

## Daren J. Timmons, Ph.D.

*Interim Provost and Executive Vice Chancellor for Academic Affairs, University of South Carolina Aiken*

### **SIGNIFICANT LEADERSHIP EXPERIENCE**

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- **Interim Provost and Executive Vice Chancellor for Academic Affairs, USC Aiken**, work collaboratively with the Chancellor, other Vice Chancellors, and Faculty Assembly leadership; 2018-present
  - leadership of university academic planning
  - program administration of all academic departments, enrollment management, student support, the library, institutional research and effectiveness, and continuing education
  - oversight of recruitment, evaluation, and training of faculty
  - oversight of accreditation processes for academic affairs
  - international relationship building and student recruitment
  - management of academic affairs budget
- **Dean, College of Sciences and Engineering, USC Aiken**, work collaboratively with the Executive Vice Chancellor for Academic Affairs, other deans, and department chairs; 2016–2018:
  - personnel and program administration of the college
  - oversight of accreditation process of the college
  - lead the college in improving recruitment of new students
  - management of college budget
  - partner with development office in building external partnerships and securing external funding
  - coordinated major reworking of degrees in mathematics and in computer science with university faculty and industry partners
  - established USC Aiken Summer Scholars Institute (STEM) with extramural funding
- **Deans' Council, USC Aiken**, led efforts to revise Faculty Manual to incorporate the role of deans (*e.g.* in promotion and tenure processes, annual faculty evaluations). Worked collaboratively with the Faculty Welfare Committee and the chair of the Faculty Assembly
- **John C. Allen '62 Institute Professor of Chemistry and Head of VMI Chemistry**; 2009–2016:
  - evaluate and develop faculty and staff towards tenure and promotion
  - manage the \$285,000 departmental budget including monies for student scholarships and summer undergraduate research program
  - address diversity issues among departmental faculty through hiring practices and among students, for example, through an alumnae mentoring program
  - helped the faculty articulate and implement a five-year plan of curricular changes to incorporate engaged learning practices and a dynamic capstone course
  - developed core curriculum assessment instruments which contribute to institutional assessment reports for SACS COC
  - led a successful recertification of our chemistry degree by the American Chemical Society
- **VMI Chemistry Representative for \$19 million building renovation**; 2009–2013:
  - helped manage the purchase of approximately \$2 million in equipment and furniture
  - worked closely with the Biology representative, the project leaders from the design and construction companies and VMI, as well as faculty and staff from my own department
  - mediated final design changes, multiple occupant moves, and many daily issues needing immediate attention or decision
  - worked diligently for a satisfactory solution for all involved staying mindful of both the cost and vision
- **Director, Timmons Research Laboratory**; 2001–2016:
  - co-authored 15 peer-reviewed publications since 2002, 27 in total
  - mentor multiple undergraduate research students each semester, 30 in total
  - help students pursue acceptance into post-graduate programs
  - built collaborations and secured funding

**EDUCATION**

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| • Ph.D. Chemistry | Texas A&M University, College Station, TX | May 1999 |
| • B.S. Chemistry  | Duke University, Durham, NC               | May 1994 |

**AWARDS**

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- VMI Meritorious Service Medal (2016)
- John C. Allen 1962 Institute Professorship in Chemistry (2009–2016)
- W. S. Hinman, Jr. '26 Research Award (VMI 2004, 2014)
- Matthew Fontaine Maury Research Award (VMI 2011)
- VMI Distinguished Teaching Award (2009)
- Faculty Mentor Award (VMI 2007)
- VMI nominee for the State Council of Higher Education of Virginia's "Rising Star" award (2006)
- Thomas Jefferson Teaching Award (VMI 2004)

