Dr Chithra P G

Professor of Chemistry

**ADDRESS & EMAIL**

Chithira, Priyadarsini Nagar 108(A)

II Mile stone, Kilikolloor P O, Kollam

chithrasumej@gmail.com

drchithrapg@sncwkollam.or g

**QUALIFICATION**

**MSc, MPhil, Ph.D**

**DATE OF JOINING 11.03.1997**

**EXPERIENCE IN YEARS**

**26 years 8 months**

**AREA OF SPECIALIZATION**

**Physical Chemistry**

# ADMINISTRATIVE DISTINCTION

* Research Committee Coordinator
* PG Admission committee convenor
* Library Advisory Committee member
* Head of the Department
* Member, Planning and Purchasing Committee
* Council Secretary

 **PRESENTATIONS**

* International seminar on Supra and nano chemistry of bio active molecules 2019-A novel sensor for ascorbic acid and uric acid based on Graphene-Chitosan composite .
* International seminar on advanced materials June2019-A novel voltammetric sensor for morphine detection based on electrochemically synthesized Poly(aminobenzenesulfonic acid)/Reduced graphene oxide

composite.

* International conference on energy and environment December 2019-Novel Enzyme Biosensor for catecholamines.
* Green approaches towards chemical synthesis-A novel electrochemical sensor based on copper-poly(alanine)film for the determination of morphine.
* 31st Kerala science congress 2019-A novel electrochemical sensor for the determination of morphine based on the conducting polymer poly (CTAB)/Graphene oxide nanocomposite.
* International conference on emerging frontiers and challenges in chemistry February2014-Thermal and ageing of maleated natural/organoclay nanocomposites.
* National seminar on Frontline approaches in material science and computational chemistry March2018-a)A review on green synthesis of nanoparticles. b)Strain sweep and cure characteristics of nitrile rubber/closite 30B nanocomposites.
* Green chemistry-Environmental and Economic benefits June 2014-Synthesis characterization and application of Sn (IV)phosphorous acid in the nano form.
* Electrosynthesis and catalytic properties of thin layered poly/Reduced graphene oxide nanocomposite, National seminar on “Recent research and developments in chemistry” 30 and 31st Oct.2018 , Department of Chemistry, B J M College Chavara.
* Palladium /Graphene composite-A platform for dopamine sensing , National seminar on “Recent research and developments in chemistry” 30 and 31st Oct.2018 , Department of Chemistry, B J M College Chavara.

# PARTICIPATION IN SEMINARS/ CONFERENCES/ WORKSHOPS

* Workshop on Practicals in Chemistry
* Theory and Applications of Fourier Transform Spectroscopy in Chemistry
* Regional workshop on Computer Applications in Chemistry
* National workshop on applications of computational chemistry in spectroscopy
* Lecture on Computational Chemistry
* G CHEM Paint training online seminar
* College level Training Programme in General Informatics
* Catalysis for Green Chemistry
* Advanced Polymer MaterialsParticipated in the Five day National E-workshop on ‘Advanced materials: Properties and Applications organised by NIT,Karnataka, Surathkal.
* UGC Sponsored Orientation Programme/ Refresher courses
* Completed one orientation course from 24-11-1999 to 21-12-1999.
* Participated in the Refresher course in Chemistry from 02-12-02 to 23-12-02
* Participated in the Refresher course in Chemistry from 03-09-2004 to 24-09-2004
* Participated in the Refresher course in Chemistry from 30-08-2007 to 20-09-2007.

## HRDC Courses attended other than Orientation and Refresher courses:

* Stimulating Teachers through advanced training programme (STAT) workshop for college teachers on chemistry materials. NIIST,TVM. 13.09.2010 to 17.09.2010. Govt of Kerala.
* Five day workshop on Restructuring of B.Sc.chemistry Programme. University Buildings TVM. 02.03.2009 to 06.03.2009. University of Kerala
* Familiarize teachers with the semesterization of the UG Programme under choice based credit and semester system. UGC-ASC,TVM. 5th and 6th August 2010. University of kerala

