

ARUN TIMOTHY ROYAPPA

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Education

- Massachusetts Institute of Technology** *Cambridge, MA*
1985-1992 Ph.D. in Physical Chemistry, February 1992. Ph.D. thesis on “Novel Langmuir-Blodgett Films of Electrically Conducting Polyion Complexes and Diblock Copolymers,” under Prof. Michael F. Rubner (Department of Materials Science & Engineering) and Prof. Robert J. Silbey (Department of Chemistry).
- Indiana University** *Bloomington, IN*
1981-1985 Bachelor of Science (Honors) in Chemistry with Highest Distinction, June 1985. Undergraduate honors thesis on “Theoretical Studies of Photoexcitation and Photoionization Processes Involving Selected High-Lying Valence Orbitals in Nickel Carbonyl, NiCO,” under Prof. Peter W. Langhoff.

Awards and Honors

- Gabor Award for Excellence, University of West Florida, 2008, 2017, 2024
Senior Career Faculty Excellence in Undergraduate Research Mentoring Award, University of West Florida, 2021
Faculty Award for Excellence in Undergraduate Teaching and Advising, University of West Florida, 2000, 2004, 2007, 2012, 2016, 2021
Distinction in Faculty Research and Scholarly Activities Award, University of West Florida, 2019
Distinguished Teaching Hall of Fame (for receiving third career Distinguished Teaching Award), University of West Florida, 2009
Distinguished Teaching Award, University of West Florida, 1998, 2003, 2009
Passer Education Award, Division of Chemical Education, American Chemical Society, 2001, 2008
Golden Apple Award for Teacher of the Year, The Foundation for Excellence in Education, 1999
Sigma Xi, The Scientific Research Society, elected 1992
Phi Beta Kappa, elected 1985
Indiana University Undergraduate Science Research Prize, Indiana University, 1985
Outstanding B.S. Chemistry Major of the Class of 1985 (Indiana University)
American Institute of Chemists Student Award, Indiana University, 1985

Experience

- University of West Florida** *Pensacola, FL*
2011-present Professor of Chemistry. Teaching responsibilities include lecture and laboratory courses in Chemistry for Liberal Arts, Chemistry for Non-Science Majors, General Chemistry, Physical Chemistry, Inorganic Synthesis, and Polymer Science. Research interests center on the synthesis of inorganic and organometallic copper(I) complexes for applications in electronics, pharmaceutical manufacturing, and nanotechnology.
- 1996-2011 Associate Professor of Chemistry (3/04-5/11); Assistant Professor of Chemistry (8/96-3/04).
- Durham University** *Durham, England*
Fall 2002 Visiting Scientist, OlexSys (sabbatical with Dr. Horst Puschmann).
- University of California, San Diego** *La Jolla, CA*
Spring 2016 Visiting Professor, Department of Chemistry and Biochemistry (sabbatical with Prof. Arnold L. Rheingold).

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1993-1996 **PerSeptive Biosystems, Inc.** *Cambridge, MA*
Senior Research Scientist at analytical equipment company serving pharmaceutical and biotechnology sectors.

1992-1993 **Massachusetts Institute of Technology** *Cambridge, MA*
Postdoctoral Research Associate in the Department of Chemical Engineering with Prof. Linda G. Cima. Designed, developed, and characterized structure-property relationships in novel polymeric biomaterials for tissue engineering applications, particularly liver cell culture and transplantation.

Recent Grants and Consulting Experience

- 2022 Sole Principal Investigator on a Northwest Florida Industrial Research Matching Grant (renewal) for \$72,000 from SynQuest Laboratories.
- 2021 Sole Principal Investigator on a 11-BM beamline rapid-access grant (8 hours of synchrotron beam time) at the Advanced Photon Source, Argonne National Laboratory.
- 2020 Sole Principal Investigator on a Northwest Florida Industrial Research Matching Grant (renewal) for \$72,000 from SynQuest Laboratories.
- 2017 Sole Principal Investigator on a Northwest Florida Industrial Research Matching Grant for \$92,000 from UWF Research and Sponsored Programs and SynQuest Laboratories.
- Ongoing Scientific consultant to Ascend Performance Materials (Alvin, TX), Plasmine Technology (Pensacola, FL); Avista Technologies (San Marcos, CA); Applied Biosystems (Cambridge, MA); Pall Corporation (Pensacola, FL); CERA Inc. (Pensacola, FL) and Globalinx, Inc. (Wayland, MA).

