

## PROFILE

**Name** : M KANAGASABAPATHY  
**Email** : rrcmks@gmail.com  
**Mobile** : +91 9443862183



## ACADEMIC PROFILE

#	Degree	Institution	Awarded on	Rank
1.	<b>B.Sc.</b> (Chemistry)	A.J. College, Sivakasi Madurai Kamaraj University, Madurai	June 1990	III
2.	<b>M.Sc.</b> (Chemistry)		June 1992	II
3.	<b>M.Phil.</b> (Chemistry)		August 1993	I <b>Gold Medalist</b>
4.	<b>Ph.D.</b> (Industrial Chemistry)	<b>Central Electrochemical Research Institute,</b> Council for Scientific and Industrial Research Karaikudi.	July 2009	<b><u>Research Supervisor</u></b> <b>Dr. J. Sobha</b> Deputy Director Senior Principal Scientist EMFT Division, CECRI

## TEACHING PROFILE

#	Designation and Institution	Period of service
1.	Lecturer (SF), Department of PG Chemistry, S. V. N. College, Madurai.	01-10-1993 to 05-09-1996 (2 years and 10 months)
2.	Lecturer, Department of Chemical Engineering, Priyadarshini Engineering College, Vaniyambadi.	06-09-1996 to 16-11-1997 (1 year and 2 months)
3.	Lecturer, Department of Chemical Engineering, Mohamed Sathak Engineering College, Kilakarai.	17-11-1997 to 31-05-2007* (9 years and 6 months)
4.	Assistant Professor, Department of Chemistry, Rajapalayam Rajus' College, Rajapalayam.	13-06-2007 to till date

\*Pursued Ph.D. in Full-Time at EMFT, Central Electrochemical Research Institute, Karaikudi, between May 2004 to May 2007 and worked under part time.

## **RESEARCH PROFILE**

### **RESEARCH INTERESTS**

Electrochemical fabrication of nano films & electrodes for Hybrid Supercapacitors, Electrochemical sensors, Simulation of X-ray Diffraction and cyclic voltammograms, Arduino interfaced sensors.

### **RESEARCH PUBLICATIONS: Links to publications**

Google Scholar: <https://scholar.google.co.in/citations?user=dFLjzY4AAAAJ&hl=en>

ORCID ID: <https://orcid.org/0000-0003-4113-0701>

SCOPUS: <https://www.scopus.com/authid/detail.uri?authorId=6504710448>

### **PEER-REVIEWER IN RESEARCH JOURNALS**

- 1) Surface & Coatings Technology (Elsevier)
- 2) Journal of Electroanalytical Chemistry (Elsevier)
- 3) Advanced Theory & Simulations (Wiley-VCH)
- 4) Science of the Total Environment (Elsevier)

### **BOOKS PUBLISHED**

#### **1. Electrochemical Basics of Rechargeable Batteries: Technical approach**

ISBN: 978-1484047460      Publisher: CreateSpace, UK.      (4<sup>th</sup> May 2013)

#### **2. Mathematical modeling on Numerical data analysis for Science & Engineering**

ISBN: 978-1492983125      Publisher: Tech-Center, USA.      (26<sup>th</sup> Nov 2013)

#### **3. Introduction to wxMaxima for Scientific Computations**

ISBN: 978-9387284425      Publisher: BPB Publications, New Delhi.      (3<sup>rd</sup> Sep 2018)

#### **4. Electrochemical & Electrical basics for Capacitors and Supercapacitors**

ISBN: 979-8579819352      Publisher: KDP, USA.      (4<sup>th</sup> Dec 2020)

#### **5. Simulated Cyclic Voltammograms: Basics of Electrochemical Kinetics**

ISBN: 979-8370717437      Publisher: Kindle Direct, (International).      (22<sup>nd</sup> Dec 2022)

#### **6. Introduction to Python Algorithms, Simulations & Programing for Chemistry**

Publisher: BPB Publications, Singapore.