**PUBLICATIONS IN BOOKS OR JOURNALS**

1. Synthesis, Characterization and Application of Sn(IV) Phosphorous acid in the nano form , Chithra P G & Vijayalekshmi V ,International J of Engineering Research and Management,(2014) ,Vol-01 , Issue-09.
2. Synthesis Characterization and Application of nanodimensional silver tungstate,P G Chithra & Vijayalekshmi V, International J of Advance research in science and Engineering(2015)
3. Synthesis and characterization of Sn(IV)phenyl phosphonate in the nano form,Chithra sumej&Beena Raveendran,(2008)
4. Studies on the effect of Montmorillonite clay in combination with Graphene oxide on the properties of chitosan, Vijayalekshmi V&Chithra P G,Applied science and Advanced materialsInternational V.1(4-5) ,2015, 133-38.
5. Proton transport properties of tin phosphate,chromotropic acid anchored onto tin phoaphate and tin phenyl phosphonate,Chithra sumej,P P Sharmila,Nisha J Tharayil & S Suma,Bull.Mater.Sci (2013).
6. Parachlorophenol anchored tin antimonate- An Inorgano Organic ion exchanger for the separation of heavy metals like Bi(III) and Cu (II),P G Chithra, R Raveendran & B Beena, Desalination,(2008)
7. Optical Electrical and Structural studies of nickel-coblt oxide nanoparticles,Nisha J Tharayil,R Raveendran,Alaxender Varghese Vaidyan & P G Chithra,Indian J of Engineering & Materials Sciences (2008).
8. O-Chlorophenol anchored tin antimonate-An ion exchanger for the separation of heavy metals,P G Chithra & B Beena,Indian J of chemical technology,(2008).
9. Green synthesis Characterization and Cyclic voltammetric studies of nano Zinc oxide,Chithra P G & Vijayalekshmi V,International J of Engineering,Science & Mathematics,(2017). 10.Graphene oxide supported palladium nanoparticle as an electrochemical sensor for epinephrine,S.Renjini,Pinky Abraham,T.Jyotish Kumar, V Anithakumary & P.G Chithra,A I P Conference Proceedings,(2019).
10. Catalytic activity of [Cu(NH3)4]2+ sorbed on an inorgano organic ion exchanger -tin(IV) phenyl phosphonate,P.G Chithra & B Beena,Oriental J of Chemistry,(2007).
11. Analysis of Effluents discharged to Ashtamudi Lake from China clay Industries,Suma S, Manoj S V & Chithra P G,Analysis of effluents discharged to ashtamudi lake from china clay industries,(2012).
12. An Electrochemical sensor based on Electrodeposited CTAB Film on Glassy Carbon electrode for detection of Morphine,Pinky Abraham,S.Renjini,V Anithakumary & P G Chithra,Asian J of Chemistry,(2019).
13. A novel voltammetric sensor for morphine detection based on electrochemically synthesized poly (P-amino benzene sulfonic acid )/reduced graphene oxide composite,,Pinky Abraham,S.Renjini,T E Nancy Mary,V Anithakumary & P.G Chithra,A I P Conference Proceedings(2019).
14. A comparative study of catalytic activity of tin phosphate and tin phenyl phosphonate,Chithra P G & Beena B,Indian J of Chemical technology, (2008).
15. A comparative study of bronsted acidity of tin phosphate and chromotropic acid anchored tin phosphate, P G Chithra & Nisha J Tharayil,Oriental J of Chemistry,(2008).

17.[Cu(NH3)4]2+ SnP as a catalyst,Chithra P G,Nisha J Tharayil &Beena B,Indian J of chemical technology, (2009).

1. Green synthesis of ZnO/MgO nanocomposites and their optical studies,Chithra P G,Poornima Vijayan P,Vijayalekshmi V&Renjini S,IJAIS,(2021).
2. Nanocoatings: Universal antiviral solution against covid -19, P G Chithra, Pinky Abraham, Jesiya Susan George, Hanna J Maria, T Sreedevi & Sabu Thomas, Progress in Organic Coatings(2022), 163,106670
3. Integration of antifouling properties into epoxy coatings-a review, P Poornima Vijayan, K Formela, M R Saeb, P G Chithra & S Thomas, (2022), J of coatings technology and Research 19(1), 269-284.
4. Developments of current trends on Ion exchange materials,Poornima Vijayan P, Chithra P G,Anjana Krishna S V, Ansar E B & Jyothishkumar Parameswaranpillai,seperation and purification Reviews,(2022) , DOI : 10.1080/15422119.2022.2149413.
5. Fabrication and Electrochemical Investigation of RGO-NiO Nanocomposite electrodes for supercapacitor applications, Subramanian A P, Vidyadharan A K, Gopi C P, Orient J Chem ,2023, 39(4).

 **Book chapter published**

* + One Book chapter named Research Perspectives in Chemistry for sustainable development Published on 07-07-2020 Editors-Dr.Bindu Sharmila T.K, Dr.Sreesha Sasi,Dr.Smitha George.Publisher-Excel India - Photocatalytic decomposition of Malachite green in aqueous solutions under UV irradiation using natural rubber latex- Clay/TiO2 nanocomposites.

## Completed Research Projects

Completed two minor research projects of UGC and one student project of STEC. 1.Synthesis characterization and application of some nanomaterials .

1. Inorgano organic ion exchangers. 3.Green synthesis of nanometal oxides.

# MEMBERSHIP IN PROFESSIONAL BODIES

* + Executive member, ACT.
	+ P G Board of studies member

# RESEARCH OUTPUT

* + Approved Research Guide, University of Kerala
	+ No of PhD produced - 2

# CITATIONS AND INDEXING, IF ANY

**JOURNAL CITATIONS and INDEXING (h-INDEX)**

Scopus ID-23569227200 Orchid ID-0000-0003-1028-6252

<https://www.scopus.com/authid/detail.uri?authorId=23569227200>

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| Google scholar-<https://scholar.google.com/citations?user=92wuC8IAAAAJ&hl=en>**thttps://scholar.google.com/citations?hl=en&user=92wuC8IAAAAJ&view\_op=list\_works&sortby=title** |