

## Resume

**Dr. M. Rajasekaran M.Sc., Ph. D.,**  
Assistant Professor ( Selection Grade)  
Department of Chemistry  
Sourashtra College  
Pasumalai  
Madurai Dist. 625 004  
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### Objective

To take up a challenging career in the chemistry field in a reputed concern like yours where I can be a key member making contributions to the Strength and Growth of the institution.

### Academic Experience in Institutions / University / Colleges

Sl. No	Name of Institution/ University /College	Designation	Teaching experience			
			Programme (UG/PG)	Regular / Self-Finance	From	To
1.	<b>Sourashtra College</b> Madurai Dt	Assistant Professor	UG only	<b>Regular</b>	<b>14.08.2013</b>	Till date
2.	<b>Sourashtra College</b> Madurai Dt	Assistant Professor	UG only	SF	01.02.2013	13.08.2013
3.	<b>PSY Engineering College</b> Sivagangai Dt	Assistant Professor	UG only	SF	April 2012	Jan 2013
4.	<b>Yadava College</b> Madurai	Assistant Professor	UG only	SF	July2011	April 2012
5.	<b>Vivekananda College,</b> Tiruvedakam west, Madurai Dt	Lecturer	UG & PG	SF	June 2005	April 2006

## Academic Profile:

	<u>Year</u>	<u>Qualification</u>	<u>Institution</u>	<u>Percentage</u>
1	2006-2011	Ph.D.,	<b>Madurai Kamaraj University,</b> Madurai	<b>Awarded</b> <b>(13-10-2011)</b>
2	2003-2005	M.Sc., (Chemistry)	<b>Vivekananda College,</b> Madurai	<b>68.71%</b>
3	2000-2003	B.Sc., (Chemistry)	<b>Thiagarajar College,</b> Madurai	<b>65.15%</b>
4	1999-2000	H.Sc.,	Jayaraj Nadar H.S.S Nagamalai, Madurai	<b>73.10%</b>
5	1997-1998	S.S.L.C.,	Jayaraj Nadar H.S.S Nagamalai, Madurai	<b>80.50%</b>

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## Technical Skills:

### **Electron Spin Resonance (*ESR-JEOL: JES-FA200* )**

- (Room Temperature, Liquid Nitrogen Temperature & Variable Temperature (+100 to -160°C))

### **UV-Vis spectrophotometer**

*(JASCO V-550, Shimadzu UV-1600 & Varian Cary 50)*

- (Diffuse Reflectance Spectroscopic, Thin film and liquid with thermostat)

### **FT-IR spectrophotometer (*JASCO 410, Shimadzu FT-IR-8400s*)**

- ( Liquid cell, solid and thin film)

### **Viscometer (*Brook-field DV-II + pro*)**

### **Cyclic Voltammetry**

*(Bio-Analytical System (BAS) CV-50W model electrochemical analyzer)*

### **Spectrofluorometer (*JASCO FP-6300*)**

### **Spectropolarimeter (*JASCO J-810*)**

- (*DNA and Protein interaction*)

### **Electrophoresis (*DYY-6C power supplier*)**

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**Computer skills:**

- Chem draw (3D and Bioassys)
  - Photoshop
  - Coral draw
  - Microsoft Office (Word, Excel, Power point and outlook)
  - Origin professional
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**Research Expertise:**

Inorganic Chemistry  
Bioinorganic Chemistry  
Nano Bio-technology

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**Title of Ph. D., Thesis;**

*“Synthesis, Characterization and Applications of Nanoparticles in Drugs”*

Supported by *UGC-Meritorious Student Fellowship* (2008-2012)  
(PhD awarded on 13-10-2011)

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**Awards:**

**UGC-JRF** *-Meritorious Student Fellowship (2008-2012)*

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**Academic Project (In Post Graduate):**

*“Synthesis and characterization of copper(II) complexes of  $\beta$ -diketonates having dithiol: Biomodels for copper proteins and as DNA intercalators”*

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**Lectures / Talks given:**

1. Delivered a special lecture on *“Nanotechnology-nanochemistry”* in EMG yadava college at Madurai (2015).
  2. Delivered a special lecture on *“Pollution removed by chemicals”* (Masu agatrum vethiporul) in **All India Radio** at Madurai (2011).
  3. Delivered a special lecture on *“LaTeX application in Chemistry”* in **PSY Engineering College** at Sivagangai Dt. (2012).
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## Articles Published in International Journals:

1. “Analytical methods to determine the comparative DNA binding studies of curcumin–Cu(II) complexes” Jegathalaprathaban Rajesh, **Marichamy Rajasekaran**, Gurusamy Rajagopal and Periakaruppan Athappan. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* 97 (2012) 223–230.
  2. “Studies on The Enhanced Biological Applications of PVA Loaded Nanocurcumin” J. Annaraj, R. Dhivya, M. Vigneshwar, K. Dharaniyambigai, G. Kumaresan, **M. Rajasekaran** *J. Nanosci. Nanotechnol.* 2014, Vol. 2, 490-495.
  3. “A Lucid Build-Up of Nanostructured Curcumin, Quercetin and Their Interaction with DNA” **Marichamy Rajasekaran** and Jamespandi Annaraj, *J. Nanosci. Nanotechnol.* 2014, Vol. 14, 1-6.
  4. “pH responsive curcumin/ ZnO nanocomposite for drug delivery” Raman Dhivya, Jothi Ranjani, Jeyaprakash Rajendhran, **Marichamy Rajasekaran** and Jamespandi Annaraj *Advanced Materials Letters* 2015, 6(6), 505-512.
  5. “Biological evaluation of redox stable cisplatin/Cu(II)-DNA adducts as potential anticancer agents” S Kathiresan, R Dhivya, M Vigneshwar, **M Rajasekaran**, J Ranjani, J Rajendhran, S Srinivasan, S Mugesh, M Murugan, PR Athappan, *Journal of Coordination Chemistry*, 2016, VOL . 69, NO . 2, 238–252.
  6. “Synthesis and Characterization of Nanoscale level Mono/bi-ligated Metal (II) Complexes” M. Rajasekaran, P.R Athappan, J. Annaraj and Suresh Sagadevand, *Malay. NANO Int. J.* Vol.3 (1) (2023) 17 – 30.
  7. “Biological appraisals of Cisplatin and Intercalating Analogies of Nanoscale level Metal (II) Complexes” M. Rajasekaran, P.R. Athappan, J. Rajendiran, J. Annaraj, and Suresh Sagadevan, *J. Molecular and Engineering Materials*, Accepted Papers 22 Nov 2023. <https://doi.org/10.1142/S2251237324400069>
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## Paper presented in national/ international conferences:

1. Synthesis, characterization and DNA binding studies on nanorod metal (II) complexes, **M. Rajasekaran**, J. Annaraj and PR. Athappan, *International seminar on emerging Trends in Chemistry & Energy Science* ( under UGC Autonomy Grant) PG and Research Department of Chemistry, Saraswathi Narayanan College, Madurai, 7<sup>th</sup> February 2020.
2. Synthesis, characterization and DNA binding studies of cisplatin analogous nanorod metal complexes, **M. Rajasekaran**, J. Annaraj and PR. Athappan. *National Seminar on Nanostructured Materials and Applications*, (NSNMA-2011), Madurai Kamaraj University, Madurai.
3. Design and development of bilayer dosage form containing multivitamin and minerals and their controlled release, L. Ramanathan, **M. Rajasekaran** and PR. Athappan. *Recent Advances in Inorganic and Nano Chemistry-2010*, (RAIN-2010), Madurai Kamaraj University, Madurai.
4. Synthesis of nanostructured organic drugs and their DNA binding, **M. Rajasekaran**, L. Ramanathan and PR. Athappan. *12<sup>th</sup> International Symposium on Inorganic Ring Systems (IRIS-12)*, Goa, Aug 16-21, 2009.
5. DNA binding studies of Co(II) and Ni(II) complexes containing natural drugs, **M. Rajasekaran** and PR. Athappan. *International Conference on Coordination and Organometallic Chemistry (ICCO-2009)*, Bharathiar University, Coimbatore, March 19 & 20, 2009.
6. Synthesis, characterization of tetraaza ligand metal complexes and its application, **M. Rajasekaran**, Leeju and PR. Athappan. *International Conference on Materials for the New Millennium (MAT con 2010) Cochin University of Science and Technology, Kochi, Kerala, India, 11-13 January 2010*.
7. Organized an one day intercollegiate symposium on, **Modern Trends in Chemistry, MTC-6** as lecturer in chemistry, PG and Research Department of Chemistry, Vivekananda College, Madurai, 4<sup>th</sup> January 2006.

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## Participation in National/International Conferences/Webniar

1. *The National level Webniar on Designing New Chiral Molecules for Asymmetric Organocatalysis* PG and Research Department of Chemistry, V.O. Chidambaram College, Thoothukudi, 11<sup>th</sup> June 2020.
2. *A Two day National Workshop on Nanomaterials for Human Safety and*

**Envirnoment**, Department of Physics, K.M.E. Socuety's G. M. Momin Women's College, Maharashtra, 15<sup>th</sup> and 16<sup>th</sup> May 2020.