### **[Links to Published Books](#)**

### **RESEARCH GUIDANCE**

Recognized Research Supervisor in Chemistry at Madurai Kamaraj University, Madurai (ID # 1510)

M.Phil. : 1 (Completed)      Ph.D. : 4 (Ongoing)

## COMPUTER PROFICIENCY

**LANGUAGES KNOWN:** Python, NumPy, SciPy, MATLAB, wxMaxima, C, Visual Studio, HTML, CSS, MS-Excel-VBA and Arduino interface.

### CERTIFICATE COURSES COMPLETED

1. Python Data Structures by University of Michigan, USA.
2. Using Python for Research by Harvard University, USA.

### COMPUTER PROGRAMS PUBLISHED

Designed many computer programs in Python, MATLAB and MS-Visual Studio for electrochemical and XRD simulation, which are peer-reviewed & indexed by International Universities.

No.	Program	Description	University / Publisher
1.	<b>ELECHEM</b>	Computation of ternary alloy electrodeposition process parameters, thickness, current distribution, Hull cell current density, current and energy efficiency etc.,	Electrochemical Science and Technology Information Resource (ESTIR), The Electrochemical Society, Inc. (ECS) and Solid-state electrochemistry Center for Electrochemical Sciences, Chemical Engineering Department, <b>Case Western Reserve University, Cleveland, Ohio. USA</b> Department of Chemistry, <b>University of North Carolina, Chapel Hill. USA</b>
<a href="https://knowledge.electrochem.org/estir/pdi.htm#ref24">https://knowledge.electrochem.org/estir/pdi.htm#ref24</a> <a href="https://www.enote.page/">https://www.enote.page/</a>			
3.	<b>Crystalsim</b> Formerly as Crystal hack	{hkl} simulation for XRD data at 2-Theta data for polycrystalline materials.	<b>International Union of Crystallography (IUCR)</b> Department of Biomedical and Molecular Sciences, Molecular Modeling and Crystallographic Computing Facility, <b>Queen's University, Kingston, Canada.</b> American Physical Society, National Science Digital Library, USA, <b>National Science Foundation (NSF)</b> , Science Education Resource Center, <b>Carleton College, Northfield, Minnesota, USA</b> Physics To Go, comPADRE
<a href="https://www.iucr.org/resources/other-directories/software/crystalsim2">https://www.iucr.org/resources/other-directories/software/crystalsim2</a> <a href="https://serc.carleton.edu/resources/44407.html">https://serc.carleton.edu/resources/44407.html</a>			
4.	<b>Graphixy</b>	Data extraction for XRD & spectral charts	<b>Softpedia</b> , Romania.

Links: <a href="https://softpedia.com/ro/">Softpedia, Romania</a> <a href="https://sourceforge.net/projects/graphixy/">https://sourceforge.net/projects/graphixy/</a>			
5.	<b>INVESTOCK</b>	Back-test and analyze NSE (Indian) stocks data for >15+ years.	<b>SourceForge,</b> California, USA
6.	<b>NSE Option Chain</b>	To fetch live NSE, India Option Chain Data - OI (%) & LTP (%) for Stocks.	
Link: <a href="https://sourceforge.net/">SourceForge</a>			

### **RESEARCH PROJECTS GRATED**

1. UGC MRP entitled, ‘Electrochemical and Microstructural Characteristic Studies on Zn-Fe alloy Electrodeposition For Corrosion Prevention of steel components’ (No. F. MRP-375/11 P. No. 315, Link No.3575) (MRP/UGC-SERO) was completed on March 2013.
2. Ministry of Micro, Small & Medium Enterprises, Government of India, Innovation idea proposal on, “Cost effective fabrication of hybrid capattery with high energy density and power density as an energy storage device” (INR: 12.8 lakhs).

