**Darryl Boyd, Ph.D.**

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#### Education

**Doctor of Philosophy**, Inorganic Chemistry December 2010

Purdue University, West Lafayette, Indiana

**Master of Science**, Biochemistry August 2008

Purdue University, West Lafayette, Indiana

### **Bachelor of Science**, Chemistry May 2004

University of Michigan, Ann Arbor, Michigan

#### Research Experience

U.S. Naval Research Laboratory, Washington, DC Aug 2014 – present

Research Chemist, Optical Sciences Division

* Developing polymeric materials for use in high-performance optical applications via sulfur chemistries.
* Synthesizing unique (luminescent) nanocomposite polymers for use in Additive Manufacturing.
* Developing chalcogenide-based polymers for use in rechargeable battery and energy applications.
* Chemically modifying nanostructured, IR-transmitting substrates to impart superhydrophobicity.
* Manufacturing unique polymer nanocomposite materials for use as high-powered laser claddings.

U.S. Naval Research Laboratory, Washington, DC May 2011 – Aug 2014

Post-Doctoral Research, Center for Bio/Molecular Science & Engineering

Advisor: Professor Frances S. Ligler

* Developed multifunctional, modifiable polymer films and fibers for use as sensors and smart materials.
* Incorporated nanoparticles into thiol-based polymers to form optical, SERS-active nanocomposite materials.
* Fabricated micron-scale fibers into various specific shapes and sizes, using microfluidics, in order to impart increased strength to composite materials made from the fibers.

Purdue University, West Lafayette, Indiana Jan 2008 – Dec 2010

Doctoral Degree (Ph.D.), Chemistry Department

Advisor: Professor Tong Ren

* Synthesized novel diruthenium compounds to evaluate their ability to modulate electron transfer when equatorially chelated by ferrocene carboxylate ligands.
* Cross-coupled diruthenium complexes to nucleobases, nucleosides and nucleotides for use as DNA single nucleotide polymorphism (SNP) biosensor detectors.
* Bound bidentate ligands and nucleotides to diruthenium complexes to investigate anti-viral properties.

Purdue University, West Lafayette, Indiana Aug 2004 – Dec 2007

Master’s Degree (Thesis), Chemistry Department

Advisor: Professor Christine Hrycyna

* Carried out site-directed mutagenesis on several amino acid residues of the methyltransferase protein Ste14p to determine their effect on the ability of Ste14p to transfer methyl groups to the G-protein Ras, which is suspected of causing pancreatic cancer when mutated.
* Performed protein purification on Ste14p in order to carry out further assays on the protein.
* Initiated the development of a protein filter binding assay, as well as a radioactive photolabeling assay, for Ste14p to test cloned mutants for the ability to bind a methyl donor.

University of Michigan, Ann Arbor, Michigan Aug 1999 – July 2004

Bachelor’s Degree, Chemistry Department

Advisor: Professor Vincent Pecoraro

* Used amino acids (e.g. cysteine, leucine) to synthesize gadolinium containing 15-MC-5 metallacrown ethers.

#### Leadership

Chemical Society of Washington Oct 2015 – present

* President (1-year term in 2020)
* Councilor (2020 – 2022) & Alternate Councilor (2015 – 2018) to the American Chemical Society
* Elections Chair (2021 – 2022)
* Public Relations Chair (2015 – 2019)

National Organization of Black Chemists and Chemical Engineers March 2015 – present

* National Conference Planning Committee Chairperson (2018)
* National Conference Technical Sessions Co-Chair and Student Programs committee member (2015 – 2017)
* National Conference Poster Session Organizer (2015 – 2017)

U.S. Naval Research Laboratory, Washington, DC June 2012 – May 2014

Center for Bio/Molecular Science & Engineering

* Postdoc representative for the Center’s colloquium series planning committee; responsible for hosting the outside speakers and for organizing an informal “postdocs-only” roundtable discussions with the speakers.

National Organization of Black Chemists and Chemical Engineers Aug 2004 – Dec 2010

Purdue University, West Lafayette, IN

* Planned and organized the 1st Purdue NOBCChE Research Symposium (April 2009), a campus-wide research event that is designed to enhance the presentation skills of students engaged in research. The symposium targets undergraduate and graduate students that have conducted research in the chemical sciences. This symposium is now an annual event.
* Former President, Vice President and Secretary for the Purdue Chapter.
* Co-Planner for the 2007 Midwest Regional Conference held at Purdue University.

National Organization of Black Chemists and Chemical Engineers Jan 2000 – May 2004

University of Michigan, Ann Arbor, MI

* Served as President, Organizational Liaison and Chemistry Representative.
* Organized meetings and built relationships with corporate contacts in order to increase the membership’s awareness of career opportunities in the chemical sciences.

