

Curriculum Vitae



Jorphin Joseph

Office:

Assistant Professor (June 2021-)
Department of Chemical Oceanography
School of Marine Sciences
Lakeside Campus
Cochin University of Science and Technology (CUSAT)
Phone: 0484-2663380(Office)
9495283270
E-mail: jorphin@cusat.ac.in
jorphinjoseph@gmail.com

Employment History:

Assistant Professor (Dec 2010-cont.) & HoD (June 2020-June 2021)
PG & Research Department of Chemistry,
Sacred Heart College (Autonomous), Thevara.
Kochi-682013
Kerala.

Education:

Raman Post-doctoral Fellow **(2014-15)**
Texas Materials Institute, University of Texas, Austin, US,
Field: Solid electrolytes for Li-S Batteries
Advisor: Prof. Arumugam Manthiram
Ph.D. National Taiwan University of Science & Technology, Taipei, Taiwan **(2006-2010)**
Field: Hybrid inorganic-organic membranes for fuel cell applications
Advisor: Prof. Bing Joe Hwang
M.Sc. Chemistry, University of Calicut, Kerala, India **(1999-2001)**
Specialisation: Environmental Chemistry
B.Sc. University of Calicut, India **(1996-1999)**
Major: Chemistry; Minors: Mathematics and Physics
B.Ed. University of Kerala, India **(2002- 2003)**
Major: Physical Sciences, Minor: Educational Psychology

Publications:

1. *Suppression of the polysulfide-shuttle behaviour in Li-S batteries through the development of a facile functional group on the polypropylene separator*
Xingwen Yu, **Jorphin Joseph**, Arumugam Manthiram
Materials Horizons (RSC), 2016, 3, 314-319
(ISSN: 2051-6355, Journal Impact Factor: 12.319)
2. *Polymer lithium-sulfur batteries with a Nafion membrane and an advanced sulfur electrode*
Xingwen Yu, **Jorphin Joseph**, Arumugam Manthiram
Journal of Material Chemistry A, 2015, 3, 15683-15691
(ISSN: 2050-7496, Journal Impact Factor: 11.301)
3. *Interpenetrating network-forming sulfonated poly (vinyl alcohol) proton exchange membranes for direct methanol fuel cell applications*
Chi-Yung Tseng, Yun-Sheng Ye, Kuei-Yu Kao, **Jorphin Joseph**, Wei-Chung Shen, John Rick, Bing-Joe Hwang
International Journal of Hydrogen Energy, Volume 36, Issue 18, September 2011, Pages 11936-11945
(ISSN : 0360-3199, Journal Impact Factor: 4.939)
4. *Tuning transport properties by manipulating the phase segregation of tetramethyldisiloxane segments in modified polyimide electrolytes*
Chi-Yung Tseng, Yun-Sheng Ye, **Jorphin Joseph**, Kuei-Yu Kao, John Rick, Shou-Ling Huang, Bing-Joe Hwang
Journal of Power Sources, Volume 196, Issue 7, 1 April 2011, Pages 3470-3478
(ISSN: 0378-7753, Journal Impact Factor: 8.247)
5. *Analysis of states of water in poly (vinyl alcohol) based DMFC membranes using FTIR and DSC*
Bing-Joe Hwang, **Jorphin Joseph**, Yu-Zhen Zeng, Chi-Wen Lin, Ming-Yao Cheng
Journal of Membrane Science, Volume 369, Issues 1-2, 1 March 2011, Pages 88-95
(ISSN: 0376-7388, Journal Impact Factor: 7.183)
6. *Phosphonic acid-grafted mesostructured silica/Nafion hybrid membranes for fuel cell applications*
Jorphin Joseph, Chi-Yung Tseng, Bing-Joe Hwang
Journal of Power Sources, Volume 196, Issue 18, 15 September 2011, Pages 7363-7371
(ISSN: 0378-7753, Journal Impact Factor: 8.247)
7. *Growing well-defined monodispersed silica in polyimide host membranes using a surfactant assisted sol-gel process*
Jorphin Joseph, Chi-Yung Tseng, Chun-Jern Pan, Hung-Ming Chen, Chi-Wen Lin, K. Chandrasekara Pillai, Bing-Joe Hwang
Polymer, Volume 51, Issue 24, 12 November 2010, Pages 5663-5668
(ISSN: 0032-3861, Journal Impact Factor: 4.231)

8. *Modifying microphase separation of PVA based membranes for improving proton/methanol selectivity*
Chia-Chin Shen, **Jorphin Joseph**, Yun-Chih Lin, Sheng-Horng Lin, Chi-Wen Lin, Bing Joe Hwang
Desalination, Volume 233, Issues 1-3, 15 December 2008, Pages 82-87
(ISSN: 0011-9164, Journal Impact Factor: 7.098)
9. *One-Step Synthesis of Nanocrystalline Ba(Sn_xTi_{1-x})O₃*
V. Kumar, **Jorphin Joseph**, I. Packia Selvam
Journal of the Ceramic Society of Japan, Vol. 113 (2005), No. 1324, 784-787
(ISSN: 0914- 5400, Journal Impact Factor: 1.067)

Conference Presentations:

1. Presented a paper in the **International Conference on Membranes, ICM 2013** held at Kottayam during 3rd to 6th October 2013. The conference was jointly organised by Centre for Environment Education and Technology (CEET) and Advanced centre for Environmental Studies and Sustainable development, Mahatma Gandhi University, Kottayam, Kerala.
“Probing the fuel cell relevant properties of the membranes using indicator dyes”
2. Presented a paper in the **National Conference CTric-2013**, organized jointly by the Department of Applied Chemistry-CUSAT and UGC in March 2013.
“Hybrid inorganic organic membranes based on soluble polyimides and silica for DMFC applications”
3. Presented a paper in the **International conference on Polymers on the frontiers of science and Technology (APA-2013)** held from 21-23 February, 2013 at Panjab University, Chandigarh, India.
“Synthesis and fuel cell relevant properties of polyimide-functionalised silica composite membranes”
4. Presented a paper in the **International Conference on Membranes: Environmental and biological applications (ICM-2011)** held in Kottayam in September 16-19th 2011.
“Composite Membranes Containing Functionalized Silica in Polyimide Matrix for DMFC Applications”
5. Presented a paper in the **4th National Conference (Taiwan) on Hydrogen Energy and Fuel Cells** held in Taipei in December 18-19, 2009.
“Hybrid inorganic-organic membranes based on soluble polyimides and silica: Physical characterization studies”
6. Contributing author of prize winning presentation in the **User’s meeting of National Synchrotron radiation Research Centre (NSRRC)**, Hsinchu, Taiwan in 2009.
“Realizing the enhanced reactivity towards CO electro-oxidation on Carbon supported Pd_{core}Pt_{shell} Catalyst by in situ electrochemical-FTIR”
7. Presented a poster in the **Fourth Conference of Aseanian Membrane Society: AMS4** held in Taipei in August 16-18, 2007

“PVA-based membranes for fuel cell applications: Preparation and characterization”

Awards and Honors:

- Travel Grant by French Embassy in India in 2018
- Raman Post-doctoral Fellowship 2014-15
- IASc-INSA-NASI Summer Research Fellowship-2012
- Taiwan Government Scholarship awarded by Ministry of Education, Taiwan (2006-2009).
- National Eligibility Test (University Grants Commission, UGC and Council for Scientific and Industrial Research, CSIR) for Lectureship 2002.

Training/ Projects undertaken in recent years:

1. Participated in five-day faculty enrichment programme on ‘Computational chemistry’ during 16-22 December, 2020.
2. Participated in five-day faculty enrichment programme on ‘Group theory and its applications in chemistry’ during 9-13 November, 2020.
3. Completed two-week faculty development programme on ‘Advanced concepts for developing MOOCs’ organised by Teaching Learning Centre, Ramanujan College, University of Delhi during 02-17 July 2020.
4. Completed one-week faculty development programme on ‘Development and Management of MOOCs and online courses using LMS-Moodle’ organised by Teaching Learning Centre, Guru Angad Dev, MHRD-PMMMMNMTT, Government of India during 30 June-4 July 2020.
5. Completed one-week faculty development programme on ‘Open Source Tools for Research’ organised by Teaching Learning Centre, Ramanujan College, University of Delhi during 08-14 June 2020.
6. Completed two-week online workshop on ‘Comprehensive e-learning to e-training guide for administrative work’ organised by Teaching Learning Centre, Ramanujan College, University of Delhi during 25 May-5 June 2020.
7. Participated in Refresher course in ‘Material Sciences’ organized by UGC-HRDC, Osmania University during 13-26 November 2019.
8. Participated in the Cyclic Voltammetry International School organized by University Paris Diderot, Paris, France during 9-13 April 2018.
9. Participated in Science Academies’ Refresher course on ‘Foundations of Physical Chemistry and its Applications’ during 15-30 December 2017.
10. Attended National workshop on ‘microscale techniques in experimental organic and physical chemistry’ organised by the Post Graduate Department of chemistry, St. Teresa’s college during 2, 3 November, 2017.
11. Attended a workshop on Research Based Pedagogy Training(RBPT) organised jointly by Department of Physics, Sacred Heart College, IISER Pune and the British Council during October 11 to 14, 2017.
12. Participated as a co-investigator in a major project entitled ‘Development of polymeric, acid doped porous PBI membranes for fuel cell applications’ funded

- by University Grants Commission, India with Prof. Tushar Jana, University of Hyderabad (MRP-MAJOR-CHEM-2013-37829) and completed.
13. Attended CEC Annual Workshop on Electrochemistry held at the University of Texas at Austin on 7 and 8 February, 2015.
 14. Attended a course on 'Electrochemistry Energy Materials' during the spring semester 2015 in the Department of Mechanical Engineering, University of Texas at Austin.
 15. Worked on a project as Summer Research Fellow on a project entitled "Preparation and characterization of polymer blends of polybenzimidazoles and polyimides" during April-May & November, 2012 under the supervision of Dr. Tushar Jana, University of Hyderabad.
 16. A minor research project has been approved by University Grants Commission (UGC) for the year 2011-2012(MRP(S)-1199/11-12/KLMG017/UGC-SWRO) and successfully completed.
 17. Participated in the National Workshop on the "Current trends in molecular modelling" organised by the Post Graduate department of Chemistry, Sacred Heart College, Thevara, on 1-3 March, 2011.

General Information:

Born in Thrissur, Kerala, India on 22.05.1979

Marital status : Married

Nationality : Indian

Languages Known : Malayalam, Hindi, Tamil, and English

January, 2022