



Name : **Dr. C. JAYAKUMAR**  
Designation and Affiliation : Teaching Fellow, Department of Applied Science and Technology  
Date of birth : 19/10/1971  
Permanent Contact Address : 1, Gopal Street, Vellachery, Chennai, India-600042  
E-Mail ID: c\_jayakumar73@yahoo.com

**Academic Qualification** :

	College Name	Area of Specialiazation	Year of passing	Marks Obtained
<b>Ph.D</b>	A.C.Tech, Anna University.	Mass Transfer	May 2012	-
<b>UG</b>	B.E.(Chemical Engineering ) Annamalai University.	Chemical Engineering	1991 - 1995	First Class
<b>PG</b>	M.Tech. A.C.Tech, Anna University.	Chemical Engineering	1995-1997	First Class

**Area of Research:**

**Research Projects:**

Funding Agencies	Title of the Project	Amount (Rs in Lakhs)	Status
-	-	-	-
-	-	-	-
-	Total		

**Post doctoral research / Ph.D /M.Tech / MS Guidance:**

**PDF** : -  
**Ph.D** : -

**Research publications:**

Category	Conferences	Journals
National	24	-
International	15	35

**Books:**

International publications : 2

**Patent:****Consultancy Assignments:**

Funding Agencies	Number of Projects	Amount (Rs in Lakhs)

**Administrative Experience:**

- Coordinator, Centre for Entrepreneurship Development, Anna University.

**Awards/Recognitions:**

"Best Paper Awards" given by Recent Advances in Chemical Engineering and Technology”  
Kochi, Kerala, March 2011 from Kochi, Kerala, India (2011).

**Membership in Professional**

Organization Indian Institute of Chemical Engineers (IChE) life member

Chief Guest Editor- Recent Trends in Chemical Sciences and Technology for World journal of Chemical Editorial Board Member

Journal of Critical Reviews. Editorial Board Member

Journal of Chemical and Pharmaceutical Research. Editorial Board Member

ASIO Journal of Engineering & Technological Perspective Research -ADVISORY BOARD MEMBERS

ASIO Journal of Engineering & Technological Perspective Research. Reviewer

World Journal of Chemical Education, USA. Editorial Team Members-

International Journal of Research and Review Editorial Board-

Editorial Board Members: Journal of Applied Science

Board member of International Research Journal of Modernization in Engineering Technology

Research Journal of Pharmacology and Pharmacodynamics (Editorial Member (Associate Editor)

International Journal on Research- Methodologies in Physics and Chemistry (IJRPC)-  
Editorial Board Member

(IJRDO)Journal of Biological Science International Association of Engineers (IAENG)-  
Member

International Journal of Engineering Research & Technology- Reviewer

International Research Journal of Innovations in Engineering and Technology-Editorial Board  
Member

American Journal of Chemical Engineering- Editorial Member.

## **TECHNICAL RESEARCH PUBLICATIONS**

1. ""Effect of hydrotropes on solubility and mass transfer coefficient of carotenoids"," presented in a International level conference on RACET-2011,, organized by The International Conference on "Recent Advances in Chemical Engineering and Technology", Kochi, Kerala, March 2011.
2. "Investigation on the mechanism of drug solubility through hydrotropes" presented in a International level conference on International Conference on "BIOENERGY, ENVIRONMENT & SUSTAINABLE TECHNOLOGIES - BEST 2013 , organised by Arunai Engineering College, Chennai, Tamilnadu , India from 27-Jan-2013 to 30-Jan-2013.
3. "Assessment and remediation of heavy metals in soil -" presented in a International level conference on International Conference on "BIOENERGY, ENVIRONMENT & SUSTAINABLE TECHNOLOGIES - BEST 2013, organized by Arunai Engineering College, Chennai, Tamilnadu, India from 27-Jan-2013 to 30-Jan-2013.
4. "Environmental applications of bio synthesized nano particles" presented in a International level conference on International Conference on "BIOENERGY, ENVIRONMENT & SUSTAINABLE TECHNOLOGIES - BEST 2013, organised by Arunai Engineering College, Chennai, Tamilnadu, India from 27-Jan-2013 to 30-Jan-2013.
5. "Statistical and artificial neural network for the determination of thermophysical properties of theophylline drug " presented in a International level conference on GLOBAL LEARNING CONFERENCE ON MOBILE COMPUTING, organised by

Department of Applied Science and Technology, A.C.Tech, Anna University, Chennai, India from 09-Feb-2017 to 10-Feb-2017.

