



**ARULMIGU PALANIANDAVAR ARTS COLLEGE FOR  
WOMEN (AUTONOMOUS), PALANI  
STAFF-PROFILE**



<b>Name</b>	<b>Dr.S.PORCHELVI</b>
<b>Designation</b>	ASSISTANT PROFESSOR
<b>Department</b>	PHYSICS
<b>Qualification</b>	M.SC.,M.Phil.,B.Ed., Ph.D.,
<b>Year of Experience in Teaching/Research</b>	22 years
<b>Date of Joining</b>	11-10-2022
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<b>No. of Journal Published (International)</b>	09 (citation 13, h-index 1, iten-index-1)
<b>No. of Journal Published (National)</b>	-
<b>No. of Papers Presented (International Conference)</b>	10
<b>No. of Papers Presented (National Conference)</b>	06
<b>No. of Faculty Development Programme (FDP) Attended</b>	09
<b>No. of Workshops Attended</b>	06
<b>No. of Conferences Attended</b>	04
<b>No. of TNSCST Project Fund (For Students SPS Scheme) Received</b>	02
<b>Member of Editorial Board/ Reviewer Board if any</b>	-

## Educational Qualification

S.No	Degree	Subject	Year of completion	Name of the Institution/ University
1.	Ph.D	Physics	2018	Anna University
2	M.Phill	Physics	1999	U.D College, Trichy
3	B.Ed	Physics	1997	Government College of Education, Orathanadu.
4	M.Sc	Physics	1996	R.S. Government Arts College Thanjavur.
5	B.Sc	Physics	1994	K.N Government Arts College Thanjavur

## Teaching Experience

S.No	Designation	Name of the Institution	From	TO
1	Assistant Professor	Arulmigu Palaniandavar Arts College For Women, Palani	11.10.2022	Till date
2	Associate Professor & HOD	Sakthi College of Arts and Science for Women, Oddanchatram	13.06.2019	03.11.2021
3	Associate Professor	Sri Subramanya College of Engineering and Technology, Palani	18.07.2007	12.06.2019
4	Senior Lecturer	Ponnaiyah Ramajayam College Thanjavur	28.08.2000	18.05.2007

## Research Projects Guided:

UG	PG	M.Phill	Ph.D Registered	Ph.D Submitted	Ph.D Awarded
6	30	20	-	-	-

- ✚ TNSCST – Project fund received for PG project for 2021 -2022 Academic Year.
- ✚ TNSCST – Project fund received for PG project for 2019 -2020 Academic Year

## Areas of Expertise

- Material scientist experienced and expertise in
- ✚ Development of polymer electrolyte membrane for Fuel cell applications
- ✚ Organic-inorganic Nanocomposite materials
- ✚ Characterization of polymer electrolyte membranes
- ✚ Thin film coating and its characterization.

## Research Work involved

- ✚ Development of polymer blend membranes.
- ✚ Development of polymer nanocomposite membranes.
- ✚ Structural, functional and morphological study of various polymer electrolytes.
- ✚ Studies on Hydrolytic and Thermal stability of the membranes for Fuel cell Applications.
- ✚ Conductivity studies on polymer electrolytes at low to elevated temperatures.
- ✚ Nanocomposite materials for Fuel cell media.