### **INDUSTRIAL TECHNICAL CONSULTANCY SERVICES PROVIDED**

1. Know-how for ‘Electro galvanizing’ was given to Energie Capacitors, Rajapalayam and signed a MoU for transferring technical knowledge on May 2013.
2. Optimization of solvent dispersion for CNS Oil was given to Siva Industries, Rajapalayam.
3. Designing of Ion exchange resin columns for demineralized water, to Sheema Industries, Rajapalayam on January and February 2015.
4. Technical as well as Instrumentation onsite consultancy services were given to Aravind Herbals Ltd. Rajapalayam since February 2014.
5. Consultancy services on ‘Anionic Liquid detergent formulation’, was given to Sheema Industries, Rajapalayam on February 2016.
6. Know-how on ‘Metal & alloy cleaning powder formulation’, was given to Sri Srinivasa Traders, Rajapalayam on January 2018.
7. Designing and fabrication of electrode films and electrolytes for Symmetric / EDLC / hybrid supercapacitors from January 2019 to till date to Energie Capacitors, Rajapalayam
8. Serving as Coordinator, Incubation Centre and providing technical and start-up services on detergent formulation, pain relieving oil formulation, hydroponics, water quality testing etc.
9. Served as pre-screening Evaluator in **Smart India Hackathon (SIH) 2022**, (Senior Category) in Software and Hardware Edition organized by Ministry of Education, Innovation Cell, Government of India, and AICTE, New Delhi.

## **SEMINARS / WEBINARS ORGANIZED**

Served as the Nodal coordinator, Tamil Nadu State Council for Science and Technology, Chennai.

Conducted various ‘Scientific Awareness’ programmes as Coordinator funded by Tamilnadu State Council for Science and Technology, Chennai.

1. Creation of scientific awareness programmes for Farmers, Self-help women groups, School students in March to July 2009.
2. Presented a public awareness lecture on ‘**Electrochemical Cells for Solar Energy Storage**’, Organized by Rajapalayam Entrepreneurs Club in association with Medium and Small-scale Industries Association.
3. Organized five individual ‘Hands-on training’ programmes entitled, ‘Application of Science and Technology in Rural Areas (ASTRA)’ in association with Tamil Nadu State Council for Science and Technology, Directorate of Technical Education, Chennai, for young entrepreneurs, farmers, students, rural women, women self-help group members. More than 500 participants were benefitted through these training programmes. Themes of these sessions are:

No.	Theme	Date
1.	Hands-on Training on Honeybee Rearing	9-9-2017
2.	Training & Demonstration on Solar Energy Appliances	15-9-2017
3.	Self-Employment Training for Rural Women	22-9-2017
4.	Irrigation water management & Soil rejuvenation	25-9-2017
5.	Training on Herbal plantation & Trees sapling	28-9-2017

4. Served as the Convener to organize one day intercollegiate seminar ‘*Recent Trends in Chemistry*’ in view of National Science Day celebrations conducted by Department of Chemistry on 26-2-2016.
5. Conducted National level online quiz on ‘Fundamentals of Rechargeable Batteries’ from 27-5-2020 to 4-6-2020.
6. Served as the Convener to organize National webinar on ‘*Tips & tricks to crack IIT-JAM, CSIR–NET, GATE Exams*’ on 23-7-2021.
7. Organized national level webinar on, ‘Science and Technology for Sustainable Future’ in view of National Technology Day on 11<sup>th</sup> May 2022.

## **RESEARCH SEMINARS / CONFERENCES PARTICIPATED & PAPERS PRESENTED**

*Participated / attended more than **150** Seminars / Conferences / Workshops.*

## **EXAMINERSHIP**

- a) Tamil Nadu Public Service Commission Examiner Panel and Chief examiner at RRC.
- b) Served as Examiner / Question Paper Setter in Chemistry (UG / PG) for the following Institutions
  1. Anna University (B.E. / B.TECH) Valuation, Karaikudi, Up to 2007.
  2. Madurai Kamaraj University, Madurai and other Autonomous colleges such as, VHNSN College, Virudhunagar, The Madura College, Madurai, SVN College, Madurai, HKRH College, Uthamapalayam, Kalasalingam University, Krishnankoil, Sri Kaliswari College, Sivakasi, SRNM College, Sattur, VVV College, Virudhunagar.