#### Science Outreach Activities

Science Made Simple, LLC 2019 – present

CEO/Founder

* Founded a multi-faceted science focused company with emphasis in 3 areas: (1) scientific educational outreach, (2) public scientific communication and (3) groundbreaking scientific research.

Roots Public Charter School – Washington, DC 2019 – present

STEM Instructor

* Give a monthly educational, hands-on/interactive STEM lesson for youths aged pre-K through 5th grade.

Transformational Education Adventure Center (the TEA Center) McClean, VA 2017 – present

STEM Director

* Lead an educational and hands-on/interactive STEM program for youths K-5.

[www.DrBoydTheChemist.com](http://www.DrBoydTheChemist.com) 2016 – present

Dr. Boyd “The Chemist”

* Creator of a science outreach website that features original science videos for children and a science blog.
* Write, perform and produce all posts on the associated YouTube channel (***search: Dr Boyd The Chemist***).

#### Teaching & Mentoring Experience

U.S. Naval Research Laboratory, Washington, DC 2011 – present

Center for Bio/Molecular Sci. & Engin.**/**Optical Sciences

* Mentored several graduate, undergraduate and high school summer research interns.

Purdue University, West Lafayette, IN Aug 2004 – Dec 2010

Teaching Assistant & Tutor, Chemistry Department

* Taught and tutored for multiple general chemistry courses (111, 112, 115, 116, 125, 126) and introductory biochemistry (333) as a teaching assistant during the course of eleven semesters.
* Led hands-on laboratory and recitation sections for each course (~50 students per semester).
* Co-wrote problem sets and quizzes for the biochemistry courses.

University of Michigan, Ann Arbor, MI Feb 2001 – May 2004

Chemistry Tutor, Comprehensive Studies Program Office

* Served as the head tutor for general chemistry students.

#### Awards & Recognitions

2021 – *Admiral Michelle Howard Legacy Award* – BEYA STEM Global Competitiveness Conference

2020 – *ARPAD Publication Award* – US Naval Research Laboratory

2020 – *Distinguished Alumni* – Purdue University College of Science

2019 – *Frontiers in Engineering Symposium Invitee* – National Academy of Engineering

2019 – *Edison Patent Award* – US Naval Research Laboratory

2019 – *SPIE DCS Rising Researcher* – SPIE, International Society for Optics & Photonics

2018 – *C&EN Talented 12* – Chemical & Engineering News, magazine of the American Chemical Society

2018 – *Diversity Transformation External Advisory Board Member* – Purdue University Chemistry Department

2017 – *ACS Student Chapter Guest Lecturer* – University of Maryland, College Park Chemistry Department

2016 – *Lloyd N. Ferguson Young Scientist Award Winner* – NOBCChE National Award

2016 – *NOBCChE Student Chapter Guest Lecturer* – Ohio State University Chemistry Department

2014 – *Jerome & Isabella Karle Research Fellow* – US Naval Research Laboratory

2014 – *Future Faculty Symposium Invitee* – Massachusetts Institute of Technology (MIT)

2014 – *Postdoctoral Research Publication Award* – National Research Council

2011 – *RAP Fellowship Recipient* – National Research Council

2010 – *Best Oral Presentation* – Purdue Indiana Notre Dame University – Inorganic Chemistry Conference

2010 – *Building Engineering and Science Talent (BEST) Symposium Invitee* – Dow Chemical Company

2010 – *Carl Storm Fellowship Recipient* – Gordon Research Conference (Inorganic Chemistry)

2009 – *Research & Technical Careers in Industry Conference Invitee* (now called FIRST) – Procter & Gamble

2009 – *Special Recognition Award* – Purdue Chem Dept: established “Purdue NOBCChE Research Symposium”

2008 – *Grant Recipient* (2 years of funding) – Purdue Research Foundation

2008 – *Leadership Award Recipient* – Purdue University Black Graduate Association

2008 – *Research Scholar Grant Recipient* – Alliance for Graduate Education and the Professoriate (AGEP)

2004 – *Fellowship Recipient* – Alfred P. Sloan

#### Professional Memberships

* Macromolecules – Journal Editorial Advisory Board Member Jan 2021 – present
* Analytical Chemistry – Journal Editorial Advisory Board Member Jan 2021 – present
* Cell Reports Physical Science – Journal Editorial Advisory Board Member Aug 2019 – present
* RadTech International – RadTech UV+EB Magazine Associate Editor April 2017 – present
* Sigma Xi – Scientific Research Society – NRL Edison Chapter May 2015 – present
* Chemical Society of Washington (CSW) – *Board Member since 2015* Aug 2011 – present
* American Chemical Society (ACS) Aug 2004 – present
* National Organization of Black Chemists and Chemical Engineers (NOBCChE) Jan 2000 – present

