

CURRICULUM VITAE

APPLICATION FOR THE POSITION OF POST DOCTORAL FELLOW (PDF)

Name ... **B. ARUL PRAKASAM**
 Date of Birth ... 07-07-1977
 Sex ... Male
 Marital Status ... Unmarried
 Nationality ... Indian

**CURRENT POSITION ... Research Scientist (With an Assignment of
 Synthesis and Characterization of Organic Molecules of
 Therapeutic Importance)**

ACADEMIC QUALIFICATIONS:

Degree	Specialization	Institute	Period	Class Obtained
Ph.D.	Chemistry- Synthetic and structural Organometallic Chemistry	Annamalai University, India	2001-2005	Viva completed on 19-01-06
M.Phil	Organic Chemistry	Annamalai University India	1999-2001	First class
M.Sc.	Organic Chemistry	Govt. College for men (Autonomous), Kumbakonam, affiliated to Bharathidasan University, India	1997-1999	First class
B.Sc.	Organic, Inorganic and Physical Chemistry	Govt. College for men (Autonomous), Kumbakonam, affiliated to Bharathidasan University, India	1994-1997	First class

Address for Communication

209, Thiruvambanallur,
 Pandanallur – Post
 Tanjore – District
 Tamilnadu - 609 807
 INDIA
 Telephone (Home): 0435-2450191
 (Cell): 9866440653
 E-mail: arul7777@rediffmail.com
 arul7777@yahoo.com

Research Experience

Period: 18.08.1999 to till date and I have considerable experience in the following areas of research in chemistry:

- Synthesis of organic molecules of therapeutic importance.
- Synthesis of metallo-organic compounds and their structural studies (including air-sensitive compounds)
- Synthesis of heterocyclic compounds (Tetrahydro-1,4-thiazines and 1,4-dithianes)
- Analysis and interpretation of XRD (Single crystal and powder), NMR, Cyclic Voltammetry, IR, and UV-Visible spectra
- Having knowledge in crystal growth & study their structure using single crystal XRD technique and polymorph prediction using powder XRD
- Experience in stereochemical analysis (conformational analysis) by using NMR spectroscopy.
- Experience in fluorescence studies of organometallic compounds
- Confident to systematically crack any research problem in chemistry and find a viable solution.

Ph.D. Dissertation:

***Title:* Synthesis, spectral and single crystal X-ray structural studies on some dithiocarbamate metal chelates**

Syntheses of Dithiocarbamate chelates of transition & main group metals and their structural studies by using UV, IR, NMR (^1H , ^{13}C & ^{31}P), CV, fluorescence spectra and single crystal X-ray structural analysis has been discussed in detail. Synthesis of some air sensitive compounds and their structural studies has also been reported. BVS calculations of the obtained structures and the difference in reactivity molecular iodine with the dtc-metal chelates are also been carried out. Steric and electronic effects of the ligands over the reactivity and structural requirements of the synthesized dtc-metal chelates have been investigated.

M.Phil. Dissertation:

***Title:* Syntheses and stereochemistry of tetrahydro 1,4- thiazines and tetrahydro 1,4- dithianes**

Syntheses of tetrahydro 1,4- thiazines and tetrahydro 1,4- dithianes from the double Michael addition reactions of sulphur and nitrogen nucleophiles over α , β - unsaturated sulfones and their conformational studies by NMR spectroscopy (^1H , ^{13}C , DEPT & SEFT) has been studied in detail.

Instrumental knowledge

1. UV-spectrophotometer (Hitachi U-2001)
2. IR- spectrophotometer (ABB BOMEM 400)
3. Cyclic voltammeter (ECDA basic electrochemical system)