**PROFESSIONAL ACTIVITIES AND AFFILIATIONS**

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- SC INBRE Steering Committee (2017–present)
- USC Aiken Taskforce for Diversity, Inclusion, and Belonging (2017–2018)
- Citizens for Nuclear Technology Awareness (2017–present, vice-chair 2018–present)
- Invited speaker for *USC Aiken STEM: professional experience within a liberal arts education*, Augusta Kiwanis. January 2018, Augusta, GA
- Invited speaker for *Filling the pipeline: the importance of academic and industrial partnerships*, CNTA Up and Atom Breakfast, December 2017, Aiken, SC
- Invited panelist for *PowerUp Education and Industry Partnerships*, North Augusta Chamber of Commerce November 2017, North Augusta, SC.
- Invited speaker at *SC Cyber Savannah River Kickoff*. SC Cyber, March 2017, North Augusta, SC.
- Conducted an external review for The Citadel's Chemistry Department (Spring 2014)
- Committee for the 2009 Inorganic Chemistry Exam, ACS Exams Institute
- Professional conferences:
  - *Cyber Georgia*. Augusta University, October 2017, Augusta, GA.
  - *2017 State of South Carolina Cyber Security Awareness Symposium*. SC Cyber, October 2017, Columbia, SC.
  - *Southeast Donor Relations Conference*. ADRP, June 2017, Augusta, GA.
  - *Cyber Georgia*. Augusta University, October 2016, Augusta, GA.
  - *Shared Futures Difficult Choices: Reclaiming a Democratic Vision for College Learning, Global Engagement, and Success*. AAC&U Annual Meeting, 2012, Washington, D.C.
  - *Creativity, Inquiry, and Discovery: Undergraduate Research In and Across the Disciplines*. AAC&U/CUR, 2010, Durham, NC
  - *Teacher-Scholar Symposium on Undergraduate Research*. Washington and Lee University, 2009, Lexington, VA

- VMI committees:
  - Academic Board with the Deputy Superintendent of Academics
  - Assessment Audit Committee, Chair
  - Academic Planning and Review Committee, Chair
  - Council of Science Heads
  - Athletics Committee, NCAA Faculty Athletic Representative
  - Hiring committee for the Director of VMI's Center for Leadership and Ethics
  - Evaluation of the Tenure and Review Process
  - Faculty Development Committee
  - Undergraduate Research Initiative
- Professional and Honor Societies
  - Council on Undergraduate Research (CUR), 2014–2016 VMI
  - American Chemical Society, 1995–present
  - AAC&U
  - Phi Lambda Upsilon (Chemistry Honor Society)
  - Gamma Sigma Epsilon (Chemistry Honor Society, VMI Charter Member)
  - Omicron Delta Kappa (National Leadership Honor Society)
  - Phi Kappa Phi (Honor Society)

### **ADDITIONAL ACTIVITIES**

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- VMI Navigator's Faculty Advisor (VMI 2003–2016). Weekly meetings with students to discuss leadership, character development, and the integration of life and faith; also coordinate a group of adult volunteers.
- Board Member for the Conway Cup, an annual benefit soccer tournament (2012–2016)
- Soccer Coach: VMI Club (2002–2005); RARO Youth Soccer Coach (2007–2010), Rockbridge United Soccer Club (2011–2015); Virginia State Youth Soccer Association (VYSA) State F Certificate in Coaching (2014)

### **TEACHING EXPERIENCE**

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**Virginia Military Institute:** *Full (2011), Associate (2007), and Assistant Professor (2001)* (Inorganic Chemistry)

- implemented “short courses” for advanced topics
- developed three new inorganic courses (Basic and Advanced Inorganic Chemistry and Advanced Inorganic Synthesis Laboratory)
- developed a new Capstone Course on “liquid crystals”
- taught six additional courses (general chemistry for science and engineering majors, general chemistry lab 1 and general chemistry lab for chemistry majors).

**University of Arizona:** *Lecturer.* Co-instructor of graduate level class with M.P. Doyle. (2000)

**Texas A&M University:** *Teaching Assistant.* Instructor in freshman chemistry laboratory. 1994–1995

**Duke University:** *Teaching Assistant.* Instructor in a senior level inorganic synthesis laboratory and a freshman chemistry laboratory. 1993–1994

## RESEARCH INTERESTS AND EXPERIENCE

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Crystal Engineering: (1) Development of new materials with liquid crystal applications. (2) Assembly of metal-organic frameworks (MOFs) using transition metal and lanthanide compounds. (3) Structural characterization of new complexes and examination of their electronic and physical properties in diverse areas, particularly in luminescence and catalysis. (4) Cocrystals of active pharmaceutical ingredients.