## Papers Published in International Journals

1. G. Jeya Jothi, **S.Porchelvi**, G.Sophia, M.N.Jothi, 2021, ‘Comparison Between Variety Of Turmeric Brands By Using Silver Nanoparticle’, Wesleyan Journal Of Research, Vol.14 No1(XXXIII), pp 18-19.
2. **Porchelvi, S**, Kannan, R, Bahavan Palani, P, Sainul Abidin, K & Rajashabala, S 2017,‘High conductive proton exchange membrane (SPEEK/MMT) and its characterization’, Materials Research Innovation August 2017, Vol.23, Pg 33-38 (**Scopus ISSN 14328917 & AU, Annexure I, Impact Factor – 1.46**).
3. **Porchelvi, S**, Kannan, R, Rajashabala, S, Bahavan palani, P & Sainul Abidin, K , ‘Dielectric Dispersion and Relaxation Behaviour Of Synthesized Polymer Electrolyte Membrane For Electrochemical Applications’, International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056, vol. 04, Special Issue: 09 August 2017 Pg.62-65 (**Impact Factor – 5.181**).
4. **S. Porchelvi**, R. Kannan, S. Rajashabala, K.Sainul Abidin, “SPEEK based Hybrid Proton Conducting Membrane for Fuel Cell Applications “, International Journal of Advance

Engineering and Research Development ,Vol. 5, Special Issue 07, April-2018 (UGC Approved) ISSN- 2348-4470, **Impact Factor (SJIF): 5.71**

5. K. Sainul Abidin, R. Kannan, **S.Porchelvi**, P.Bahavan Palani, S.Rajashabala, “Polyimide based polymer electrolyte membranes containing polyrotaxane for direct methanol fuel cell applications”, International Journal of Advance Engineering and Research Development Volume 5, Special Issue 07, April-2018 (UGC Approved) (**Impact Factor (SJIF): 5.71**)
6. K. Sainul Abidin, R. Kannana, **S. Porchelvi** 2019, ‘Polyimide Based Polymer Electrolyte Membrane For Direct Methanol Fuel Cell Applications’, IJSRR, 8(2), 862-870.
7. V. Kirthika, **S. Porchelvi**, K. Pakiyaraj, K. Karthik, Preparation and Characterization of Al doped SnO<sub>2</sub> Nanocrystalline Thin Films by Spray Pyrolysis Technique, International Journal for Research in Applied Science & Engineering Technology (IJRASET) **ISSN: 2321-9653**; Pg.183-191, IC Value: 45.98; Vol.8 Issue II Feb 2020.
8. **S.Porchelvi**, R. Premila, R.Thenmozhi, S.Anitha, G. Jeyajothi, “Synthesis and characterization of polymer blend Membrane for Electrochemical Applications,” International Journal For Innovative Research In Multidisciplinary Field, Vol - 7, Issue - 1, Jan – 2021,pp175-180. **ISSN: 2455-0620 Impact Factor: 6.719**
9. R.Thenmozhi,K.Jayanthipriya, **S.Porchelvi**, G.Jeyajothi, “Green synthesis of silver nanoparticles from Jasminum multiflorum leaf extract and evaluation of antioxidant activity,” Journal of Applied Science and Computations, Vol 8, Issue -2, 2021, pp 46-54. **ISSN 0022-1945.**

## Papers Presented in National/International Conferences

1. **Porchelvi S**, Kannan R, Premila R, Sainul Abidin K, ‘Synthesis and characterization of SPEEK/ZrP Composite membrane for fuel cell application’ NCAM-2019 at Mother Teresa Women’s University, Kodaikanal on 20<sup>th</sup> September 2019.
2. **Porchelvi S**, Mohamedyousuf S, Veeravelmani S, ‘symmetric analysis of novel multilevel bridge inverter with fuel cell’ NCAES’19 at SNS college of technology, Coimbatore on 4<sup>th</sup> may 2019.
3. **Porchelvi S**, Kannan R, Sainul Abidin K, Rajashabala S, “Synthesis and Thermal Analysis of SPEEK based proton exchange membrane for fuel cell applications”, One day seminar on materials science and application NSMSA-2018, on 30<sup>th</sup> July 2018 at Mother teresa Women’s University, Kodaikanal.
4. **Porchelvi. S** , R.Kannan, S.Rajashabala, K. Sainul Abidin, “SPEEK based hybrid proton conducting membrane for fuel cell application”, International conference on momentous role of nano materials in Renewable energy devices (IC MNRE 2018), on 1<sup>st</sup> and 2<sup>nd</sup> March 2018 at Alagappa university, Karaikudi.
5. **Porchelvi S**, Kannan, R. Rajashabala, S. ‘Incorporation of Phosphotungstic acid with SPEEK base membrane for Fuel cell applications’ (ICONN 2017) 9-11 August 2017, SRM University, Chennai.
6. **Porchelvi S**, Kannan, R. Rajashabala, S. Bahavan Palani, P. Sainul Abidin, K. ‘Dielectric Dispersion and Relaxation Behaviour of Synthesized Polymer Electrolyte Membrane for Electrochemical Applications’ (ISMST – 2017)4<sup>th</sup> August 2017 at Mother Teresa Women’s University, Kodaikanal.