Professional Membership

American Chemical Society

Languages Working knowledge of German, French and Dutch

Citizenship U.S. citizen

Publications and Presentations (UWF student co-authors underlined)

Refereed Journal Articles

1. J. L. Guillet, T. J. Ozumerzifon, M. P. Shores, C. E. Moore, A. L. Rheingold, A. T. Royappa, L. H. Doerrer, "Metallophilic interactions and magnetism in heterobimetallic {Pt,M} lantern complexes," *Polyhedron* **250**, 116788 (2024).
2. L. Nyiranshuti, E. R. Andrews, L. I. Povolotskiy, F. M. Gomez, N. R. Bartlett, A. T. Royappa, A. L. Rheingold, W. R. Seitz, and R. P. Planalp, "Development of a Ratiometric Fluorescent Cu(II) Indicator Based on Poly(N-isopropylacrylamide) Thermal Phase Transition and an Aminopyridyl Cu(II) Ligand," *Molecules* **28**, 7097 (2023).
3. A. T. Royappa, R. J. Papoular, M. Gembicky, W. Shepard, A. D. Ross, A. G. Stemen, J. J. Bobbitt, D. T. Doan, S. H. Lapidus, D. H. Johnston, and A. Filatov, "Crystalline Phase Transitions and Water-Soluble Complexes of Copper(I) 2-Hydroxyethanethiolate," *Polyhedron* **222**, 115873 (2022).
4. A. T. Royappa, A. L. Rheingold, W. C. Teuchtler, and N. L. Auld, "Structures of the Oxidized States of Some Common Biochemical Reducing Agents," *Journal of Molecular Structure* **1202**, 127268 (2020).