**Virginia Military Institute:** *Full* (2011), *Associate* (2007), and *Assistant Professor* (2001) (Inorganic Chemistry)

- Establish and maintain a research laboratory with approximately 20 undergraduate students and 1 high school student trained. Each has given presentations at national, regional or local conferences.
- 15 publications and 13 external research presentations since 2002
- Variety of instrumentation including X-ray diffractometer, NMR, DSC, IR, GC/MS, HPLC, UV/vis, fluorescence spectrophotometer, and hot-stage microscopy

**University of Arizona:** *Post-Doctoral Research Associate* with Michael P. Doyle (1999–2001)

- Mentored 3 undergraduate students and one graduate student
- Design and synthesis of chiral organic ligands and chiral dirhodium complexes for asymmetric catalysis.
- Use of column chromatography, GC and HPLC, NMR spectroscopy, mass spectroscopy, FT-IR and UV-visible spectroscopies, and Bruker Smart CCD X-ray diffractometer

**Texas A&M University:** *Research Assistant* with F. Albert Cotton (1994–1999)

- Synthesis and characterization of inorganic complexes
- Use of NMR spectroscopy, mass spectroscopy, cyclic voltammetry, FT-IR and UV-visible spectroscopies
- Manipulation of air-sensitive transition metal complexes using Schlenk and glove box techniques
- Over 60 single crystal X-ray diffraction structures completed using Nonius CAD4 serial detector and FAST area detector systems; structure solution using SHELX systems

**Duke University:** *Independent study* with George R. Dubay (1993–1994)

- Development of methodology for analysis of air-sensitive Group 13/15 complexes by mass spectroscopy

## EXTERNAL RESEARCH FUNDING

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*Jeffress Memorial Trust*, \$20,000. Awarded January **2009**

*Cottrell College Science Award* (Research Corporation), \$39,755. Awarded January **2004**.

*National Science Foundation CCLI Program* \$121,000. Awarded March **2002** (contributor).

*Camille and Henry Dreyfus Faculty Start-up Grants for Undergraduate Institutions*, \$20,000. Awarded July **2001**.

## ORAL RESEARCH PRESENTATIONS

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Liquid Crystalline Flavones, 247<sup>th</sup> ACS *National Meeting*, Dallas, TX, **2014**.

Flavones with Liquid Crystal Properties. *Southeast Regional Meeting of the ACS*, Atlanta, GA, November **2013**.

Flavones: Ligands and Liquid Crystals. Invited talk at *Florida State University*, March **2013**.

Flavones as liquid crystals. *Southeast Regional Meeting of the ACS*, Richmond, VA October **2011**.

Flavone Complexes and Networks. *Southeast Regional Meeting of the ACS*, Nashville, TN, November **2008**.

Flavones for Metal Complexation and Network Formation. 235<sup>th</sup> *ACS National Meeting*, New Orleans, LA, April **2008**.

Novel Flavones as Intermediaries for Network Formation. *Southeast Regional Meeting of the ACS*, Augusta, GA, November **2006**. (session chair)

Research is teaching—even at a military institution. Invited lecture at the Pimentel Award Symposium for F. A. Cotton, *National ACS Meeting*, April **2006**.

Novel Luminescent Materials. Invited talk at *Old Dominion University*, May **2005**.

In Search of a “Better Amidinate”: Dinuclear Compounds with the Bicyclic Nitrogen Donor Ligand HPP. 208<sup>th</sup> *ACS National Meeting*, Dallas, TX, March **1998**.

Some Dinuclear Compounds of the Group 6 Elements with the Bicyclic Nitrogen Donor Ligand HPP. American Chemical Society *Regional Meeting*, Houston, TX, October **1996**.

## **POSTER RESEARCH PRESENTATIONS**

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Synthesis of flavones with mesogenic properties. Daren J. Timmons,\* Abraham J. Jordan, Heidi D. Beemer, Thomas A. Bradshaw, Chelsea M. Loy, Kacey C. Hall. Southeastern Regional Meeting of the ACS, Raleigh, NC, November **2012**.

Self-organizing materials from flavones. Daren J. Timmons,\* Stanton Q. Smith, Jeff R. Cooper '10, Jerry L. Hickey '11. Southeastern Regional Meeting of the ACS, San Juan, Puerto Rico, October **2009**.

Novel Transition Metal Flavonolate Complexes. *Southeast Regional Meeting of the ACS*, Durham, NC, November **2004**.

Transition Metal Complexes as a Control in Lanthanide-based Luminescence. *Southeast Regional Meeting of the ACS*, Charleston, SC, November **2002**.