7. **Porchelvi S**, Kannan, R .Rajashabala, S. ‘Thermal, Morphological and conductivity study of synthesized polymer electrolyte membrane for Fuel cell applications, BRNS & CSIR Sponsored International conference on Energy Environment and Advanced Materials for a Sustainable Future (ICEEAMSF – 2017)23<sup>rd</sup> & 24<sup>th</sup> May 2017 at Kongu Engineering College Erode.
8. **Porchelvi S**, Bahavan Palani, P. Sainul Abidin, K. Kannan, R. Rajashabala, S. ‘Structural and Dielectric performance of polymer nanocomposite membrane for electrochemical applications’, International conference on Advanced Functional Materials and Applications (NCAFMA – 2017) March 30 & 31, 2017 at Kalasalingam University, Krishnankoil.
9. **Porchelvi, S.** Sainul Abidin,K. Bahavan Palani, P. Kannan, R. Rajashabala, S. Dielectric behavior of sulfonated poly (ether ether ketone) with Polymer blend nanocomposite for Direct Methanol Fuel Cell Applications, National conference on Materials Science & Technology (NCMST 2016), July 12-14 2016, IIST, Thiruvananthapuram.
10. **Porchelvi, S.** Kannan, R. Rajashabala, S. ‘Synthesis and characterization of polymer blend nanocomposite membrane for DMFC applications’, International Conference on Recent Innovations in Engineering, 2<sup>nd</sup> April 2016 at SSCET, Palani.
11. **Porchelvi, S.** Bahavan Palani, P. Kannan, R. Rajashabala, S. ‘Improvement on proton conductivity of polymer nanocomposite membrane for Direct Methanol Fuel cell Applications’, International conference on frontiers in Nanoscience & Nanotechnology (ICFNN- 2016), 26-28, FEB 2016 at SASTRA University, Thanjavur.
12. **Porchelvi, S.** Kannan, R. Rajashabala, S ‘Polymer blend nanocomposite membrane for fuel cell applications, National level seminar on The widening Horizons of Chemistry - III(TWHC – III-2015) 5<sup>th</sup> March 2015 at APA College, Palani.
13. Rajendran, S. Premila, R. **Porchelvi, S.** ‘TEQIP – II Sponsored National Conference on Advancement in Materials Science (AMS 2014), 26<sup>th</sup> & 27<sup>th</sup> September 2014 at CIT, Coimbatore.
14. **Porchelvi, S.** Kannan, R. Rajashabala, S. ‘Eco Friendly Energy’ State level seminar on Recent Trends in Material Science and Energy Science, 7<sup>th</sup> March 2014 at APA College, Palani.
15. **Porchelvi, S.** ‘Nanotechnology applications- Fuel cell’, National conference on Emerging Multidisciplinary Trends of Nanotechnology’ on 20<sup>th</sup> April 2013 at Fatima Michael College of Engg. & Tech., Madurai.
16. **Porchelvi, S.** ‘Renewable Energy system – Fuel Cell’, National Level Seminar on Energy and Nanotechnology on 12<sup>th</sup> April 2013 at APA College, Palani.