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5. A. T. Royappa, C. M. Tran, R. J. Papoular, M. Khan, L. E. Marbella, J. E. Millstone, M. Gembicky, B. Chen, W. Shepard, and E. Elkaim, "Copper(I) and Gold(I) Thiolate Precursors to Bimetallic Nanoparticles," *Polyhedron* **155**, 359 (2018).
6. S. K. Gibbons, R. P. Hughes, D. S. Glueck, A. T. Royappa, A. L. Rheingold, R. B. Arthur, A. D. Nicholas, and H. H. Patterson, "Synthesis, Structure, and Luminescence of Copper(I) Halide Complexes of Chiral Bis(phosphines)," *Inorganic Chemistry* **56**, 12809 (2017).
7. E. A. Qian, A. I. Wixtrom, J. C. Axtell, A. Saebi, D. Jung, P. Rehak, Y. Han, E. H. Mouly, D. Mosallaei, S. Chow, M. S. Messina, J. Y. Wang, A. T. Royappa, A. L. Rheingold, H. D. Maynard, P. Král, and A. M. Spokoyny, "Atomically Precise Organomimetic Cluster Nanomolecules Assembled via Perfluoroaryl-thiol SNAr Chemistry," *Nature Chemistry* **9**, 333 (2017).
8. A. T. Royappa, A. D. Royappa, R. F. Moral, A. L. Rheingold, R. J. Papoular, D. M. Blum, T. Q. Duong, J. R. Stepherson, O. D. Vu, B. Chen, M. R. Suchomel, J. A. Golen, G. André, N. Kourkoumelis, A. D. Mercer, A. M. Pekarek, and D. C. Kelly, "Copper(I) Oxalate Complexes: Synthesis, Structures and Surprises," *Polyhedron* **119**, 563 (2016).
9. J. C. Axtell, K. O. Kirlikovali, P. I. Djurovich, D. Jung, V. T. Nguyen, B. Munekiyo, A. T. Royappa, A. L. Rheingold, and A. M. Spokoyny, "Blue Phosphorescent Zwitterionic Iridium(III) Complexes Featuring Weakly Coordinating nido-Carborane-Based Ligands," *Journal of the American Chemical Society* **138**, 15758 (2016).
10. R. M. Dziedzic, L. M. A. Saleh, J. C. Axtell, J. L. Martin, S. L. Stevens, A. T. Royappa, A. L. Rheingold, and A. M. Spokoyny, "B-N, B-O, and B-CN Bond Formation via Palladium-Catalyzed Cross-Coupling of B-Bromo-Carboranes," *Journal of the American Chemical Society* **138**, 9081 (2016).
11. J. L. Gomez-Lopez, D. Chávez, M. Parra-Hake, A. T. Royappa, A. L. Rheingold, D. B. Grotjahn, and V. Miranda-Soto, "Synthesis and Reactivity of Bis(Protic N-Heterocyclic Carbene)Iridium(III) complexes," *Organometallics* **35**, 3148 (2016).
12. P. M. Miura-Akagi, M. L. Nakashige, C. K. Maile, S. M. Oshiro, J. R. Gurr, W. Y. Yoshida, A. T. Royappa, C. E. Krause, A. L. Rheingold, R. P. Hughes, and M. F. Cain, "Synthesis of a Tris(Phosphaalkene)Phosphine Ligand and Fundamental Organometallic Reactions on Its Sterically Shielded Metal Complexes," *Organometallics* **35**, 2224 (2016).
13. N. Tymińska, M. Włoch, and A. T. Royappa, "Mind the Correct Basis Set: A Case Study for Predicting Gas Phase Acidities of Small Compounds Using Calculations from First Principles," *International Journal of Quantum Chemistry* **115**, 42 (2015).
14. A. T. Royappa, J. R. Stepherson, O. D. Vu, A. D. Royappa, C. L. Stern, and P. Müller, "Tetrakis(Acetonitrile)Copper(I) Hydrogen Oxalate-Oxalic Acid-Acetonitrile (1/0.5/0.5)," *Acta Crystallographica* **E69**, m544 (2013).
15. A. T. Royappa, M. R. Vashi, C. L. Russo, and A. C. Blackwell, "A Comparison of the Cationic Ring-Opening Polymerizations of 3-Oxetanol and Glycidol," *Macromolecular Research* **21**, 1069 (2013).
16. A. D. Royappa, J. A. Golen, A. L. Rheingold, and A. T. Royappa, "μ-Oxalato-Bis[Bis(Triphenylphosphine)Copper(I)] Dichloromethane Disolvate," *Acta Crystallographica* **E69**, m126 (2013).
17. R. Dickinson, A. T. Royappa, F. Tone, L. Ujj, and G. Wu, "Distribution of Non-Uniform Demagnetization Fields in Paramagnetic Bulk Solids," *Journal of Applied Physics* **110**, 013902-1 (2011).
18. A. T. Royappa, V. Suri, S. E. Genet, and D. J. Pope, "Some New Closed-Form Empirical Modified Lennard-Jones Potentials," *Journal of Undergraduate Chemistry Research* **9**, 102 (2010).
19. Y.-C. Huang, A. T. Royappa, S. Tundel, K. Tsukamoto, and V. Sharma, "Biocompatibility of Polyglycidol with Human Peripheral Blood Mononuclear Cells," *Journal of Applied Polymer Science* **111**, 2275 (2009).

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20. A. T. Royappa, V. Suri, and J. R. McDonough, "Comparison of Empirical Closed-Form Functions for Fitting Diatomic Interaction Potentials of Ground State First- and Second-Row Diatomics," *Journal of Molecular Structure* **787**, 209 (2006).
21. A. T. Royappa and R. L. McDaniel, "Copolymerization of Glycidol with Functionalized Phenyl Glycidyl Ethers," *Journal of Applied Polymer Science* **97**, 1462 (2005).
22. H. Zhang, A. F. Nitzman, and A. T. Royappa, "Statistical Modeling and Sizing Determination Guides for Dispersed Rosin Sizes," *TAPPI Journal* **3**, 3 (2004).
23. A. T. Royappa, M. L. Vogt, and V. Sharma, "Composition and Long-Term Stability of Polyglycidol Prepared by Cationic Ring-Opening Polymerization," *Journal of Applied Polymer Science* **91**, 1344 (2004).
24. A. F. Nitzman and A. T. Royappa, "Sizing Variations of Dispersed Rosin Sizes with Fortification, Hardness, pH and Temperature," *TAPPI Journal* **2**, 8 (2003).
25. A. T. Royappa, "Synthesis and Characterization of a Hyperbranched Copolymer," *Journal of Chemical Education* **79**, 81 (2002).
26. A. T. Royappa, D. D. Steadman, T. L. Tran, P. T. Nguyen, C. S. Prayaga, B. Cage, and N. Dalal, "Synthesis of Sulfonated Polyaniline by Polymerization of the Aniline Heterodimer 4-Aminodiphenylamine-2-sulfonic acid," *Synthetic Metals* **123**, 273 (2001).
27. A. T. Royappa, N. Dalal, and M. W. Giese, "Amphiphilic Copolymers of Glycidol with Nonpolar Epoxide Comonomers," *Journal of Applied Polymer Science* **82**, 2290 (2001).
28. A. T. Royappa, R. S. Saunders, M. F. Rubner, and R. E. Cohen, "Langmuir-Blodgett Films of Conducting Diblock Copolymers," *Langmuir* **14**, 6207 (1998).
29. A. T. Royappa, "On the Copolymerization of Epichlorohydrin and Glycidol," *Journal of Applied Polymer Science* **65**, 1897 (1997).
30. C. H. Paul and A. T. Royappa, "Acid Binding and Detritylation During Oligonucleotide Synthesis," *Nucleic Acids Research* **24**, 3048 (1996).
31. A. T. Royappa and M. F. Rubner, "Novel Langmuir-Blodgett Films of Conducting Polymers. I. Polyion Complexes and Their Heterostructures," *Langmuir* **8**, 3168 (1992).
32. J. H. Cheung, E. Punkka, M. Rikukawa, R. B. Rosner, A. T. Royappa, and M. F. Rubner, "New Developments in the Langmuir-Blodgett Manipulation of Electroactive Polymers," *Thin Solid Films* **210/211**, 246 (1992).

