M.Sc	2015-16
9	E. Sowndharya	Characterization of Potassium doped SnS Thin	M.Sc	2015-16

		Films by Chemical Bath Deposition		
10	M. Abishake, M. Aishwarya, A. Kathirvel	Charging a Mobile using DC Battery	B.Sc	2015-16

### **+References**

<b>Professor Dae-Eun Kim</b> Professor, School of Mechanical Engineering, Director, Center for Nano-Wear, Yonsei University, Seoul, South Korea Email: <a href="mailto:kimde@yonsei.ac.kr">kimde@yonsei.ac.kr</a> Cell : +82-10-93292822	<b>Dr.V. Veeravazhuthi,</b> Associate Professor & Head, Department of Physics, PSG College of Arts & Science, Coimbatore, Tamil Nadu- 641 014, India Email : <a href="mailto:vv.vazhuthi@gmail.com">vv.vazhuthi@gmail.com</a> Cell : +91-9159941065
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I hereby declare that all the information's given above are true to the best of my knowledge and belief.

Sincerely,  
Dr. D. Vishnu Shankar