### Orientation/Refresher courses/other programmers & training:

S.No	Name of the course	Title	Organized by/sponsored by	DD/MM/YEAR
<b>Faculty Development Program (FDP) attended</b>				
1	<b>FDP</b>	NAAC Sponsored National level Seminar on Pedagogical Tools in Higher Education	M.V.M Government Arts College for Women, Dindigul	<b>30-31.01.2020</b>
2	<b>FDP</b>	Petroleum Conservation Research Association conducted	Ministry of Petroleum & Natural Gas Government of India at Sakthi College of Arts & Science for Women, Oddanchatram	25.01.2020
3	<b>FDP</b>	Women and Legal Rights	Mother Theresa Women's university, Kodaikana	16-20.06.2018
4	<b>FDP</b>	PH8151-Engineering Physics	Anna University, University College of Engineering –Dindigul	20-26.06.2018
5	<b>FDP</b>	Educating the Engineers	Sri Subramanya College of engineering and technology	01-04.12.2017
6	<b>FDP</b>	Bridge course on Physics	Centre for Faculty Development, Anna University, Chennai	20-21.06.2014
7	<b>FDP</b>	Material Science and Metallurgy	PSNA college of Engineering & Technology, Dindigul.	22-23.03.2011
8	<b>FDP</b>	Program in Entrepreneurship	Entrepreneurship Development Institute of India Regional Office, Bangalore.	23.11.1998 to 12.12.1998
9	<b>FDP</b>	Basics of Computer Science	Periyar Centenary Girls' Polytechnic college	14-19.09.1998
<b>Workshop and Conference attended</b>				
1	<b>Workshop</b>	Materials Characterization Techniques	Kalasalingam University, Krishnankoil.	09.01.2015

2	<b>National Conference</b>	Advancement in materials science	Coimbatore institute of Technology, Coimbatore.	26-27.09.2014
3	<b>Workshop</b>	Advanced Materials	Alagappa University, Karaikudi.	21.03.2014
4	<b>Workshop</b>	Advanced Materials for Engineering Application	Institute of Engineering and Technology, Pollachi.	2&3.11.2012
5	<b>Workshop</b>	Nano Science and Nano Technology	Sri G.V.G Visalakshi College for Women, Udumalpet.	07.03.2012
6	<b>Workshop</b>	advanced energy Materials	Alagappa University, Karaikudi	09-10.02.2012
7	<b>National Conference</b>	Recent Trends in Polymer Science & Technology	PSG College of Technology, Coimbatore.	26-27.08.2011
8	<b>National Seminar</b>	Application of Polymer Nanocomposite Materials in Various Fields	Kongu Engineering College, Erode.	16-07-2011
9	<b>National Conference</b>	Advanced Functional Materials and Applications	Kalasalingam University, Krishnankovil.	16-17.12.2011
10	<b>Workshop</b>	Recent trends in spectroscopy	P.R. College, Thanjavur.	11.10.2004

## Webinars & Quiz Attended

1. Online course on Geographical Information System on 28-09-2020 to 15-10-2020 conducted by Indian Institute of Remote Sensing (IIRS), ISRO.
2. Online Quiz on National Education Policy NEP 2020 on 27-09-2020 to 29-09-2020 at PSNA College of Engineering and technology, Dindigul.
3. Attended Physics talent quiz on 07-08- 2020 to 09-08-2020 at C.Abdul Hakeem College of Engineering and technology, Vellore.
4. National Level e- quiz on current affairs on 25-07-2020 at Sakthi College of Arts and Science for women, Oddanchatram.
5. E quiz on Tamil Sanga Elakkiyam on 25-07-2020 to 27-07-2020 at Sakthi college of Arts and science for women, Oddanchatram.
6. Online Quiz marathon on Poetry on 24-07-2020 at Sakthi College of Arts and Science for Women, Oddanchatram.
7. Webinar on Synthesis and characterization of Nano materials on 24-07-2020 at Sri Subrmanya College of Engineering and technology, Palani.
8. Online quiz of Tamil Elakkiyam thirananaravu thervu on 20-07-2020 to 22-07-2020 at Sakthi college of arts and science for women, Oddanchatram.