Presentations

1. C. H. Womack, S. H. Miller, M. E. Hinrichsen, T. C. Thompson, A. T. Royappa, "Synthesis of copper(I) complexes from the acid-base reaction of various weak acids with copper(I) oxide in the presence of coordinating ligands," poster presented at the Student Scholars Symposium, UWF (April 2022).
2. A. D. Ross, A. G. Stemen, D. T. Doan, J. J. Bobbitt, M. Gembicky, R. Papoular, D. Johnston, A. T. Royappa, "Structure Elucidation of a Copper(I) Thiolate and its Water-Soluble Complex," poster presented at the Student Scholars Symposium, UWF (April 2022).
3. C. Gutierrez, A. W. Brodie, M. D. Wells, and A. T. Royappa, "Alternative Synthetic Routes to Copper(I)-Based Trifluoromethylating Agents," ABRCMS meeting (October 2020).
4. A. T. Royappa, "Teaching Chemical Crystallography Without a Diffractometer," American Chemical Society National Meeting, San Diego, CA (August 2019).

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5. J. Ducilon, A. T. Noll, J. T. Sockman, H. M. Kidd, S. L. Sandri, A. M. Ishver, and A. T. Royappa, "Ligandless Copper(I) Carboxylates," poster presented at the American Chemical Society National Meeting, Orlando, FL (March/April 2019).
6. A. T. Royappa, "Synthesis and Structural Characterization of Copper(I) Oxalate Complexes," American Chemical Society National Meeting, New Orleans, LA (March 2018).
7. C. M. Tran, M. Khan, R. J. Papoular, L. E. Marbella, J. E. Millstone, M. Gembicky, B. Chen, and A. T. Royappa, "Synthesis and Characterization of Copper(I) and Gold(I) Thiolates," poster presented at the American Chemical Society National Meeting, New Orleans, LA (March 2018).
8. M. Thomson, L. Reid, M. Hinrichsen, E. A. Shcherbina, A. S. Arango, M. D. Huang, and A. T. Royappa, "Alternate Syntheses of Copper(I)-based Trifluoromethylating Agents," poster presented at the Student Scholars Symposium, UWF (April 2018).
9. A. T. Noll, J. T. Sockman, H. M. Kidd, S. L. Sandri, J. Ducilon, A. M. Ishver, and A. T. Royappa, "Synthesis of Ligandless Copper(I) Carboxylates," poster presented at the Student Scholars Symposium, UWF (April 2018).
10. C. M. Tran, M. Khan, R. J. Papoular, L. E. Marbella, J. E. Millstone, M. Gembicky, B. Chen, and A. T. Royappa, "Synthesis and Characterization of Copper(I) and Gold(I) Thiolates," poster presented at the Student Scholars Symposium, UWF (April 2018).
11. A. T. Royappa, "Teaching Chemical Crystallography Without a Diffractometer," American Crystallographic Association Meeting, New Orleans, LA (2017).
12. A. T. Royappa, "Copper(I) Complexes for the Electronics and Pharmaceutical Industries," SynQuest Laboratories, Alachua, FL (2017).
13. J. Jacobs, K. R. Haga, K. R. Oldham, B. J. Bookheimer, L. Lajmi and A. T. Royappa, "Recrystallization of Phenanthroline Trifluoromethyl Copper(I): The Search for the Molecular Structure," poster presented at the Student Scholars Symposium, UWF (April 2017).
14. L. R. Reid, M. N. Thomson, E. A. Shcherbina, A. S. Arango, M. D. Huang and A. T. Royappa, "Alternate Syntheses of Copper(I)-based Trifluoromethylating Agents," poster presented at the Student Scholars Symposium, UWF (April 2017).
15. C. M. Tran, C. I. Smylie, M. Khan and A. T. Royappa, "Structural Characterization of Bimetallic Nanoparticle Precursor Complexes," poster presented at the Student Scholars Symposium, UWF (April 2017).
16. L. R. Reid, M. N. Thomson, E. A. Shcherbina, A. S. Arango, M. D. Huang and A. T. Royappa, "Alternate Syntheses of Copper(I)-based Trifluoromethylating Agents," poster presented at the ABRCMS meeting, Tampa, FL (November 2016).
17. A. T. Royappa, "Teaching Chemical Crystallography Without a Diffractometer," ACS National Meeting, Philadelphia, PA (2016).
18. A. T. Royappa, "Teaching Chemical Crystallography Without a Diffractometer," Fatima College, Madurai, India (2016).
19. A. T. Royappa, "Teaching Chemical Crystallography Without a Diffractometer," Lady Doak College, Madurai, India (December 2016).
20. H. M. Kidd, S. L. Sandri, and A. T. Royappa, "Progress Towards the Synthesis of Ligand-Free Copper(I) Carboxylates," poster presented at the American Chemical Society National Meeting, San Diego, CA (2016).
