CURRICULUM VITAE (January 09, 2015)

SUDHA CHELLAMMA, Ph.D

Phone Number: 972-338-1000	UNT Dallas Campus
Office Number/Building: FH 305	7400 University Hills Blvd.
E-Mail: Sudha.Chellamma@untdallas.edu	Dallas, TX 75241

Area of Expertise:

My research expertise is in the synthesis and characterization of new inorganic molecules, which exhibit unique spectral and electrochemical properties. Novel complexes having applications in Quantum dot Cellular Automata (QCA) have been synthesized and characterized. I am also involved in teaching various Chemistry courses for majors and non- majors in Science.

Education:

- **Ph. D. Chemistry**, **Indian Institute of Science**, Bangalore, India (Advisor: Prof. Chakravarty)

(Thesis title: Chemistry of oxo-carboxylato bridged diruthenium complexes containing imidazole terminal ligands)

- **M. S. Chemistry**, Cochin University of Science and Technology, India

(M.S. project: 'Zeolites as catalysts' - **National Chemical Laboratory**, Pune, India)

- **B. S. Chemistry**, Mahatma Gandhi University, India

Professional Experience:

- **Associate Faculty**, University of North Texas, Dallas, TX, Spring 2015-
- **Associate Faculty**, East Field College, Mesquite, TX, Spring 2014-
- **Associate Faculty**, Collin College, Plano, TX, 2013 -
- **Associate Faculty**, Richland College, Dallas, TX, 2013 -
- **Associate Faculty**, Paul Quinn College, Dallas, TX, 2013 Spring
- **Assistant Professor,** St. Xavier University, IL: 2006 - 2008
- **Associate Faculty,** College of DuPage, IL: 2004 - 2011
- **Associate Faculty:** Benedictine University, IL: 2004-2006
- **Associate Faculty:** City Colleges of Chicago, Triton College, IL: 2004-2005
- **NIH Post Doctoral Fellow**, University of Chicago, IL: 2002-2004
- **Post Doctoral Research Associate**, University of Notre Dame, IN : 1999-2002
- **Post Doctoral Research Associate**, Kansas State University, KS : 1997-1998

Teaching Experience - Courses taught:

- General Chemistry **I** and **II** **(**Collin College, Plano, TX)
- General Chemistry **I** and **II** **(**Richland College, Dallas, TX)
- General Chemistry **I** and **II (**Eastfield College, Mesquite, TX)
- General Chemistry **II** **(**Paul Quinn College, Dallas, TX)

- General Chemistry **I and II** (College of DuPage, IL)
- Contemporary Chemistry (College of DuPage, IL)
- Fundamentals of Chemistry (St. Xavier University, IL)
- Instrumental Methods of Analysis (St. Xavier University, IL)
- Introduction to Organic and Biochemistry Lab (St. Xavier University, IL)
- Organic Chemistry lab (St. Xavier University, IL)
- General Chemistry **I and II** (Benedictine University, IL)
- Basic Chemical Calculations Chemistry (City Colleges of Chicago, IL)
- Fundamentals of Chemistry (City Colleges of Chicago, IL)
- Fundamentals of Chemistry (Triton College, IL)

Scholarships/Grants:

2008: Summer research fund award, St. Xavier University, IL

2007: Dean's fund award for undergraduate research, St. Xavier University, IL

1989 - 1991: University Merit Scholarship (MS Chemistry)

List of Publications:

1. Cleavage of human apolipoprotein(a) coated on the surface of constituents of the vascular extracellular matrix by pancreatic elastase and metalloproteinase-12- Scanu, A.; **Chellamma, S**. ***Vascular Disease Prevention***, 1, 59 (2004).
2. XPS study of self-assembly of ruthenium dimers, $[((acac)_2Ru)_2bptz]^{0,1+}$ on hydrophobic and hydrophilic SAMs – Varughese, B.; **Chellamma, S.**; Lieberman, M. ***Langmuir***, 18, 7964 (2002).
3. Quantum-Dot Cellular Automata at a Molecular Scale, Lieberman, M.; **Chellamma, S.**; Varughese, B.; Wang, Y.; Lent, C.; Bernstein, G. H.; Snider, G.; Peiris, F. ***The Annals of the New York Academy of Sciences***; Aviram, A., Ratner, M., Mujica, V., Eds.; New York, 960, 225-239 (2002).
4. Synthesis and properties of $[Ru_2(acac)_4(bptz)]^{n+}$ (n = 0, 1) and crystal structure of $[Ru_2(acac)_4(bptz)]$ – **Chellamma, S**.; Lieberman, M. ***Inorganic Chemistry***, 40, 3177-3180 (2001).
5. Synthesis, structure and properties of α, β-unsaturated carboxylate adducts of arene ruthenium(II) Schiff-base complexes: X-ray crystal structure of $[(\eta^6\text{-}p\text{-cymene})Ru(O_2CCH{=}CMe_2)(O\text{-}2\text{-}C_6H_4CH{=}NC_6H_4\text{-}p\text{-}Me)].H_2O$ – Roy, S.; Rath, R. K.; **Chellamma, S.**; Chakravarty, A. R. ***Ind. J. Chem***, 39A, 838-842 (2000).
6. Synthesis, X-ray Structures, spectroscopic and electrochemical properties of (μ-oxo)bis(μ-carboxylato)diruthenium complexes having six imidazole bases as terminal ligands – **Chellamma, S.**; Mandal , S. K.; Chakravarty, A. R. ***Inorganic Chemistry***, 37, 270-278 (1998).
7. Synthesis, X-ray structure and properties of (η6-pcymene) ruthenium(II) Schiff-base complexes of vinylpyridine and vinylimidazole ligands- Roy,S.; **Chellamma,S.**; Chakravarty, A.R.; ***Ind. J. Chem***., 37A, 1045-1051 (1998).
8. Axial binding of 2-methylimidazole to the tetracarboxylatodiruthenium(II, III) core: X-ray crystal structure of $[Ru_2(O_2CC_6H_4\text{-}p\text{-}OCH_3)_4(2\text{-}mimH)_2](ClO_4).1.75CH_2Cl_2.H_2O$- **Chellamma, S.**;

Chakravarty, A. R**.** ***Ind. J. Chem***, 37A, 1-6 (1998)

9. Synthesis, X-ray structure and redox properties of (μ-oxo)bis(μ-acetato)diruthenium(III) complexes having 2, 2'-bipyridine and imidazole bases as terminal ligands – **Chellamma, S.**; Chakravarty, A. R. ***Journal of Chemical Society, Dalton Transactions***, 3289-3292 (1996).
10. Edge sharing bioctahedral diruthenium(III) complexes containing methoxy and carboxylate bridge: X-ray structures, redox behavior and core stability – **Chellamma, S.**; Mandal, S. K.; Chakravarty, A. R**.** ***Inorganic Chemistry***, 33, 4878- 4884 (1994).
11. Electrochemical evidence for a two-electron reduction process in a (μ-oxo)bis(μ-carboxylato) diruthenium(III) complex containing terminal 1-methylimidazole ligands – **Chellamma, S.**; Mandal, S. K.; Chakravarty, A. R. ***Inorganic Chemistry***, 32, 3801-3802 (1993).

Selected Conference Presentations:

1. Molecules and supramolecular arrays for quantum-dot cellular automata (QCA) - **224th ACS National Meeting,** Boston, MA, 2002.
2. From quantum dots to computers – **222ndACS National meeting**, Chicago, IL, 2001.
3. Towards molecular implementations of Quantum-dot Cellular Automata – **221st ACS National meeting**, San Diego, CA, 2001 (won **Best poster award**) and PINDU, Notre Dame, IN, 2001.
4. Selective adsorption of molecular QCA candidates, $[Ru_2(acac)_4(bptz)]^{n+}$ (n = 0, 1) on chemically modified surfaces - **221st ACS National meeting**, San Diego, CA, 2001 and PINDU, Notre Dame, IN, 2001.
5. Scanning tunneling microscopy characterization of potential molecules for implementing molecular-quantum-dot cellular automata, **American Physical Society Meeting**, Seattle, WA, 2001.