9. National Level Online quiz on Basics of Renewable Energy on 17-07-2020 to 20-07-2020 at Rajiv Gandhi University of Knowledge technologies, Andra Pradesh
10. Webinar on An Introduction to Patent and Career opportunities in IPR on 9-07-2020 at Seethalakshmi Ramaswami College, Thiruchirapalli.
11. Online E-quiz on Fundamental of Physics on 25-06-2020 to 29-06-2020 at M.V. Muthiah Governmnet arts college for Women, Dindigul.
12. Online quiz on Physics is fun on 19-06-2020 at St.Xavier's College, Palayamkottai
13. Online Galvano quiz on 09-06-2020 at Parvathys Arts and Science College, Dindigul.
14. Online Physics Quiz 2020 on 08-06-2020 to 10-06-2020 at Sree Sevugan Annamalai College, Devakottai.
15. E-quiz on day to day chemistry on 06-06-2020 at chemistry family, Thanjavur.
16. Online awareness quiz on COVID-19 the basics on 1-6-2020 to 3-6-2020 organized by Department of Chemistry PSNA College of Engineering and technology, Dindigul.
17. Online workshop on Materials science and Application on 29-05-2020 at Arulmigu Palani Andavar arts college for women, Palani.
18. E- quiz on General Physics on 29-05-2020 at C.Abdulhakeen College of Engineering and technology, Ranipet.
19. Online Quiz on General Awareness of NSS on 28-05-2020 at Shanmuga Industries Arts and science College, Tiruvannamalai.
20. International webinar on MRI & Raman Spectroscopy on 27-05-2020 to 28-05-2020 at Arulmigu Palani Andavar arts college for women, Palani.
21. Awareness quiz on your health your life on 26-05-2020 at Justice Basheer Ahmed Syeed College for Women, Chennai.
22. National Level E-quiz on impact of COVID-19 on Indian Economy on 23-05-2020 at M.V. Muthiah government arts college for women, Dindigul.
23. Webinar on Functional Novel Materials for electrochemical sensors and energy storage devices on 15<sup>th</sup> may 2020 at Thiyagaraj college, Madurai
24. Webinar on Micro & Nano Technology and its applications on 14-05-2020 at GTN arts College, Dindigul.
25. Webinar on Role of IQAC in higher Education Institutions on 05-05-2020 at Sri GVG Visalakshi College for Women, Udumalpet.
26. Online Teaching Aptitude Quiz at Adhiyaman Arts and Science college for Women, uthangarai.

## **Other Responsibilities Hold In Service (Current/Previous)**

1. **Organizer** for online Quiz on "Space Mission" as a remembrance of Fifth Death Anniversary of our Missile Man Dr.A.P.J Abdul Kalam from 27-29<sup>th</sup> July 2020.
2. **Co-ordinator** for Online Quiz Programme conducted on "Physics in Daily Life" from 3- 5<sup>th</sup> July 2020.
3. **Co-ordinator** for National Level Webinar on Fuel Cell Technology-Green Energy held on 15<sup>th</sup> July 2020.
4. **Guest speaker** about Fuel cells and its application on 04-10-2018 at Arulmigu Palani Andavar College of Arts and Culture, Palani.



5. **Guest Speaker** on the topic of “Green Energy device – Fuel Cell” on 05-12-2020 at Sri Adi Chunchanagiri Women’s College, Cumbum.
6. **Guest Speaker** on the topic of “Eco Friendly Device – Fuel Cell” on 23-06-2021 at Parvathy’s College of Arts and Science, Dindigul.
7. IQAC Cordinator at Sakthi arts and Science College for women, oddanchatram.