

## SYAMLAL S K

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### ACADEMIC QUALIFICATIONS

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2016 July- 2018 May	<b>Master of Science in Physics</b> SRM Institute of Science and Technology, Tamil Nadu, India CGPA : 7.55/10
2013 July – 2016 April	<b>Bachelor of Science in Physics</b> University of Calicut, Kerala, India CGPA : 2.9/4
2011 June -2013 March	<b>Class XII</b> HSE Kerala Percentage : 72
2008 June – 2011 March	<b>Class X</b> SSLC Kerala Percentage : 71

### AWARDS AND ACHIEVEMENTS

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- Best project presentation award in SciConnect 2018 held on April 2018 at SRM Institute of Science & Technology.
- Fellowship for Japan-Asia Youth Exchange program in Science administered by Japan Science and Technology agency at National University Corporation Shizuoka University from September 10 to September 16 in 2017.
- Secured A grade in career-oriented course (UGC aided) in Electrical, Electronics and Instrumentation.

### PROJECTS

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- **Master's project ( June 2017- April 2018)**  
**Research Supervisor:** Dr. V. J. Surya, Research Assistant Professor, Department of Physics and Nanotechnology, SRM University Chennai.  
**Title: 'Understanding the solubility of selected gases with water molecules a First Principles investigation using Density Functional Theory (DFT)**

Hydration effect on certain gas molecules have been investigated using first principles DFT method. All the calculations has been carried out using GAUSSIAN 16 and VASP code. Calculations are carried out with different basis sets to study the interaction of these gas molecules with water molecules. The intermolecular interactions are revealed from the interaction energies, density of states and charge transfer calculations. This study has helped to understand the structural, chemical and electronic properties of hydrated gas molecules. Also, these investigations have given a theoretical insight on how gases will interact with water vapour in the atmosphere. Scientific article with the obtained results has been communicated for publication.

- **Bachelor's Project (Dec 2015- April 2016)**

**Research Supervisor:** Prof. Dr. T Ramachandran, Head, Department of Physics, Zamorin's Guruvayurappan College, Kozhikode.

**Title: 'Emissivity of Different Metals Using Stefan's Radiation Law'**

Determine the emissivity of the metals Copper, Zinc, Aluminium and Silver by Measuring the surface temperature and atmospheric temperature using LM 35 Temperature Sensor. And compare emissivity predicted by Stefan's Radiation Law against observed emissivity.

### **LIST OF PRESENTATIONS**

- Participated in Oral Presentation in Research day 2018 on March 2018 at SRM Institute of Science & Technology.
- Participated in Poster Presentation on International Conference on Nanoscience and Nanotechnology (ICONN) on August 2017.
- Participated in Regional Conference on Science and Technology for national development conducted by Indian Science Congress Association (ISCA) on November 2016.
- Participated in National Seminar on Facets of Physics (UGC Sponsored) on 2013.

### **TECHNICAL SKILLS**

- **Programming language:** Python
- **Scientific Software:** VASP, Gaussian16 (DFT softwares), Gauss view 6.0.16, GaussSum 3.0, Material Studio 7.0, Vesta 3.4, Avogadro, OriginPro 8.0
- **Other major tools:** Microsoft Office, TeamViewer, PuTTY, WinSCP, Adobe Photoshop tools.
- **Operating systems:** WINDOWS, LINUX

## **REFEREES**

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- 1. Dr. V. J. SURYA**  
Research Assistant Professor  
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Kattankulathur, India  
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- 2. Dr. S. YUVARAJ**  
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- 3. Dr. MOHAMED AMEEN POYLI**  
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