#### Patents & Trademarks

1. **Boyd, D.A.;** Myers, J.D.; Nguyen, V.Q.; Baker, C.C.; Kim, W.; Sanghera, J.S., “Organically Modified Chalcogenide Polymers For Use As Optical Adhesive Materials,” ***NC #112154-US2,*** ***US 17/855,021***, Notice of Allowance. July 24, 2023.
2. **Boyd, D.A.;** Nguyen, V.Q; Rhonehouse, D.L.; Chin, G.D.; Kung, F.H.; Ewing, K.J.; Gibson, D.J.; Kim, W.; Sanghera, J.S., “Organically Modified Chalcogenide Polymer Preforms and Fibers,” ***NC #211455-US1***, filed March 6, 2023.
3. **Boyd, D.A.**; Stewart, M.H.; Susumu, K.; Oh, E. ; Wissman, J.P., “Fabrication of Luminescent Quantum Dot Thiol-yne Nanocomposites With Tailorable Optical, Thermal and Mechanical Properties,”[***US20220228061A1***](https://patents.google.com/patent/US20220228061A1/en), filed April 5, 2022.
4. **Boyd, D.A.;** Stewart, M.H.; Susumu, K.; Oh, E., “Fabrication of Transparent, Luminescent Quantum Dot Thiol-yne Nanocomposites With Tailorable Optical, Thermal and Mechanical Properties,” ***US Patent US11180696***, Granted. November 23, 2021.
5. **Boyd, D.A.;** Myers, J.D.; Nguyen, V.Q.; Baker, C.C.; Kim, W.; Sanghera, J.S., “Organically Modified Chalcogenide Polymers For Use As Optical Adhesive Materials,” ***NC #112154***, filed Dec 3, 2019.
6. **Boyd, D.A.,** “Science Made Simple,” ***US Trademark SN88298003***, Granted August 6, 2019.
7. **Boyd, D.A.;** Rhonehouse, D.L.; Baker, C.C.; Shaw, L.B.; Kim, W.; Sanghera, J.S., “Fabrication of Polymer Nanocomposites For Use As Fiber Laser Claddings,” ***US Patent Application #62/833,057***, filed April 12, 2019.
8. Baker, C.C.; **Boyd, D.A.;** Myers, J.D.; Nguyen, V.Q.; Drake, G.A.; Bowman, S.R.; Kim, W.; Sanghera, J.S., “Organically Modified Multicomponent Chalcogenide Polymers,” ***US Patent US10059810B2***, Granted. August 28, 2018
9. **Boyd, D.A.;** Frantz, J.A.; Bayya, S.S.; Busse, L.E.; Kim, W.; Aggarwal, I.; Sanghera, J.S., “Processing of Superhydrophobic, Light Transmissive, Anti-Reflective Nanostructured Surfaces,” ***US Patent Application #15/193,210***, filed June 27, 2016.