6. "Production of Bio-Ethanol from the Ligno-Cellulosic Biomass Rice Straw" presented in a International level conference on CHEMCON-2017, organised by INDIAN INSTITUTE OF CHEMICAL ENGINEERS, HALDIA REGIONAL CENTRE & DEPARTMENT OF CHEMICAL ENGINEERING, HALDIA INSTITUTE OF TECHNOLOGY, HALDIA 721657, W, INDIA from 27-Dec-2017 to 30-Dec-2017.
7. On SALVATIO '18, International Conference on Energy, Environment and Industrial Safety (ICEEIS), organised by Department of Applied Science and Technology AC Tech, Anna University, Chennai, INDIA from 22-Feb-2018 to 23-Feb-2018.
8. "Remediation of Cr(VI) from waste water using biochar of indian grass" presented in a International level conference on ICCMES 2021, organised by KPR Institute of Engineering and Technology, Arasur, Coimbatore., India from 25-Mar-2021 to 26-Mar-2021.

## INTERNATIONAL JOURNALS

1. "Effective separation of petro products through Hydrotropy", Chem. Eng. Technol., Vol. 31, Issue 1, pp. 129-133 (2009).
2. "Effect of Hydrotropes on the solubility and mass transfer coefficient of methyl benzoate", Modern Applied science, Vol. 3, Issue 3, pp. 101-111 (2009).
3. "Hydrotropic study on furfural-comprehensive design expert plot", Modern Applied science, Vol. 3, Issue 4, pp. 117-130 (2009).
4. "Separation of a phenol/ o-chlorophenol mixture through hydrotropy", Chem. Engg Data., Vol. 54, pp. 1923-1926 (2009).
5. Jayakumar, C. and Nagendra Gandhi, N., "Thermodynamic study on hydrotropic aggregation behavior of benzamide.", J. Chem. Engg Data., published by ACS. Vol. 55, pp. 4362-4368, 2010. (2010).
6. "Separation of chemical products through hydrotropy", International Journal of Applied Science and Engg., Vol. 8, Issue 1, pp. 1-9 (2010).
7. "Effect of hydrotropes on solubility and mass transfer co-efficient of curcuminoids", Journal of Pharmacy Research, Vol. 3, Issue 9, pp. 2170-2171 (2010).
8. "Quantitative analysis of theophylline bulk sample using sodiumsalicylate

hydrotrope””, International Journal of Pharmacy and Pharmaceutical Sciences ., published by International Journal of Pharmacy and Pharmaceuti. pp. 124-125 (2010).

9. "Study on hydrotropy-petroleum and petrochemical products”, ", Petroleum Science and Technology, Vol. 29, pp. 337-348, (2011).
10. “Experimental evaluation of flutamide drug using sodium Salicylate hydrotrope”, International Journal of Institutional Pharmacy and Life Sciences, Vol. 2, Issue 5, (2012).
11. "Hydrotropic effect on solubility and mass transfer coefficient enhancement of cyclohexene”,", ", International journal of institutional pharmacy and life science;, Vol. 2, Issue 2, pp. 75-83 (2012).
12. “Quantitative spectrophotometric determination of phenytoin sodium tablets using sodium salicylate as hydrotropic solubilizing agent””, International Journal of Universal Pharmacy and Life Sciences, , Vol. 2, Issue 2, pp. 96-101, (2012).
13. “Quantitative analysis of famotidine bulk sample using sodium salicylate hydrotrope”. INTERNATIONAL JOURNAL OF INSTITUTIONAL PHARMACY AND LIFE SCIENCES, Vol. 2, Issue 2, pp. 98-103 (2012).
14. “Quantitative analysis of salbutamol bulk sample using nicotinamide hydrotrope”. ", International Journal of Pharmacy and Pharmaceutical Science Research, Vol. 2, Issue 1, pp. 16-19 (2012).
15. “Effect of Hydrotropes on Solubility And Mass Transfer Coefficient of 1, 2-Dichloroethane”.", International Journal of Chemical Science and Technology, Vol. 2, Issue 1, pp. 6-12 (2012).
16. ".“Enhancement of solubility and mass transfer coefficient of cyclohexane through hydrotropy”,", International Journal of Chemical and Analytical Science., Vol. 3, Issue 4, pp. 1348-1352 (2012).
17. “Extraction studies through hydrotropy – l-tyrosine”. ", Journal of Chemical Science and Technology, Vol. 29, Issue 2, pp. 13-19 (2012).
18. “Environmental toxicology-assessment and remediationof toxic metals in soil”. ", International Journal of Environmental Biology., Vol. 2, Issue 2, pp. 59-66 (2012).
19. “Effect of Hydrotropes on Solubility and Mass transfer Coefficient of Chlorobenzene ", Research Journal of Chemical Sciences, Vol. 2, Issue 8, pp. 9-13 (2012).