21. A. T. Royappa, "Teaching Chemical Crystallography Without a Diffractometer," oral presentation to San Diego Cambridge Structural Database User Group Meeting, San Diego, CA (2016).

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22. H. M. Kidd, S. L. Sandri, and A. T. Royappa, "Progress Towards the Synthesis of Ligand-Free Copper(I) Carboxylates," poster presented at the Student Scholars Symposium, UWF (2016).
23. A. T. Royappa, "Plastics Recycling," oral presentation to Pensacola Local Section of the American Chemical Society (2015).
24. C. M. Staton, A. A. Chaudhry, E. A. Shcherbina, L. A. Searcy, and A. T. Royappa, "Effect of Ethers on BF_3 -Initiated Cationic Ring-Opening Polymerization of Glycidol," poster presented at the Student Scholars Symposium, UWF (2015).
25. E. A. Shcherbina, A. E. Golanka, A. M. Pekarek, and A. T. Royappa, "Synthesis of Copper(I) Trifluoromethylating Agents," poster presented at the Student Scholars Symposium, UWF (2015).
26. C. M. Staton, A. A. Chaudhry, E. A. Shcherbina, L. A. Searcy, and A. T. Royappa, "Effect of Ethers on BF_3 -Initiated Cationic Ring-Opening Polymerization of Glycidol," poster presented at the American Chemical Society National Meeting, Denver, CO (2015).
27. A. E. Golanka, R. B. Kamerman, and A. T. Royappa, "Attempts at Growing Single Crystals of Copper(II) Oxalate," poster presented at the Student Scholars Symposium, UWF (2014). This poster won the award for best presentation in Chemistry.
28. C. M. Staton, E. A. Shcherbina, and A. T. Royappa, "The Effect of Emulsifiers on the Cationic Ring-Opening Polymerization of Glycidol," poster presented at the Student Scholars Symposium, UWF (2014).
29. D. M. Blum, O. D. Vu, T. Q. Duong, J. R. Stepherson, and A. T. Royappa, "Synthesis of Copper(I) Oxalate Complexes," poster presented at the Student Scholars Symposium, UWF (2014).
30. R. J. Papoular, G. Andre, N. Kourkoumelis, A. Markou, B. H. Toby, A. T. Royappa, and A. D. Royappa, "The Elusive Case of Copper(II) Oxalate Hydrate, $\text{CuC}_2\text{O}_4 \cdot n\text{H}_2\text{O}$: *Ab Initio* Structure Solution from Neutron and X-ray Powder Diffraction Studies," poster presented at the Spring Meeting of the International Centre for Diffraction Data, Newtown Square, PA (2014).
31. C. M. Staton, L. A. Searcy, and A. T. Royappa, "Effect of Emulsifiers on the Cationic Polymerization of Glycidol," poster presented at the Student Scholars Symposium, UWF (2013).
32. A. D. Royappa and A. T. Royappa, "Progress Toward a New Green Synthesis of Copper(I) Oxalates," poster presented at the American Chemical Society National Meeting, New Orleans, LA (2013).
33. C. M. Staton, L. A. Searcy, and A. T. Royappa, "Effect of Emulsifiers on the Cationic Polymerization of Glycidol," poster presented at the American Chemical Society National Meeting, New Orleans, LA (2013).
34. M. R. Vashi, C. L. Russo, Carla M. Staton, Aaron C. Blackwell, J. A. Trindell, and A. T. Royappa, "Synthesis and Characterization of Hyperbranched Poly(3-oxetanol)," poster presented at the Student Scholars Symposium, UWF (2012).
35. M. R. Vashi, C. L. Russo, J. A. Trindell, and A. T. Royappa, "Synthesis and Characterization of Hyperbranched Poly(3-oxetanol)," poster presented at the American Chemical Society National Meeting, San Diego, CA (2012). This poster won two Excellence in Undergraduate Polymer Research awards (one for travel) from the American Chemical Society.
36. C. Russo, M. Vashi, and A. T. Royappa, "Polymerization of 3-Oxetanol," Student Scholars Symposium, UWF (2011). This poster won the award for best presentation in Chemistry.
37. A. T. Royappa, "Hyperbranched Polymers and Copolymers of Glycidol," Department of Chemistry, Michigan Technological University, Houghton, MI (2011).
38. C. L. Russo, M. R. Vashi, and A. T. Royappa, "Synthesis and Characterization of Hyperbranched Poly(3-Oxetanol)," poster presented at the 1st Annual Florida Statewide Student Research Symposium, Jacksonville, FL (2011).