#### Publications (h-index: 16, as of 11/01/2023 – Google Scholar)

1. Collins, N.S.; Appleby, L.; **Boyd, D.**; Thammavongsy, Z., “Wakanda Forever: Vibranium and the 5g Subshell,” *Chem.Educator*, **2023**, *28*, 80-82.
2. **Boyd, D.A.;** Nguyen, V.Q; Kung, F.H.; Pollard, N.A.; Myers, J.D.; McClain, C.C.; Hunt, M.P.; Gibson, D.J.; Baker, C.C.; Clayborne, A.Z.; Kim, W.; Sanghera, J.S., “Comonomer Isomers Result in Varied Optical Properties Within ORMOCHALC Polymers,” ChemRxiv, Cambridge: Cambridge Open Engage; **2023**.
3. Liu, S.; Islam, M.D.; Ku, Z.; Urbas, A.M.; Derov, J.; **Boyd, D.A.**; Kim, W.; Sanghera, J.S.; Ryu, J.E., “Novel Nanocomposite Refractive Index Tuning Mechanism Based On Controlling Embedded Particle Morphology,” *ASME International Mechanical Engineering Congress and Exposition*, **2021**, *85574*, V003T03A011.
4. Islam, M.D.; Liu, S.; Derov, J.; Urbas, A.M.; Ku, Z.; Sihn, A.; Smith, E.M.; **Boyd, D.A.**; Kim, W.; Sanghera, J.S.; Nguyen, V.Q.; Myers, J.D.; Baker, C.C.; Ryu, J.E., “Highly Efficient Mid-Wavelength Infrared (MWIR) Polarizer By ORMOCHALC Composite With Improved Thermomechanical Stability And Spectral Selectivity,” *ASME International Mechanical Engineering Congress and Exposition*, **2021**, *85574*, V003T03A012.
5. **Boyd, D.A.**, “Safer and Greener Polymer Demonstrations for STEM Outreach,” *ACS Polymers Au*, **2021**, *1*(2), 67-75.
6. **Boyd, D﻿﻿.A.**, “The Importance of Mentorship and Science Outreach to the Next Generation,” In: Collins, S.N., editor. [African American Chemists: Academia, Industry, and Social Entrepreneurship](https://pubs.acs.org/doi/book/10.1021/bk-2021-1381). American Chemical Society, **2021**, *1381*, 53–65.
7. Liu, S.; Islam, M.D.; Ku, Z.; **Boyd, D.A.**; Zhong, Y.; Urbas, A.M.; Smith, E.; Derov, J.; Nguyen, V.Q.; Kim, W.; Sanghera, J.S.; Ko, Y.; Genzer, J.; Ye, X; Guo, Z.; Seo, E.; Ryu, J.E., “Novel Computational Design of High Refractive Index Nanocomposites and Effective Refractive Index Tuning Based On Nanoparticle Morphology Effect,” *Composites Part B: Engineering*, **2021**, *223*, 109128.
8. Islam, M.D.; Liu, S.; Derov, J.; Urbas, A.; Ku, Z.; **Boyd, D.A.**; Kim, W.; Sanghera, J.S.; Nguyen, V.Q.; Myers, J.D.; Baker, C.C.; Smith, E.M.; Ryu, J.E., “Tunable Mid-Wavelength Infrared (MWIR) Polarizer By ORMOCHALC Composite With Improved Thermomechanical Stability,” *SPIE, Plasmonics: Design, Materials, Fabrication, Characterization, and Applications XIX*, **2021**, 1179722.
9. Liu, S.; Islam, M.D.; Ku, Z.; Urbas, A.M.; **Boyd, D.A.**; Kim, W.; Sanghera, J.S.; Ryu, J.E., “The Polymer Nanocomposites Embedded Particles Size and Agglomeration Effect On The Effective Refractive Index Tuning,” *SPIE, Nanoengineering: Fabrication, Properties, Optics, Thin Films, and Devices XVIII*, **2021**, 118020L.
10. Islam, M.D.; Liu, S.; **Boyd, D.A.**; Zhong, Y.; Nahid, M.M.; Henry, R.; Taussig, L.; Ko, Y.; Nguyen, V.Q.; Myers, J.D.; Baker, C.C.; Kim, W.; Sanghera, J.S.; Smith, E.M.; Derov, J.S.; Ye, X.; Amassian, A.; Ade, H.; Genzer, J.; Ryu, J.E., “Enhanced Mid-Wavelength Infrared Refractive Index of Organically Modified Chalcogenide (ORMOCHALC) Polymer Nanocomposites With Thermomechanical Stability,” *Optical Materials*, **2020**, *108*, 110197.
11. Islam, M.D.; Kim, J.O.; Ko, Y.; Ku, Z.; **Boyd, D.A.**; Smith, E.M.; Nguyen, V.Q.; Myers, J.D.; Baker, C.C.; Kim, W.; Sanghera, J.S.; Czaplewski, D.A.; Urbas, A.M.; Genzer, J.; Ryu, J.E., “Design of High Efficient Mid-Wavelength Infrared Polarizer on ORMOCHALC Polymer,” *Macromolecular Materials and Engineering*, **2020**, *305* (5), 2000033.
12. **Boyd, D.A.;** Nguyen, V.Q; McClain, C.C.; Kung, F.H.; Baker, C.C.; Myers, J.D.; Hunt, M.P.; Kim, W.; Sanghera, J.S., “Fabrication of High Refractive Index, Infrared Transmitting Organically Modified Chalcogenide (ORMOCHALC) Polymers,” *Proc. SPIE 10998*, Advanced Optics for Imaging Applications: UV through LWIR IV, **2019,** 1099802.
13. **Boyd, D.A.**; Shaw, L.B.; Baker, C.C.; Rhonehouse, D.L.; Hunt, M.H.; Friebele, E.J.; Kim, W.; Sanghera, J.S., “Improved Polymer Cladding For Eye Safer Fiber Lasers,” *Proc. SPIE 10981*, Laser Technology for Defense and Security XV, **2019,** 10910H.
14. **Boyd, D.A.;** Nguyen, V.Q.; McClain, C.C.; Kung, F.H.; Baker, C.C.; Myers, J.D.; Hunt, M.P.; Kim, W.; Sanghera, J.S., “Optical Properties of a Sulfur-Rich Organically Modified Chalcogenide Polymer Synthesized via Inverse Vulcanization and Containing an Organometallic Comonomer,” *ACS Macro Letters*, **2019**, *8*, 113–116.
15. McClain, C.C.; Brown, C.G.; Flowers, J.; Nguyen, V.Q.; **Boyd, D.A.,** “Optical Properties of Photopolymerized Thiol-Ene Polymers Fabricated Using Various Multivinyl Monomers,” *Industrial & Engineering Chemistry Research*, **2018**, *57* (27), 8902–8906.