20. "Hydrotropic effect and thermodynamic analysis on the solubility and mass transfer coefficient enhancement of ethylbenzene", Korean Journal of Chemical Engineering, Vol. 30, Issue 4, pp. 925-930 (2013).
21. "Quantitative analysis of mebendazole bulk sample using sodium salicylate hydrotropic agent", International Journal of Current, Vol. 5, Issue 2, pp. 93-94 (2013).
22. "New quantitative estimation of famotidine using hydrotropic solubilizing agents", International Journal of Pharmacy and Pharmaceutical Science Research, Vol. 3, Issue 2, pp. 58-60 (2013).
23. "A REVIEW ON SOLUBILITY ENHANCEMENT USING HYDROTROPIC PHENOMENA", International Journal of Pharmacy and Pharmaceutical Sciences, Vol. 6, Issue 6, pp. 1-7 (2014).
24. "Solubility Enhancement of Theophylline Drug Using Mixed Solvency Approach", International Journal of Chemical Separation Technology, Vol. 1, Issue 2, pp. 1-4 (2015).
25. "Statistical and Artificial Neural Network for the Determination of Thermo-Physical Properties of Fomoditine Drug Using Mixed Hydrotrophy", International Journal of Chemical Engineering & Processing, Vol. 1, Issue 2, pp. 1-6 (2015).
26. "MODELING AND SIMULATION OF MULTICOMPONENT SYSTEM USING CHEMSEP", International Journal of Chemical Science and Technology, Vol. 7, Issue 1, pp. 7-13 (2017).
27. "OIL EXTRACTION FROM TRICHOSANTHES TRICUSPIDATA SEED USING CONVENTIONAL SOXHLET APPARATUS", Asian Journal of Chemistry, Vol. 21959, (2019).
28. "Thermodynamic Study On Hydrotropic Aggregation Behavior Of Mebendazole", International Journal of Research, Vol. 7, Issue 2, pp. Edupedia Publications Pvt Ltd (2020).
29. "A study on the extraction of bioactive compounds from Capparis zeylanica", AIP Conference Proceedings, Vol. 2225, Issue 70002, (2020).
30. "New Quantitative Technique for estimation of solubility of Theophylline using Hydrotropic Solubilizing Agents", Research J. Pharm. and Tech. , Vol. 14, Issue 2, pp. 1-4 (2021).

31. R. Padmanaban, M. Dharmendirakumar, C.Jayakumar, " An assessment of the Ground Water Quality of Madurai District in Tamil Nadu using the Neural Network", Solid State Technology, Vol. 64, Issue 2, (2021).
32. CHINNAKANNU JAYAKUMAR, REDDY PRASAD DONIPATHI MOGILI,VEERAMANI MANSA DEVI, GANESAN SURENDRAN, " Using the Artificial Neural Networks to Predict the Solubility Effects of Theophylline Drug in Hydrotropic Solutions", International Journal of Pharmaceutical Research, Vol. 13, Issue 2, pp. 2749-2757 (2021).
33. "Investigation of Solubility of Mebendazole Drug using Linear Prediction and Multilayer Feed Forward Neural Network", Indian Journal of Pharmaceutical Education and Research, Vol. 55, Issue 1, pp. 149-156 (2021).
34. S Karunakaran<sup>1</sup> , P Lineesh<sup>1</sup> , G Surendran , Saroj S Baral , S Kavitha and C Jayakumar, "Remediation of Cr(VI) from wastewater using biochar of Indian Grass", IOP Conf. Series: Materials Science and Engineering, Vol. 1145, pp. 1-10 (2021).
35. Emergency Response Plan for Methane and Chlorine with Dispersion Modelling Using CAMEO", International Journal of Occupational Safety and Ergonomics, (2021).