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39. A. T. Royappa, "Hyperbranched Polymers and Copolymers of Glycidol," Department of Chemistry, UWF (2010).
40. A. T. Royappa, "Polymers and Plastics Recycling," oral presentation to Pensacola Local Section of the American Chemical Society (2008).
41. K. Tsukamoto, Y.-C. Huang, V. Sharma, and A. T. Royappa, "Attachment of Interleukin-15 to Polyglycidol," SEASTARS poster symposium, UWF (2005).
42. A. T. Royappa, "Plastics and Plastics Recycling," oral presentation to Department of Physics, UWF (2003).
43. A. T. Royappa, "Initiating and Developing Experiments for an Undergraduate Course in the Fundamentals of Polymer Science," invited paper presented at the American Chemical Society National Meeting in Boston, MA (2002).
44. A. T. Royappa, "Hydrophobic Interaction Chromatography," oral presentation to Pall Corporation, Pensacola, FL (2002).
45. A. T. Royappa, N. Dalal, and M. W. Giese, "Synthesis of Amphiphilic Hyperbranched Copolymers by Cationic Ring-Opening Polymerization," paper presented at the Southeastern-Southwestern Regional Meeting of the American Chemical Society in New Orleans, LA (2000).
46. T. M. Austin, A. T. Royappa, and C. Prayaga, "Synthesis of Nonlinear Optical Material n-Decyl Ferrocenoate (n-Decyl Ferrocenecarboxylate), paper presented at Symposium on Undergraduate Research in Mathematical Sciences in Mobile, AL (2000).
47. A. T. Royappa and T. M. Austin, "Polyaniline Blends and Derivatized Polyanilines," poster presented at the Southeastern Regional Meeting of the American Chemical Society in Durham, NC (1998).
48. B. S. Harrison, A. T. Royappa, and W. K. Fisher, "Thermal Analysis of Polyanilines and a Polyaniline-Polypropylene Blend," poster presented at the Southeast Regional Meeting of the American Chemical Society in Roanoke, VA (1997).

