

## **A JULIAT JOSEPHINE**

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### ***Objective***

I am dedicated to achieving academic excellence pursuing my personal and professional growth. I aim to enhance my leadership and communication skills through active participation in college organizations, contribute to the community through volunteer initiatives, and acquire new skills. Committed to nurturing strong relationships with my peers and faculty, I strive to create a supportive network and promote inclusivity. I aspire to teach and mentor the students, encouraging academic curiosity and personal development while sharing knowledge to contribute to the overall growth of our student community.

### ***Educational Qualification***

<b>Ph.D (Physics)</b> 2021	Bishop Heber College, Tiruchirappalli.
<b>B.Ed. (Physics)</b> First Class 76% 2008 – 2009	Chandra Chellapan College of Education, Namakkal.
<b>M.Phil. (Physics)</b> First Class with Distinction 83% 2007 - 2008	St. Joseph's College, Tiruchirappalli.
<b>M.Sc. (Physics)</b> First Class 73% 2005 - 2007	Bishop Heber College, Tiruchirappalli.

**B.Sc. (Physics)** Holy Cross College, Tiruchirappalli.  
First Class 71.85%  
2002 - 2005  
**12<sup>th</sup>** BHEL Matriculation Higher Secondary School,  
81% - 2002 Tiruchirappalli.  
**10<sup>th</sup>** BHEL Matriculation Higher Secondary School,  
64.72% - 2000 Tiruchirappalli.

### ***Academic Experience***

- ***Handled Science*** at Montfort School, CBSE, Thiruchirappalli during June 2008 – March 2009.
- ***Assistant Professor in Physics*** at Holy Cross College, Tiruchirappalli from January 2010 to till date.

### ***Roles & Responsibilities***

- Fine Arts Core Committee Member 2014-2016.
- Crossian Institute of Collaboration for Research in Sustainable Development (CICRSD) Member 2021 till date
- Institute Industry Cell Member 2024
- Institute Development Plan (Research) Member 2024

### ***Fields of Research***

- Materials Science – Nanomaterials and Thin films.
- Sol-gel and Co-Precipitation synthetic routes for applications in gas sensors, electrochromic devices, photocatalytic dye degradation and water splitting.
- Preparation of thin films using Spray pyrolysis and Nebulizer Spray pyrolysis.

### ***Summary of Research Publications***

- Publications – 7; Total Impact Factor: 14.607; Impact Factor range: 1.639 – 4.644; Citations – 137; h-index – 5; i10-index – 4.

### ***Research Papers Published***

1. C. Ravidhas, **A. Juliat Josephine**, P. Sudhagar, Anitha Devadoss, C. Terashima, K.Nakata, Akira Fujishima, A.Moses Ezhil Raj and C.Sanjeeviraja, “ Facile Synthesis of Nanostructured Monoclinic Bismuth Vanadate by Co-Precipitation Method: Structural, Optical and Photocatalytic Properties” *Materials Science in Semiconductor Processing*, **30 (2015) 343-351**.

**Impact Factor: 4.644**

2. C. Ravi Dhas, A. Jennifer Christy, R. Venkatesh, B. Anitha, **A. Juliat Josephine**, D. David Kirubakaran, D. Arivukarasan, P. Sudhagar, A. Moses Ezhil Raj and C. Sanjeeviraja, “CuInS<sub>2</sub> Layer Deposition Through Nebulizer Spray Technique for Solar Cell Fabrication”, *Recent Trends in Materials Science and Applications, Springer Proceedings in Physics*, **189 (2017) 451 - 464**.

**ISBN : 978-3-319-44889-3**

3. C. Ravi Dhas, R. Venkatesh, A. Jennifer Christy, D. Arivukarasan, B. Anitha, **A. Juliat Josephine**, D. David Kirubakaran, P. Sudhagar, A. Moses Ezhil Raj and C. Sanjeeviraja “Structural, Optical and Ethanol GasSensing Performance of Aluminium Doped Zinc Oxide (AZO) Thin Films by Nebulizer Spray Technique”, *Recent Trends in Materials Science and Applications, Springer Proceedings in Physics*, **189 (2017) 351 -365**.

**ISBN : 978-3-319-44889-3**

4. C. Ravidhas, D. Arivukarasan, R. Venkatesh, S. Esther Santhoshi Monica, **A. Juliat Josephine**, A. Moses Ezhil Raj, K. Ravichandran, C.Gopalakrishnan, C. Sanjeeviraja, "Substrate temperature induced (040) growth facets of nebulizer sprayed BiVO<sub>4</sub> thin films for effective photodegradation of Rhodamine B", *Crystal Research and Technology*, **54 (2018) 1700257**.

**Impact Factor: 1.639**

5. C. Ravidhas, D. Arivukarasan, R. Venkatesh, **A. Juliat Josephine**, K.C. Mercy Gnana Malar, S. Esther Santhoshi Monica, B.Subramanian, "Influence of precursor aging time period on physical and photocatalytic properties of nebulizer spray coated BiVO<sub>4</sub> thin films", *Solid State Sciences*, **92 (2019) 36-45**.