#### **Programme Attended:**

1. Participated in a National level workshop on "National level workshop on Process Simulation" organized by St.Joseph's College of Engineering, Chennai., India from 02-Aug-2005.
2. Participated in a National level workshop on "Indo-Europe workshop on recent developments in membrane technology for industrial applications (MEMSEP- 11)" organized by Department of Chemical Engineering, A.C.Tech, Anna University, Chennai., India from 10-Feb-2011 to 11-Feb-2011.
3. Attended a International level Short Course on "'Programme on Process Instrumentation Dynamics and Control'" organized by Department of Chemical Engineering, A.C.Tech, Anna University, Chennai., India from 29-Nov-2012 to 05-Dec-2012.
4. Attended a National level seminar on "Trends on water management'" organized by Department of Chemical Engineering, A.C.Tech, Anna University, Chennai., India from 13-Mar-2013.
5. Attended a International level Short Course on "'Programme on Process Instrumentation Dynamics and Control'" organized by Department of Chemical Engineering, A.C.Tech, Anna University, Chennai., India from 29-Nov-2013 to 06-Dec-2013.
6. Attended a International level Short Course on "'ENVIRONMENTAL SCIENCE AND

ENGINEERING" organized by Department of Applied Science and Technology", A.C.Tech, Anna University, Chennai., India from 11-Dec-2013 to 18-Dec-2013.

7. Participated in a International level conference on "RECENT TRENDS IN CHEMICAL ENGINEERING ". RTCE - 2014." organized by Department of Chemical Engineering, A.C.Tech, Anna University, Chennai., India from 25-Feb-2014 to 26-Feb-2013.

8. Participated in a National level conference on "RTCE-2014" organized by Department of Chemical Engineering, A.C.Tech, Anna University, Chennai., India from 25-Feb-2014 to 26-Feb-2014.

9. Attended a National level seminar on "CHENNAI WATER SUMMIT 2015" organized by Department of Chemical Engineering, A.C.Tech, Anna University, and Chennai., India from 15-Mar-2015.

10. Attended a International level seminar on "WORLD ENVIRONMENT DAY CELEBRATION 2015" organized by Department of Chemical Engineering, A.C.Tech, Anna University, Chennai., India from 06-Jun-2015.

11. Attended a International level Short Course on "THE STATE OF THE ART-ANALYTICAL INSTRUMENTS" organized by Department of Chemical Engineering, A.C.Tech, Anna University, Chennai., India from 26-Oct-2015 to 30-Oct-2015.

12. Attended a International level Short Course on ""PROCESS CALCULATIONS (FACULTY DEVELOPMENT TRAINING PROGRAMME) " " organized by Department of Chemical Engineering, A.C.Tech, Anna University, Chennai., India from 18-Jan-2016 to 25-Jan-2018.

13. Attended a National level seminar on "WORLD ENVIRONMENT DAY CELEBRATION - 2016" organized by Department of Applied Science and Technology", A.C.Tech, Anna University, Chennai., India from 16-Jun-2016.

14. Attended a National level Short Course on "Heat Transfer" organized by Department of Chemical Engineering, A.C.Tech, Anna University, and Chennai., India from 01-Nov-2016 to 08-Nov-2016.

15. Attended a National level seminar on ""Frontiers in Chemical Process Industries"" organized by Department of Applied Science and Technology AC Tech., Anna University & Indian Institute of Chemical Engineers, Chennai Regional Centre (IICHe-CRC), INDIA from 19-Mar-2018.

16. Attended a National level Short Course on "PROCESS CALCULATIONS (FACULTY DEVELOPMENT TRAINING PROGRAMME) " organized by Department of Applied Science and Technology,A.C.TECH, ANNA UNIVERSITY., India from 22-May-2018 to 29-May-2018.

17. Attended a International level seminar on "SUSSTAINABLE DEVELOPMENT AND



CLEAN TECHNOLOGIES" organized by CENTER FOR TECHNOLOGY DEVELOPMENT AND TRANSFER, INDIA from 03-Jul-2018.