## **BOARD OF STUDIES / ACADEMIC COUNCIL**

1. Member in Board of studies – Chemistry Board (UG) – Madurai Kamaraj University, Madurai, from December 2017 to till date.
2. Member, Academic Council, Madurai Kamaraj University, Madurai. from December 2022 to till date.

## **ORIENTATION & REFRESHER COURSES PARTICIPATED**

1. UGC sponsored orientation programme from 1-11-2008 to 28-11-2008, by UGC Academic Staff College, Bharathidasan University, Tiruchi, Tamil Nadu.
2. UGC sponsored Refresher course entitled, ‘Recent advances in Chemistry’ from 3-11-2009 to 23-11-2009, by UGC Academic Staff College and School of Chemistry, Madurai Kamaraj University, Madurai, Tamil Nadu.
3. UGC Sponsored Summer Programme - Refresher Course in Environmental Sciences by the UGC - Human Resource Development Centre and School of Environmental Sciences, Bharathiar University, Coimbatore from 10-05-2017 to 30-05-2017.
4. UGC-HRD sponsored Refresher Course (Online mode) on, “Recent Advances in Chemical Sciences” conducted by the UGC - Human Resource Development Centre, Dr. Harisingh Gour University, Sagar, Madya Pradesh from 17-08-2020 to 29-08-2020.
5. Two-week online Interdisciplinary Refresher Course on ‘Advanced Research Methodology’ from 22-Dec.-2022 to 05-Jan.-2023 conducted by Teaching Learning Centre, Ramanujan College, University of Delhi, New Delhi.

## **MEMBERSHIPS**

1. Life member in ‘The Indian Society for Technical Education’ LM 47300 All India Council for Technical Education.
2. Active member in the Society for Advancement of Electrochemical Science and Technology (SAEST) A 1622.
3. Mentor in Bharatiya Yuva Shakti Trust and Youth Business International Network, The City and Guilds of London Institute, London, UK.

## **ACADEMIC POSITIONS HOLD**                      **(@ RAJAPALAYAM RAJUS’ COLLEGE)**

1. Member, Internal Quality Assurance Cell (June 2011 to September 2018)
2. Nodal Coordinator, RUSA, Component 6 (Rs. 4 Crores) (August 2016 to till date)
3. Administrator, PFMS, (March 2017 to September 2018)
4. Coordinator, Internal Quality Assurance Cell (September 2018 to December 2019)
5. President, Institution Innovation Council (December 2020 to September 2021)
6. Advisor & Member, Internal Quality Assurance Cell (September 2021 to till date)
7. Coordinator, Incubation Centre (May 2022 to till date)

## **OTHER ACADEMIC ACTIVITIES**

- **Created a website & YouTube channel for Sci-Tech notes for students & scholars:**

Website: <https://www.enote.page/>

- YouTube Channel for Educational Video Tutorials for students & research scholars:**

<https://www.youtube.com/c/eNotepage>

- Written an article entitled ‘Soggy soap’ on 24–9–2009 in ‘The Hindu’ (India’s National Newspaper) on Science & Technology Edition.
- Written an article entitled ‘Battery recharging’ on 3–12–2009 in ‘The Hindu’ (India’s National Newspaper) on Science & Technology Edition.
- Designed many computer programs, coded in MATLAB and MS-VB such as numerical simulations, Lagrange, Cubic Spline interpolations, Plot 3D, Basic Music Composer etc., reviewed and indexed by renowned computer program publishers.

**[Link to computer programs](#)**

- Written a book on ‘*Quotes to Conquer the Thoughts*’ – **[Link: Amazon, UK](#)**