**Impact Factor: 3.400**

6. **A. Juliat Josephine**, Ravi Dhas C, R. Venkatesh, D. Arivukarasan, A. Jennifer Christy, S. Esther Santhoshi Monica, S. Keerthana, "Effect of pH on Visible- Light-Driven Photocatalytic Degradation of Facile Synthesized Bismuth Vanadate Nanoparticles". *Materials Research Express*, **7 (2020) 015036**.

**Impact Factor: 1.941**

7. D. Arivukarasan, C. Ravi Dhas, R. Venkatesh, S. Esther Santhoshi Monica, **A. Juliat Josephine**, K.C. Mercy Gnanamalar, B. Subramanian, "Template-Free and Cost-Effective Nebulizer Spray Coated BiVO<sub>4</sub> Nanostructured Thin Films for Photocatalytic Applications". *Applied Physics A* (2020) **126:86**.

**Impact Factor: 2.983**

**8.A. Juliat Josephine**, Ravi Dhas C, R. Venkatesh, D. Arivukarasan, A. Jennifer Christy, “Investigation of Bi/V Mole Ratio on structural, Optical and Photocatalytic Properties of BiVO<sub>4</sub> Nanoparticles by Co-precipitation Method”.

**Crystal Research and Technology** (Under communication)

***International/ National/State Level Paper Presentations***

<b>S.No</b>	<b>Name of the Paper</b>	<b>Name of the Conference</b>	<b>Place</b>	<b>Duration</b>
1.	Synthesis and optical characterization of nanostructured monoclinic Bismuth Vanadate powder by co-precipitation method	National Seminar on “Recent Trends in Crystal Growth and Nano Materials” (NSCGNM 2014) UGC in association with Indian Association for Crystal Growth	PG & Research Department of Physics, National College, Trichy	7 <sup>th</sup> – 9 <sup>th</sup> August 2014
2.	Synthesis and Properties of Bismuth Vanadate Nanoparticle for Visible – Light Driven Photocatalytic Degradation of Rhodamine B	“International Conference on Material Physics (ICOMP – 2018)”	PG & Research Department of Physics, Bishop Heber College, Tiruchirappalli	29 <sup>th</sup> January 2018
3.	Structural, Optical and Photocatalytic Properties of Synthesised Nanostructured Monoclinic Bismuth Vanadate by Co-Precipitation Method	“3 <sup>rd</sup> National Conference on Recent Trends in Nanomaterials and Thin Films Research (RTNMTR – 2018)”	PG & Research Department of Physics, A. Veeriya Vandayar Memorial Sri Pushpam College, Poondi, Thanjavur	9 <sup>th</sup> – 11 <sup>th</sup> January 2018

4.	Structural, Morphological, Optical and Photocatalytic Properties of Monoclinic Bismuth Vanadate Nanoparticles by Co-Precipitation Method	International Conference on Sustainable Energy Technologies – ISET - 2018	School of Physics, Bharathidasan University, Tiruchirappalli	27 <sup>th</sup> – 28 <sup>th</sup> June 2018
5.	Facile Synthesized Eco Friendly Bismuth Vanadate Nanoparticles for Photocatalytic Application	International Conference on Networking, Research and Innovation in Higher Education for a Sustainable Society: Challenges and	Holy Cross College, Trichy	25 <sup>th</sup> – 27 <sup>th</sup> July 2018
		Channels – ICNRI – 2018		
6.	Influence of pH on structural optical and photocatalytic properties of bismuth vanadate nanoparticles by co-precipitation method	INDIA-UK Joint Second International Conference On Advanced Nanomaterials for Energy, Environment, and Healthcare Applications (ANEH-2019)	Bishop Heber College, Trichy	4 <sup>th</sup> – 6 <sup>th</sup> February, 2019

***Conference/ Seminar / Workshop attended***

<b>S.No</b>	<b>Name of the Conference/ Seminar / Workshop</b>	<b>Place</b>	<b>Duration</b>
1.	Workshop-“Summer Research Training Programme”(SRTP – 2014)	PG & Research Department of Physics, Bishop Heber College, Trichy	21 <sup>st</sup> – 31 <sup>st</sup> May 2014

2.	Short term Programme on “Nano Structured Materials: Processing and Characterization”	Department of Physics, National Institute of Technology, Tiruchirappalli - 620015.	7 <sup>th</sup> - 8 <sup>th</sup> November 2014
3.	Workshop-“Summer Research Training Programme” (SRTP - 2015)	PG & Research Department of Physics, Bishop Heber College, Trichy	11 <sup>th</sup> - 18 <sup>th</sup> May 2015
4.	“International Seminar on Recent Challenges in Materials Science (RCMs - 2017)”	Sree Sevugan Annamalai College, Devakottai	15 <sup>th</sup> July, 2017
5.	National Workshop on Powder X-ray Diffraction and Data Analysis	PG & Research Department of Physics, Bishop Heber College, Tiruchirappalli	22 <sup>nd</sup> and 23 <sup>rd</sup> February 2018
6.	Workshop on Research Writing and Journal Selection Powered by Scopus	Holy Cross College (Autonomous) Tiruchirappalli.	28 <sup>th</sup> February 2022
6.	Online Workshop on Reorientating the Teaching - Learning Paradigm for the 21 <sup>st</sup> Century Classroom	Department of Biochemistry, School of Chemical Sciences, St. Joseph’s University, Bengaluru, Karnataka, India	5 <sup>th</sup> - 7 <sup>th</sup> July 2023