3. *Three days online course on **Basic Priniciples of Spectroscopy***, Department of Chemistry, AVS College of Arts & Science, Salem, 17<sup>th</sup> -19<sup>th</sup> April 2020.
4. *International seminar on **Advanced Materials (AM-2019)***, Department of Material Science and Physical Chemistry, School of Chemistry, Madurai Kamaraj University, Madurai, 23<sup>rd</sup> September 2019.
5. *The National conference on **Recent Developments in Chemistry (RDC-15)***, Department of Chemistry, SBK College, Aruppukottai, 13<sup>th</sup> and 14<sup>th</sup> February 2015.
6. *The State level Workshop on **Microscale Experiments in Physical Chemistry***, Department of Chemistry, V. V. Vanniaperumal College for Women, Virudhunagar, 29<sup>th</sup> January 2015.
7. *The Indo-Norwegian Satellite Meeting on **Advance in Solar Cell Materials & Technologies***, Department of Material Science, School of Chemistry, Madurai Kamaraj University, Madurai, 17<sup>th</sup> December 2011.
8. A two day national seminar on, ***Modern Trends in Chemistry, MTC-13***, PG and Research Department of Chemistry, Vivekananda College, Madurai, 26<sup>th</sup> & 27<sup>th</sup> February 2010.
9. A two day national seminar on, ***Modern Trends in Chemistry, MTC-9*** PG and Research Department of Chemistry, Vivekananda College, Madurai, 27<sup>th</sup> & 28<sup>th</sup> February 2007.
10. An one day intercollegiate seminar on, ***Recent Advances in Organic Chemistry***, organized by Department of Chemistry, NMSVN, Madurai, 16<sup>th</sup> March 2005.
11. ***Regional Seminar on Bioinformatics*** organized by PG Department of Zoology, Vivekananda College, Madurai, 3<sup>rd</sup> January 2005.
12. A two day national seminar on, ***Modern Trends in Chemistry, MTC-5*** PG and Research Department of Chemistry, Vivekananda College, Madurai, 29<sup>th</sup> & 30<sup>th</sup> Sepember 2004.
13. *The National Science day Exhibition and seminar conducted by the Thiagarajar College on 28<sup>th</sup> and 1<sup>st</sup> March 2002. (Second prize for seminar, Third prize for Exhibition)*

14. A Millennium Students Seminar, Department of Chemistry, Thiagarajar College, Madurai, 25<sup>th</sup> October 2002.

### Attended Orientation/Refresher/FDP/Other Programme

S.No.	Topic	Orientation/ Refresher/ FDP	Name of the College/University	Date/Period
1	“Natural Sciences”	Online Refresher Course	(PMMMNMST), University of Delhi	<b>28.06.2022 to 12.07.2022</b>
2	1 <sup>st</sup> Online Refresher Course in Chemistry	Online Subject Refresher Course	UGC- Human Resource Development Centre, Gujarat University, Ahmedabad	<b>28.09.2020 to 11.10.2020</b>
3	Programme in Teaching (ARPIT)	Online Refresher Course In Chemistry For Higher Education	<i>Swayam online</i> ARPIT -16 Weeks course-University Of Delhi	Start Date : <b>01 Sep 2019</b> End Date : <b>31 Dec 2019</b> <b>DOE:</b> <b>16.02.2020</b>
4	“Materials Science & Nanotechnology (FDP-MSNT-2020)”	14-days Online Faculty Development Programme	Department of Chemistry, B.S. Abdur Rahman Crescent Institute of Science and Technology, Vandalur, Chennai	<b>03.08.2020 to 17.08.2020</b>
5	Advanced Molecular Chemistry	3 days online FDP	PG & Research Department of Chemistry, AP College of Arts & Culture, Palani	<b>01.06.2020 to 03.06.2020</b>
6	Management of Self- A Holistic approach	One Day Faculty Development Programme	SCAAN & IQAC Sourashtra College, Madurai	29/08/2017
7	Digital Learning and Quality	FDP	IQAC Sourashtra College, Madurai	11/03/2017

8	Redefined Role of Teachers	FDP	IQAC Sourashtra College, Madurai	05/03/2016
9	Teachers on Teacher Effectivness	One day orientation programme	Sourashtra College, Madurai	07/03/2015
10	104 <sup>th</sup> Orientation Programme	Orientation Programme	Bharathiar University	<b>06/11/2014 to 03/12/2014</b>
11	Faculty Training And Motivation Program	FDP	CSIR-CECRI, KARAIKUDI	<b>8/09/2014 to 10/09/2014</b>

**Other activities / information / academic credentials you would like to mention:**

1. Additional Examiner in the Board of Chemistry - Major & Ancillary - Madurai Kamaraj University, Madurai
2. Examiner - Practical Examinations in various autonomous colleges and Madurai Kamaraj University, Madurai

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**Personal Profile**

Name : M. Rajasekaran  
Sex : Male  
Date of Birth : 08-Oct-1982  
Marital Status : Married  
Community : Yadava  
Nationality : Indian  
Address : Plot No. 99, Amaidhi Solai Nagar  
Thirunagar, Madurai – 625 006.

I hereby declare that the details furnished above, are true and correct to the best of my knowledge.

**Place:** Madurai

**Signature**

**Date:**

**(M. RAJASEKARAN)**