16. Shaw, L.B.; Hunt, M.; Kim, W.; Bayya, S.S.; **Boyd, D.A.**; Brown, C.G.; Bowman, S.R.; Sanghera, J.S., “Fabrication and Spectroscopy Pr3+ doped Ceramic Calcium Lanthanum Sulfide for Mid-IR Laser Gain Material,” High-Brightness Sources and Light-driven Interactions, OSA Technical Digest, **2018**, MM3C.5.
17. Stewart, M.H.; Susumu, K.; Oh, E.; Brown, C.G.; McClain, C.C.; Gorzkowski, E.P.; **Boyd, D.A.,** “Fabrication of Photoluminescent Quantum Dot Thiol-yne Nanocomposites via Thermal Curing or Photopolymerization,” *ACS Omega*, **2018**, *3*, 3314–3320.
18. **Boyd, D.A.**; Frantz, J.A.; Busse, L.E.; Kim, W.; Bayya, S.S.; Aggarwal, I.D.; Sanghera, J.S., “Superhydrophobic, Infrared Transmissive Moth Eye-like Substrates For Use In Wet Conditions,” *Proc. SPIE 10179*, Window and Dome Technologies and Materials XV, **2017**, 1017906-1017906-8.
19. **Boyd, D.A.;** Baker, C.C.; Myers, J.D.; Nguyen, V.Q.; Drake, G.A.; McClain, C.C.; Kung, F.H.; Bowman, S.R.; Kim, W.; Sanghera, J.S., “ORMOCHALCs: Organically Modified Chalcogenide Polymers For Infrared Optics,” *Chemical Communications*, **2017**, *53*, 259–262.
20. **Boyd, D.A.**, “Sulfur and its Role in Modern Materials Science,” *Angew. Chemie*, **2016**, 55 (50), 15486–15502.
21. **Boyd, D.A.**; Frantz, J.A.; Nimalan, R.; Busse, L.E.; Kim, W.; Bayya, S.S.; Sanghera, J.S., “Periodically Patterned Germanium Surfaces Modified To Form Superhydrophobic, IR-Transmissive Substrates,” *Opt. Mater. Express*, **2016**, *6* (10), 3254–3261.
22. **Boyd, D.A.**; Frantz, J.A.; Bayya, S.S.; Busse, L.E.; Kim, W.; Aggarwal, I.; Poutous M.; Sanghera, J.S., “Modification of Nanostructured Fused Silica For Use As Superhydrophobic, IR-Transmissive, Anti-Reflective Surfaces,” *Opt. Mater.*, **2016**, *54*, 195–199.
23. **Boyd, D.A.**; Snider R.M.; Erickson J.; Roy J.N.; Strycharz-Glaven S.M.; Tender L.M.; Beyenal, H.; Babauta, J.T., “Theory of Redox Conduction and the Measurement of Electron Transport Rates Through Electrochemically Active Biofilms,” *Book Chapter* in: Biofilms in Bioelectrochemical Systems: From Laboratory Practice to Data Interpretation. *New York: John Wiley and Sons, Inc.*, **2015**, ISBN: 9781118413494.
24. Daniele, M.A.; **Boyd, D.A.**; Mott, D.R.; Ligler, F.S., “3D hydrodynamic Focusing Microfluidics for Emerging Sensing Technologies,” *Biosens. & Bioelectron.,* **2015**, *67*, 25–34.
25. Daniele, M.A.\*; **Boyd, D.A.**; Ligler, F.S.; Adams, A.A., “Microfluidic Strategies for Design and Assembly of Microfibers and Nanofibers with Tissue Engineering and Regenerative Medicine Applications,” *Adv. Healthcare Mater.,* **2015**, *4*, 11–28.
26. **Boyd, D.A.**; Bezares, F.J.; Pacardo, D.B.; Ukaegbu, M.; Hosten, C.; Ligler, F.S., “Small-Molecule Detection in Thiol-Yne Nanocomposites vis Surface-Enhanced Raman Spectroscopy,” *Analytical Chemistry*, **2014**, 86, 12315–12320.
27. Strycharz-Glaven, S.M.; Roy, J.N.; **Boyd, D.A.**; Snider, R.M.; Tender, L.M., “[Electron Transport through Early Exponential‐Phase Anode‐Grown Geobacter sulfurreducens Biofilms](http://onlinelibrary.wiley.com/doi/10.1002/celc.201402168/full),” *ChemElectroChem*, **2014**, *1*, 1957–1965.
28. **Boyd, D.A.**; Naciri, J.; Fontana, J.; Pacardo, D.B.; Shields, A.R.; Verbarg, J.; Spillmann, C.M.; Ligler, F.S., “Facile Fabrication of Color Tunable Film and Fiber Nanocomposites via Thiol Click Chemistry,” *Macromolecules,* **2014**, *47*, 695–704.
29. **Boyd, D.A.**; Adams, A.A.; Daniele, M.A.; Ligler, F.S., “Microfluidic Fabrication of Polymeric and Biohybrid Fibers with Pre-designed Size and Shape,” *J. Visualized Exp.,* **2014**, *83,* DOI: 10.3791/50958.
30. **Boyd, D.A.**; Shields, A.R.; Howell, P.B.; Ligler, F.S., “Design and Fabrication of Uniquely Shaped Thiol–ene Microfibers Using a Two-Stage Hydrodynamic Focusing Design,” *Lab Chip,* **2013**, *13,* 3105–3110.
31. **Boyd, D.A.**; Shields, A.R.; Naciri, J.; Ligler, F.S., “Hydrodynamic Shaping, Polymerization, and Subsequent Modification of Thiol Click Fibers,” *ACS Appl. Mater. Inter.,* **2013**, *5,* 114–119.
32. **Boyd, D.A.**; Fanwick, P.E.; Ren, T., “New Diruthenium Complexes Formed Via Modification With 1,1’–Ferrocene Dicarboxylic Acid,” *Inorg. Chim. Acta*, **2011**, 370, 198–202.
33. **Boyd, D.A.**; Cao, Z.; Song, Y.; Wang, T.; Fanwick, P.E.; Crutchley, R.J.; Ren, T., “Diruthenium Compounds Bearing Equatorial Fc-containing Ligands: Synthesis and Electronic Structure,” Inorg. Chem., **2010**,49 (24), 11525–11531.
34. **Boyd, D.A.**; Crutchley, R.J.; Fanwick, P.E.; Ren, T., “Fc-Fc Electronic Interaction through Equatorial Pathways of a Diruthenium Core,” Inorg. Chem., **2010**,49 (4), 1322–1324.