Remote Functionalization of Dirhodium(II) Carboxamidates for Stereocontrol in Asymmetric Catalysis. *Contemporary Inorganic Chemistry II*, College Station, TX, March **2000**.

## **RESEARCH PUBLICATIONS**

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27. Asymmetric flavone-based liquid crystals: synthesis and properties. D. J. Timmons, A. J. Jordan, A. A. Kirchon, N. S. Murthy, T. J. Siemers, D. P. Harrison, C. Slebodnick. *Liq. Cryst.* **2017**, 44(9), 1436-1449. Featured on cover.
26. A Stepwise Transition from Microporosity to Mesoporosity in Metal-Organic Frameworks by thermal treatment. D. Yuan, D. Zhao, D. J. Timmons, and H.-C. Zhou *Chem. Sci.* **2011**, 2, 103-106.
25. Tune the Topology and Functionality of Metal-Organic Frameworks by Ligand Design. D. Zhao, D. J. Timmons, D. Yuan, and H.-C. Zhou *Acc. Chem. Res.* **2011**, 44 (2), 123–133.
24. Ligand Bridging-Angle-Driven Assembly of Molecular Architectures Based on Quadruply Bonded Mo–Mo Dimers. J.-R. Li, A. Yakovenko, W. Lu, D. J. Timmons, W. Zhuang, D. Yuan, H.-C. Zhou *J. Am. Chem. Soc.*, **2010**, 132 (49), 17599–17610.
23. Interconversion between molecular polyhedral and metal-organic frameworks. J.-R. Li, D. J. Timmons, H.-C. Zhou, *J. Am. Chem. Soc.* **2009**, 131, 6368–6369.

22. Potential Applications of Metal-Organic Frameworks. R. J. Kuppler, Q.-R. Fang, J.-R. Li, T. A. Makal, D. J. Timmons, A. A. Yakavenko, M. D. Young, D. Yuan, D. Zhao, W. Zhuang, and H.-C. Zhou, *Coord. Chem. Rev.* **2009**, 253(23-24), 3042-3066.
21. Assembling extended structures with flavonoids. D. J. Timmons, M. R. Pacheco, K. A. Fricke, C. Slebodnick, *Cryst. Growth Des.* **2008**, 8, 2765-2769.
20. Facilitating Access to the Most Easily Ionized Closed-shell Molecule,  $W_2(hpp)_4$ . F. A. Cotton, J. P. Donahue, N. E. Gruhn, D. L. Lichtenberger, C. A. Murillo, D. J. Timmons, L. O. Van Dorn, D. Villagrán, X. Wang, *Inorg. Chem.* **2006**, 45, 201-213.
19. "Matched/Mismatched" Diastereomeric Dirhodium(II) Carboxamidate Catalyst Pairs. Structure-Selectivity Correlations in Diazo Decomposition and Hetero-Diels-Alder Reactions. M.P. Doyle, J. P. Morgan, J. C. Fettinger, P. Y. Zavalij, J. T. Colyer, D. J. Timmons, M. D. Carducci, *J. Org. Chem.* **2005**, 70, 5291-5301.
18. Chiral Dirhodium(II) Catalysts and their Applications. D. J. Timmons, M. P. Doyle, in *Multiple Bonds Between Metal Atoms*, 3<sup>rd</sup> ed., Springer Science and Business Media, Inc: **2005**.
17. The Extraordinary Ability of Guanidinate Derivatives to Stabilize Higher Oxidation Numbers in Dimetal Units by Modification of Redox Potentials: Structures of  $Mo_2^{5+}$  and  $Mo_2^{6+}$  Compounds. F. A. Cotton, L. M. Daniels, C. A. Murillo, D. J. Timmons, C. C. Wilkinson, *J. Am. Chem. Soc.*, **2002**, 124, 9249-9256.
16. A Complete Series of  $W_2(hpp)_4Cl_n$  ( $n = 0,1,2$ ) Compounds. F. A. Cotton, P. Huang, C. A. Murillo, D. J. Timmons *Inorg. Chem. Commun.* **2002**, 5, 501-504.
15. Preparation and Catalytic Properties of Immobilized Chiral Dirhodium(II) Carboxamidates. M. P. Doyle, D. J. Timmons, J. S. Tumonis, H.-M. Kao, E. C. Blossey *Organomet.* **2002**, 21, 1747-1749.
14. In Search of High Stereocontrol for the Construction of *cis*-Disubstituted Cyclopropane Compounds. Total Synthesis of a Cyclopropane-Configured Urea-PETT Analogue that is a HIV-1 Reverse Transcriptase Inhibitor. W. Hu, D. J. Timmons, M. P. Doyle *Org. Lett.* **2002**, 4, 901-904.
13. Highly Selective Synthesis of a 2-Deoxyxylonolactam *via* Enantioselective Carbon-Hydrogen Insertion Reactions Using Chiral Dirhodium(II) Carboxamidates. M. P. Doyle, M. Yan, I. M. Phillips, D. J. Timmons *Adv. Synth. Catal.* **2002**, 344, 91-95.
12. First Attempts at Differential Diastereoselection in Catalytic Reactions of N-chirally substituted Dirhodium(II) Tetrakis[Methyl 2-oxaimidazolidine-4(*S*)-carboxylates] with Diazoacetates. M. P. Doyle, D. J. Timmons, M. M. R. Arndt, A. Duursma, J. T. Colyer, H. Brunner *Russ. Chem. Bull., Int. Ed.* **2001**, 50, 2156-2161. (invited contribution).
11. Highly Stereoselective Syntheses of Five- and Seven-Membered Ring Heterocycles from Ylides Generated by Catalytic Reactions of Styryldiazoacetates with Aldehydes and Imines. M. P. Doyle, W. Hu, D. J. Timmons *Org. Lett.* **2001**, 3, 3741-3744.
10. Epoxides and Aziridines from Diazoacetates via Ylide Intermediates. M. P. Doyle, W. Hu, D. J. Timmons *Org. Lett.* **2001**, 3, 933-935.
9. Catalyst Selection for Metal Carbene Transformations. D. J. Timmons, M. P. Doyle *J. Organomet. Chem.* **2001**, 617-618, 98-104 (invited review).