18. Attended a National level seminar on "Bio-degradable Materials and Bio-Technology for Environmental protection in Chemical and Pharmaceutical industries." organized by The Institution of Engineers (India), India from 26-Oct-2018 to 27-Oct-2018.

19. Attended a National level seminar on "National Convention of Chemical Engineers and National Seminar on " organized by The Institution of Engineers (India), India from 26-Oct-2018 to 27-Oct-2018.

20. Attended a National level Short Course on "Emerging Trends and Advancements in Communication Systems-An Industrial Approach(FDP)" organized by ECE Department, SRM Institute of Science and Technology\_Ramapuram Campus, Chennai and Institution's Innovation Council (Ministry Of HRD Initiative ),G, India from 06-Jun-2020 to 12-Jun-2020.

21. Attended a National level seminar on "Department of Mechanical Engineering is organizing an Online webinar on the topic of "Opportunities in NONDESTRUCTIVE TESTING" " organized by ANAND INSTITUTE OF HIGHER TECHNOLOG, India from 06-Jun-2020.

22. Participated in a National level workshop on "RENEWABLE ENERGY SYSTEMS (FDP PROGRAMME)" organized by THE INSTITUTION OF GREEN ENGINEERS & PANIMALAR INSTITUTE OF TECHNOLOGY,CHENNAI,TAMIL NADU, INDIA from 08-Jun-2020 to 12-Jun-2020.

23. Attended a International level seminar on "international webinar on “Biomedical Applications of Colloidal Metal Nanoparticle" organized by Department of Physics, SRM Institute of Science and Technology, Ramapuram Campu, India from 10-Jun-2020.

24. Attended a National level seminar on ""Application ofComputational Fluid Dynamics (CFD) in Aeronautical & Aerospace Sector" organized by School of Aeronautics (Neemrana) (Webinar, Rajasthan,India from 12-Jun-2020.

25. Attended a National level seminar on " WEBINAR “DETERMINATION OF ENGINE OPERATING CONDITIONS USING AI AND MACHINE LEARNING" organized by DEPARTMENT OF MECHANICAL ENGINEERING,SRM Institute of Science and Technology, Ramapuram Campus., India from 09-Jul-2020.

26. Attended a National level seminar on "WEBINAR “Powder metallurgy and its Associated Manufacturing Techniques”" organized by Department of Mechanical Engineering in Association with Institution’s Innovation Council, SRM Institute of Science and Technology, Ramapuram Campus., India from 14-Jul-2020.

27. Attended a International level seminar on "webinar on "Teach to learn & learn to teach using neuro linguistics programming." organized by Science and Humanities Department ,JEPPIAAR SRR Engineering College,Chennai, India from 18-Jul-2020.

28. Attended a National level Short Course on "ENERGY STORAGE CHARACTERISTICS, SURFACE TREATMENT, DURABILITY, SUSTAINABILITY AND MICRO STRUCTURAL EVALUATION OF SMART AND PHASE CHANGE MATERIALS AND ITS APPLICATIONS" organized by Sri SAI RAM INSTITUTE OF TECHNOLOGY-DEPARTMENT OF MECHANICAL ENGINEERING(AICTE Sponsored ), India from 27-Jul-2020 to 01-Aug-2020.

29. Attended a National level Short Course on "AICTE Sponsored Online Short Term Training Programme on “Innovative Techniques for Sustainable Energy Development through Modeling of Mechanical Processes – (SERIES-I)”" organized by the Mechanical Engineering Department of K.L.N. College of Engineering, Pottapalayam,Sivgangai District, Tamilnadu. , India from 03-Aug-2020 to 08-Aug-2020.

30. Attended a International level Short Course on "3D Printing Technology and its software Tools (Faculty Development Program) " organized by Department of Mechanical Engineering and Department of Automobile Engineering, AIT - Acharya Institute of Technology,Bangalore., India from 05-Aug-2020 to 07-Aug-2020.

31. Participated in a International level conference on " Online Lecture on “PREDICTIVE CFD USING CONVERGE CFD SOFTWARE” " organized by Delivered by Convergent Science, Pune, and organized by the Department of Aerospace Engineering, SRM Institute of Science and Technology, Kattankulath, India from 11-Aug-2020.