#### Research Funding (as Principal or co-Principal Investigator)

* “Sodium-ORMOCHALC Batteries For Energy Storage,” **$1.35M,** FY23 – FY25.
* “ORMOCHALC Polymers for Next-Generation IR Optics,” **$1.5M**, FY22 – FY24.
* “*Wavelength Agnostic Polymer Pump Cladding for High Power Fiber Lasers,*” High Energy Laser Joint Technology Office (JTO), **$600K,** FY20 – FY22.
* “*Optimization of ORMOCHALC for SeASCAPE,*” Office of Naval Research (ONR) Code 33, **$75K,** CY19 – FY19.
* “*Thermoelectrochemical and Transformational Material Schemes for Safe, Reliable Rechargeable Batteries,*” ONR Code 33, **$100K**, FY17 – FY18.
* “*Improved Polymer Cladding for Eye Safer High Energy Fiber Lasers,*” JTO, **$600K**, FY17 – FY19.
* “*Quantum Dot Imbedded Chiral Polymers for the Production of Metaphotonic Materials with Sensing Capabilities,*“Jerome & Isabella Karle Fellowship Award (NRL), **$25K,** FY14 – FY15.

#### Oral Presentations

1. *National Organization of Black Chemists and Chemical Engineers*

**Boyd, D.A.;** Nguyen, V.Q; Rhonehouse, D.L.; Chin, G.D.; Kung, F.H.; Ewing, K.J.; Gibson, D.J.; Kim, W.; Sanghera, J.S., “Sulfur-Rich Infrared Transmitting Polymer Fibers,” New Orleans, LA, **Sept. 2023**

1. *American Chemical Society – PMSE Division*

**Boyd, D.A.;** Nguyen, V.Q; Rhonehouse, D.L.; Chin, G.D.; Kung, F.H.; Ewing, K.J.; Gibson, D.J.; Kim, W.; Sanghera, J.S., “Sulfur-Rich Infrared Transmitting Polymer Fibers,” San Francisco, CA, **Aug. 2023**

1. *Lloyd N. Ferguson Distinguished Lecture*

**Boyd, D.A.**, “Be Stellar, Keep Striving!,” *Distinguished Lecturer Presentation*, California State University, Los Angeles, **March 2023**

1. *Lloyd N. Ferguson Distinguished Lecture*

**Boyd, D.A.;** Nguyen, V.Q; Kung, F.H.; Pollard, N.A.; Myers, J.D.; McClain, C.C.; Hunt, M.P.; Gibson, D.J.; Baker, C.C.; Clayborne, A.Z.; Kim, W.; Sanghera, J.S., “Comonomer Isomers Result in Varied Optical Properties Within ORMOCHALC Polymers,” *Invited Talk*, California State University, Los Angeles, **March 2023**

1. *Mid-Hudson ACS Research Symposium*

**Boyd, D.A.;** Nguyen, V.Q; Kung, F.H.; Pollard, N.A.; Myers, J.D.; McClain, C.C.; Hunt, M.P.; Gibson, D.J.; Baker, C.C.; Clayborne, A.Z.; Kim, W.; Sanghera, J.S., “Comonomer Isomers Result in Varied Optical Properties Within ORMOCHALC Polymers,” *Invited Talk*, Virtual Conference, **April 2022**