8. Completion of the Series of  $M_2(hpp)_4Cl_2$  Compounds from W to Pt: The W, Os, and Pt Compounds. R. Clerac, F. A. Cotton, L. M. Daniels, J. P. Donahue, C. A. Murillo, D. J. Timmons *Inorg. Chem.* **2000**, *39*, 2581-2584.
7. A very short  $Re_2^{6+}$  quadruple bond: First DFT calculations on a paddlewheel complex with an element of the third transition series. F. A. Cotton, J. Gu, C. A. Murillo, D. J. Timmons *J. Chem. Soc., Dalton Trans.* **1999**, *21*, 3741-3745.
6. First paddlewheel complex with a doubly-bonded  $Ir_2^{6+}$  core. F. A. Cotton, C. A. Murillo, D. J. Timmons *J. Chem. Soc., Chem. Commun.* **1999**, 1427-1428.
5. The First Dinuclear Complex of Palladium(III). F. A. Cotton, Jiande Gu, C. A. Murillo, D. J. Timmons *J. Am. Chem. Soc.* **1998**, *120*, 13280-13281.
4. Trinuclear complexes of four coordinate iron and cobalt: Some reflections on the importance of the reaction conditions for the formation of metal-metal bonds. F. A. Cotton, C. A. Murillo, D. J. Timmons *Polyhedron* **1998**, *18*, 423-428.
3. Further Study of Very Close Non-Bonded Cu(I)—Cu(I) Contacts. Molecular Structure of a New Compound and Density Functional Theory Calculations. F. A. Cotton, X. Feng, D. J. Timmons *Inorg. Chem.* **1998**, *37*, 4066-4069.
2. New multiply-bonded dimetal compounds containing bridging 1,3,4,6,7,8-hexahydro-2H-pyrimido[1,2-a]pyrimidinato groups- I. The  $V_2^{4+}$ ,  $Cr_2^{4+}$  and  $Mo_2^{4+}$  compounds and some salts of the protonated ligand. F. A. Cotton, D. J. Timmons *Polyhedron* **1998**, *17*, 179-184.
1. The dependence of the metal-to-metal distances on Mo—Mo multiple bond orders; a new triple bond. F. A. Cotton, L. M. Daniels, C. A. Murillo, D. J. Timmons *J. Chem. Soc., Chem. Commun.* **1997**, 1449-1450.