### ***Awards and Honors***

- Received award for cent percentage attendance at Holy Cross College, Trichy during 2010 - 2011.
- Received award for cent percentage attendance at Holy Cross College, Trichy during 2011 - 2012.
- Received Best Oral presentation of the paper entitled “*Structural, Optical and*

*Photocatalytic Properties of Synthesised Nanostructured Monoclinic Bismuth Vanadate by Co-Precipitation Method*", 3<sup>rd</sup> National Conference on Recent Trends in Nanomaterials and Thin Films Research (RTNMTR – 2018) held at PG & Research Department of Physics, A. Veeriyar Vandayar Memorial Sri Pushpam College, Poondi, Thanjavur during 9<sup>th</sup> - 11<sup>th</sup> January 2018.

### ***Conference Organized***

- Acted as an Organizing Secretary for an International Conference on Advances in Materials Sciences -2017 (ICAMS -2017) at PG & Research Department of Physics, Holy Cross College, Tiruchirappalli on 6<sup>th</sup> and 7<sup>th</sup> January 2017.
- Acted as an as an Organizing Secretary for an International Conference on Recent Advances in Physical Sciences (ICRAPS-2023) at PG & Research Department of Physics, Holy Cross College, Tiruchirappalli on 19<sup>th</sup> and 20<sup>th</sup> January 2024.

### ***Lectures Delivered / Judge***

- Delivered an invited talk in the “*Summer Training Programme on Materials Science (STMS-2019)*” at Bishop Heber College, Tiruchirappalli between 28 May, 2019 and 01 June, 2019.
- Acted as a Judge for the Documentary Competition on Life History of Indian Scientists, PG & Research Department of Physics, Holy Cross College, Tiruchirappalli on 28 February 2022.
- Acted as a Judge for the intercollegiate competition HYPHY 2023 “Flutter the Shutter”, PG & Research Department of Physics, Holy Cross College, Tiruchirappalli on 11<sup>th</sup> January 2023.
- Delivered an invited talk in the Community Organization Program on Mobile Addiction, Annai Illam, Ladies Hostel, Trichy on 29<sup>th</sup> January 2023.
- Acted as a Judge for the Soliloquy competition, PG & Research Department of



English, Holy Cross College, Trichy on 27<sup>th</sup> February 2023.

- Acted as a Judge for oral presentation competition in the International Conference on “Nanophotonics”, PG & Research Department of Physics, Holy Cross College (Autonomous), Trichy on 08<sup>th</sup> March 2023.
- Acted as a Judge for the Intra – Departmental Drawing Competition of Innovative Ideas for Go Green City, HCIICT and PG & Research Department of Physics, Holy Cross College (Autonomous), Tiruchirappalli on 11<sup>th</sup> August 2023.
- Delivered an invited talk on Career Guidance at BHEL Matriculation Higher Secondary School, Kailasapuram, Tiruchirappalli on 6<sup>th</sup> December 2023.
- Acted as a Judge for the Intra – Departmental Drawing Competition of Innovative Ideas for Go Green City, HCIICT and PG & Research Department of Physics, Holy Cross College (Autonomous), Tiruchirappalli on 11<sup>th</sup> August 2023.
- Acted as a Judge for the Intra – Departmental Activity on Sustainable Innovation: Balancing Profit and Planet, HCIICT and PG & Research Department of Physics, Holy Cross College (Autonomous), Tiruchirappalli on 19<sup>th</sup> July 2024.

### ***FDP Courses Attended***

- FDP course on “*Solar Photovoltaics Fundamentals, Technology and Applications*” through MOOCs mode, NPTEL – AICTE, Faculty Development Programme funded by the MoE, Govt. of India, during July – September 2022. (8 Weeks)
- National level online Faculty Development Program on Outcome Based Education, IPSR solutions limited, Internal Quality Assurance Cell (IQAC) of JPM Arts and Science College, Idukki, Kerala, 16<sup>th</sup> – 22<sup>nd</sup> February 2023. (1 Week)
- FDP course on “*Sensor Technologies: Physics, Fabrication and Circuits*” through MOOCs mode, NPTEL – AICTE, Faculty Development Programme funded by the MoE, Govt. of India, during July – September 2024. (8 weeks)

***Declaration***

I hereby declare that all the details furnished above are true to my knowledge.

Tiruchirappalli,

14.10.2024

yours faithfully,

**Dr. A. Juliat Josephine**