1. *Cabrini College*

**Boyd, D.A.**, “A Career In The Chemical Sciences,” *Invited Talk*, Virtual Presentation, **April 2022**

1. *ACS VA YCC - NOBCChE Diversity and Inclusion/Professional Development Workshop*

**Boyd, D.A.**, “A Career In The Chemical Sciences,” *Invited Talk*, Virtual Presentation, **April 2022**

1. *Stony Brook College*

**Boyd, D.A.**, “Slime, Polymers & The Future of Polymer Education,” *Invited Talk*, Virtual Presentation, **Jan. 2022**

1. *Stony Brook College*

**Boyd, D.A.**, “A Career In The Chemical Sciences,” *Invited Talk*, Virtual Presentation, **Jan. 2022**

1. *PACIFICHEM – Sulfur Rush Series*

**Boyd, D.A.;** Nguyen, V.Q; Kung, F.H.; Pollard, N.A.; Myers, J.D.; McClain, C.C.; Hunt, M.P.; Gibson, D.J.; Baker, C.C.; Clayborne, A.Z.; Kim, W.; Sanghera, J.S., “Comonomer Isomers Result in Varied Optical Properties Within ORMOCHALC Polymers,” *Invited Talk*, Virtual Conference, **Dec. 2021**

1. *Materials Science & Technology-21 Meeting*

**Boyd, D.A.;** Nguyen, V.Q; Kung, F.H.; Pollard, N.A.; Myers, J.D.; McClain, C.C.; Hunt, M.P.; Gibson, D.J.; Baker, C.C.; Clayborne, A.Z.; Kim, W.; Sanghera, J.S., “Comonomer Isomers Result in Varied Optical Properties Within ORMOCHALC Polymers,” *Invited Talk*, Virtual Conference, **Oct. 2021**

1. *National Organization of Black Chemists and Chemical Engineers*

**Boyd, D.A.**, “Slime, Polymers & The Future of Polymer Education,” Virtual Conference, **Sept. 2021**

1. *American Chemical Society – History Division*

**Boyd, D.A.**, “The Importance of Mentorship and Science Outreach to the Next Generation,” *Invited Talk*, Virtual Conference, **Aug. 2021**

1. *OSA Novel Optical Materials & Applications (NOMA)*

**Boyd, D.A.;** Nguyen, V.Q; Kung, F.H.; Pollard, N.A.; Myers, J.D.; McClain, C.C.; Hunt, M.P.; Gibson, D.J.; Baker, C.C.; Clayborne, A.Z.; Kim, W.; Sanghera, J.S., “Comonomer Isomers Result in Varied Optical Properties Within ORMOCHALC Polymers,” *Invited Talk*, Virtual Conference, **July 2021**

1. *University of Florida – Dept. of Chemistry – POLY/PMSE Seminar*

**Boyd, D.A.**, “Slime, Polymers & The Future of Polymer Education,” *Invited Talk*, Virtual Presentation, **May 2021**

1. *Franklin & Marshall College*

**Boyd, D.A.**, “A Career In The Chemical Sciences,” *Invited Talk*, Virtual Presentation, **May 2021**

1. *American Chemical Society – POLY Division*

**Boyd, D.A.;** Nguyen, V.Q; Kung, F.H.; Pollard, N.A.; Myers, J.D.; McClain, C.C.; Hunt, M.P.; Gibson, D.J.; Baker, C.C.; Clayborne, A.Z.; Kim, W.; Sanghera, J.S., “Comonomer Isomers Result in Varied Optical Properties Within ORMOCHALC Polymers,” Virtual Conference, **March 2021**

1. *MIT – Johnson Group Seminar Series*

**Boyd, D.A.**, “Slime, Polymers & The Future of Polymer Education,” *Invited Talk*, Virtual Presentation, **Feb. 2021**

1. *American Chemical Society – Chicago Section Meeting*

**Boyd, D.A.**, “Introducing STEM to Elementary-Aged Children,” *Invited Talk*, California State University, Los Angeles, **Oct. 2020**

1. *University of Akron – Polymer Advanced Materials Lecture Series*

**Boyd, D.A.;** Nguyen, V.Q; McClain, C.C.; Kung, F.H.; Baker, C.C.; Myers, J.D.; Hunt, M.P.; Kim, W.; Sanghera, J.S., “Fabrication of High Refractive Index, Infrared Transmitting ORMOCHALC Polymers,” *Invited Talk*, Akron, OH, **Feb. 2020**

1. *College of William & Mary – Chemistry Department*

**Boyd, D.A.;** Nguyen, V.Q; McClain, C.C.; Kung, F.H.; Baker, C.C.; Myers, J.D.; Hunt, M.P.; Kim, W.; Sanghera, J.S., “Fabrication of High Refractive Index, Infrared Transmitting ORMOCHALC Polymers,” *Invited Talk*, Williamsburg, VA, **Jan. 2020**