32. Attended a National level seminar on " Webinar on Vegetation of Tropical Coastal Wetlands & its benefits" organized by CHENNAI RIVERS RESTORATION TRUST (Wholly owned by the Government of Tamil Nadu) Adyar Eco-Park, Dr. D.G.S Dinakaran Salai, Raj Annamalai Puram, Chennai, India from 24-Aug-2020.

33. Attended a International level Short Course on "Moodle Learning Management System " organized by Moodle Learning Management System organized by Centre for Faculty Development, Anna University, Chennai, India from 24-Aug-2020 to 28-Aug-2020.

34. Participated in a National level workshop on " Moodle LearningManagement System " organized by Centre for Faculty Development, Anna University,Chennai with course material provided by Spoken Tutorial Project, IIT Bombay.This training is offered , India from 24-Aug-2020 to 28-Aug-2020.

35. Participated in a International level conference on "Virtual international conference on surface chemistry-SUCH 2020" organized by Faculty of Science, Department of Chemistry, Annamalai University., India from 27-Aug-2020 to 28-Aug-2020.

36. Attended a National level seminar on "Process Design Engineering in oil and Gas Industry" organized by Department of Applied and Science and Technology ,A.C.Tech,Anna University SPE student Chapter, India from 29-Aug-2020.

37. Attended a International level seminar on "Application of ASPEN HYSYS in oil and gas industry" organized by AC Tech, Anna University,SPE Student Chapter., India from 13-Sep-

2020.

38. Attended a National level Short Course on "Demystifying Blockchain Technology & Cyber Security Threats: Issues and Challenges" organized by S.A. ENGINEERING COLLEGE, Thiruverkadu, Chennai - 600 07, India from 30-Nov-2020 to 05-Dec-2020.

39. Attended a National level Short Course on "Method of Analysis Smart Structures -Nonlocal Mechanics (AICTE Sponsored )" organized by Department of Mechanical Engineering, Indian Institute of Technology (BHU), Varanasi Varanasi 221005, UP, India, India from 01-Feb-2021 to 13-Feb-2021.

40. Participated in a International level workshop on "Research Innovation in Computer Vision" organized by Department of Computer Science and Engineering, Kings Engineering College ., India from 10-May-2021 to 14-May-2021.

41. Attended a International level seminar on "Solid State Drives" organized by MOHAMED SATHAK A J COLLEGE OF ENGINEERING, Chennai., India from 29-May-2021.

42. Attended a National level seminar on "International Webinar on Exploring Realtime Technology organized by Department of Electrical and Electronics Engineering," organized by MOHAMED SATHAK A J COLLEGE OF ENGINEERING, India from 31-May-2021.

43. Attended a International level Short Course on "Two-day FDP on Advances in Photonics and Fiber Optics Technologies" organized by THE INSTITUTION OF ELECTRONICS AND TELECOMMUNICATION ENGINEERS, IEEE PHOTONICS SOCIETY MADRAS CHAPTER, India from 21-Jun-2021 to 22-Jun-2021.

44. Participated in a International level workshop on "One week Online faculty Development Program on Modern Industrial Technology in Mechanical Engineering." organized by Department of Mechanical Engineering ADITYA ENGINEERING COLLEGE (AUTONOMOUS), ANDHRA PRADESH-533437, India from 02-Jul-2021 to 08-Jul-2021.

45. Attended a National level Short Course on "One Week Faculty Development Program on Recent Trends in Computations" organized by Department of Computer Engineering, Vishwakarma Institute of Technology, Pune, Maharashtra., India from 19-Jul-2021 to 24-Jul-2021.

### **Book chapter:**

1. "Enhancement of the Sparingly Soluble Drugs through Hydrotropic Phenomena" authored by Dr.C.Jayakumar and published by Akinik Publisher (RTCS-03-04), New Delhi.(2019).

2. ""Risk Assessment of Hazards Safety in Paper Mills" " authored by Dr.C.Jayakumar and published by AkiNik Publications , Delhi.(2019).

**Invited Lectures.** Delivered a Lecture on " ( ME6502-HEAT AND MASS TRANSFER)" in FACULTY DEVELOPMENT PROGRAM organized by

Department of Mechanical Engineering, Anna University,  
Kancheepuram, India (21-Jun-2015).