Published Conference Proceedings

1. L. Ujj, F. Bartha, Z. Chen, C. Prayaga, A. T. Royappa, C. Amos, and M. Tsukuda, "Polarization Sensitive CARS Investigations of Controlled Molecular Rotations," XXII INTERNATIONAL CONFERENCE ON RAMAN SPECTROSCOPY - AIP Conference Proceedings **1267**, 498-499 (2010).
2. A. T. Royappa, S. T. Lopina, and L. G. Cima, "Synthesis and Characterization of Tetraethylene Glycol-Poly(Ethylene Oxide) Hydrogels For Tissue Engineering Applications," *Biomaterials for Drug and Cell Delivery*, Materials Research Society Symposium Proceedings **331**, 245 (1994).
3. A. T. Royappa and M. F. Rubner, "Langmuir-Blodgett Films of Novel Polyion Complexes of Conducting Polymers," *Macromolecular Assemblies in Polymeric Systems*, ACS Symposium Series **493**, 76 (1992). [BOOK CHAPTER]
4. A. T. Royappa, M. F. Rubner, R. E. Cohen, and R. S. Saunders, "Novel Langmuir-Blodgett Films of Electrically Conducting Polyion Complexes and Ionic Diblock Copolymers," *Electrical, Optical and Magnetic Properties of Organic Solid State Materials*, Materials Research Society Symposium Proceedings **247**, 853 (1992).
5. J. H. Cheung, E. Punkka, M. Rikukawa, R. B. Rosner, A. T. Royappa, and M. F. Rubner, "New Strategies for the Langmuir-Blodgett Manipulation of Conducting Polymers," *ACS Polymeric Materials Science & Engineering* **64**, 263 (1991).

Other Publications

1. A. T. Royappa, sequence no. A360792, On-Line Encyclopedia of Integer Sequences (2023). An integer sequence derived from the integer portion of area of inscribed circle in a regular polygon having n sides of unit length. <https://oeis.org/A360792>.

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2. A. T. Royappa, sequence no. A306396, On-Line Encyclopedia of Integer Sequences (2019). An integer sequence from the number of accidental degeneracies in the quantum mechanical 3-D “particle-in-a-box” model. <http://oeis.org/A306396>
3. A. T. Royappa, sequence no. A210032, On-Line Encyclopedia of Integer Sequences (2012). An integer sequence from the number of D term symbols of increasing multiplicity, in atomic spectroscopy. <http://oeis.org/A210032>
4. A. T. Royappa, sequence no. A188385, On-Line Encyclopedia of Integer Sequences (2011). An integer sequence from the highest powers in the prime factorization of n^n . <http://oeis.org/A188385>
5. A. T. Royappa, sequence no. A163584, On-Line Encyclopedia of Integer Sequences (2009). An integer sequence from the number of singularities of $\tan(x)$ in integer intervals. <http://oeis.org/A163584>
6. A. T. Royappa, sequence no. A163581, On-Line Encyclopedia of Integer Sequences (2009). An integer sequence from the number of zeros of $\sin(x)$ in integer intervals. <http://oeis.org/A163581>
7. A. T. Royappa, sequence no. A154392, On-Line Encyclopedia of Integer Sequences (2009). An integer sequence from the number of zeros of $\sin(x^2)$ in integer intervals. <http://oeis.org/A154392>
8. A. T. Royappa, sequence no. A125089, On-Line Encyclopedia of Integer Sequences (2008). An integer sequence from the solutions of $\log_n(z) = -z$. <http://oeis.org/A125089>
9. A. T. Royappa, book review of “The \$800 Million Pill: The Truth Behind the Cost of New Drugs,” by Merrill Gozner, *American Scientist* **93**, 384 (2004).
10. A. T. Royappa, book review of “The Ingredients: A Guided Tour of the Elements,” by Philip Ball, *American Scientist* **91**, 272 (2003).
11. A. T. Royappa, sequence no. A081623, On-Line Encyclopedia of Integer Sequences (2003). An integer sequence derived from the different ways of distributing equal numbers of up and down spins on a square $n \times n$ lattice. <http://oeis.org/A081623>
12. A. T. Royappa, book review of “Green Plastics: An Introduction to the New Science of Biodegradable Plastics” by E. S. Stevens, *American Scientist* **90**, 273 (2002).
13. A. T. Royappa, book review of “A Chemical History Tour: Picturing Chemistry from Alchemy to Modern Molecular Science” by A. Greenberg, *American Scientist* **89**, 278 (2001).
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