LIST OF PAPERS PUBLISHED

1. **B. Arul Prakasam**, Kuppukkannu Ramalingam, M. Saravanan, Gabriele Bocelli and Andrea Cantoni, “Effect of free and chelating phosphine coordination environments on the NiS₂P₂ chromophore: synthesis, NMR and other spectral studies. Crystal and molecular structures of (*N,N*-dipropyldithiocarbamate) di(triphenylphosphine)nickel(II) perchlorate and (*N,N*-dipropyldithiocarbamate)1,2-bis((diphenylphosphino)ethane)nickel(II) traphenylborate” *Polyhedron*, 23 (2004) 77-82.
2. **B. Arul Prakasam**, K. Ramalingam, G. Bocelli, R. Olla, “Synthesis, Spectral, Valence-Bond Parameters, and Single Crystal X-ray Structural Studies on [Ni(dnpdct)(PPh₃)(NCS)] and [Ni(dnpdct)(PPh₃)(CN)]”. *Zeitschrift für anorganische und allgemeine Chemie*, 630 (2004) 301-304.
3. M. Saravanan, **B. Arul Prakasam**, K. Ramalingam, G. Bocelli, A. Cantoni, “M(S)₂(I)₂ (M=Zn, Cd) and Hg(S)₃I Coordination Environment of Transition Metal Complexes - Synthesis, Spectral, and Single Crystal X-ray Structural Investigations” *Zeitschrift für anorganische und allgemeine Chemie*, 631 (2005) 1688-1692.
4. M. Saravanan, R. Ramalingam, **B. Arulprakasam**, G. Bocelli, A. Cantoni and E. R. T. Tiekink, Crystal structure of bis[(*N*-benzyl,*N*-hydroxyethyl)dithiocarbamate](1,10-phenanthroline)cadmium(II), Cd[S₂CN(C₇H₇)(C₂H₂OH)]₂(C₁₂H₈N₂), *Z. Kristallogr.* 220 (2005) 477-478.
5. **B. Arul Prakasam**, K. Ramalingam, G. Bocelli and R. Olla, “Steric and Electronic Effects of Substituents on Planar Nickel(II) Complexes: Synthesis, NMR Spectral and Single Crystal X-ray Structural Studies on Nickel(II) Dithiocarbamates with NiS₂PN, NiS₂PC, and NiS₂P₂ Chromophores”. *Bulletin of the Chemical Society of Japan*, 79 (2006) No. 1 pp.113-117.

LIST OF PAPERS UNDER REVIEW

1. **B. Arul Prakasam**, Kuppukkannu Ramalingam, Gabriele Bocelli and Andrea Cantoni, **Polyhedron**.
2. **B. Arul Prakasam**, K. Ramalingam, G. Bocelli, R. Olla, **Journal of Applied Organometallic Chemistry**.

Currently **three** more papers were under preparation.

PAPERS PRESENTED IN CONFERENCES

1. ICC, XXI Conference held at RD University, Jabalpur, India on Oct. 22-24,2002.
2. ICC, XXV Conference held at IIT- Roorkee, India on Oct. 17-19,2003.
3. NCSAS National conference held at IIT-Delhi, India on Nov. 2003.
4. Chemists Meet-2004 held at IIT-Madras, India on Mar, 26,27, 2004.
5. National seminar on current trends in Chemistry held at Annmalai University, Annamalainagar, India on Nov.21-24, 2004.

References

1. **Dr. K. Ramalingam, M.Sc., Ph.D (Research Guide)**, Professor of Chemistry, Department of Chemistry, Annamalai University, Annamalainagar - 608 002.India
E-mail: krauchem@yahoo.com. Telephone (Res): **91-(0) 413-2202834, Fax: 0091-4144-238145.**
2. **Dr. M.Swaminathan, M.Sc., Ph.D**, Professor of Chemistry, Department of Chemistry, Annamalai University, Annamalainagar - 608 002.India
E-mail: chemsam@yahoo.com. Telephone (Res): **91-(0) 4144-220572, Fax: 0091-4144-238145.**
3. **Dr. SP. Meenakshi Sundaram, M.Sc., Ph.D**, Professor of Chemistry, Department of Chemistry, Annamalai University, Annamalainagar - 608 002, India
[E-mail : meenas1957@sify.com](mailto:meenas1957@sify.com). Telephone: 04144-221670. **Fax: 0091-4144-238145.**

DECLARATION

I hereby declare that all the information and statements given in the application are true, complete and correct to the best of my knowledge and belief.

(B. ARUL PRAKASAM)