1. *American University – Chemistry Department*

**Boyd, D.A.;** Nguyen, V.Q; McClain, C.C.; Kung, F.H.; Baker, C.C.; Myers, J.D.; Hunt, M.P.; Kim, W.; Sanghera, J.S., “Fabrication of High Refractive Index, Infrared Transmitting ORMOCHALC Polymers,” *Invited Talk*, Washington, DC, **Oct. 2019**

1. *University of Michigan, Ann Arbor – Chemistry Aligned with Life and Career at the University of Michigan*

**Boyd, D.A.**; Stewart, M.H.; Susumu, K.; Oh, E.; Wissman, J., Brown, C.G.; McClain, C.C., “Photopolymerization of Thiol-yne Polymers For Use in Additive Manufacturing,” *Invited Talk*, Ann Arbor, MI, **Sept. 2019**

1. *American Chemical Society – PMSE Division*

**Boyd, D.A.;** Nguyen, V.Q; McClain, C.C.; Kung, F.H.; Baker, C.C.; Myers, J.D.; Hunt, M.P.; Kim, W.; Sanghera, J.S., “Fabrication of High Refractive Index, Infrared Transmitting ORMOCHALC Polymers,” San Diego, CA, **Aug. 2019**

1. *University of Michigan, Ann Arbor – Chemistry Dept. – Guest Lecturer*

**Boyd, D.A.;** Nguyen, V.Q; McClain, C.C.; Kung, F.H.; Baker, C.C.; Myers, J.D.; Hunt, M.P.; Kim, W.; Sanghera, J.S., “Fabrication of High Refractive Index, Infrared Transmitting ORMOCHALC Polymers,” *Invited Talk*, Ann Arbor, MI, **May 2019**

1. *SPIE Defense + Security Conference – Laser Technology for Defense and Security XV*

**Boyd, D.A.**; Shaw, L.B.; Baker, C.C.; Rhonehouse, D.; Hunt, M.P.; Friebele, E.J.; Kim, W.; Sanghera, J.S., “Superhydrophobic, Infrared Transmissive Moth Eye-like Substrates For Use In Wet Conditions,” Baltimore, MD, **April 2019**

1. *SPIE Defense + Security Conference – Advanced Optics for Imaging Applications: UV through LWIR IV*

**Boyd, D.A.**; Nguyen, V.Q.; McClain, C.C.; Baker, C.C.; Myers, J.D.; Hunt, M.P.; Kim, W.; Sanghera, J.S., “Fabrication of High Refractive Index, Infrared Transmitting ORMOCHALC Polymers,” *Rising Researcher Award Presentation*, Baltimore, MD, **April 2019**

1. *Radtech Big Ideas Conference*

**Boyd, D.A.**; Stewart, M.H.; Susumu, K.; Oh, E.; Wissman, J., Brown, C.G.; McClain, C.C., “Photopolymerization of Thiol-yne Polymers For Use in Additive Manufacturing,” Redondo Beach, CA, **March 2019**

1. *University of Colorado, Boulder – Chemical & Biological Engineering Dept. – Guest Lecturer*

**Boyd, D.A.;** Nguyen, V.Q; McClain, C.C.; Kung, F.H.; Baker, C.C.; Myers, J.D.; Hunt, M.P.; Kim, W.; Sanghera, J.S., “Fabrication of High Refractive Index, Infrared Transmitting ORMOCHALC Polymers,” *Invited Talk*, Boulder, CO, **Jan. 2019**

1. *National Organization of Black Chemists and Chemical Engineers*

**Boyd, D.A.**; Stewart, M.H.; Susumu, K.; Oh, E.; Brown, C.G.; McClain, C.C.; Gorzkowski, E.P., “Fabrication of Luminescent Quantum Dot Thiol-yne Nanocomposites via UV Photopolymerization,” Orlando, FL, **Sept. 2018**

1. *American Chemical Society – Polymer Division*

**Boyd, D.A.**; Baker, C.C.; Myers, J.D.; Nguyen, V.Q.; McClain, C.C.; Brown, C.G.; Kim, W.; Sanghera, J.S., “Sulfur – It’s Elemental,” *C&EN Talented 12 Award Lecture*, 256th Annual Meeting, Boston, MA, **Aug. 2018**

1. *Joint Technology Office – Program Review*

**Boyd, D.A.**; Baker, C.C.; Myers, J.D.; Nguyen, V.Q.; McClain, C.C.; Brown, C.G.; Kim, W.; Sanghera, J.S., “Improved Polymer Cladding for Eye Safer High Energy Fiber Lasers,” Albuquerque, NM, **June 2018**

1. *US Naval Research Laboratory – External Laboratory Review*

**Boyd, D.A.**; Baker, C.C.; Nguyen, V.Q.; Myers, J.D.; Bowman, S.R.; Kim, W.; Sanghera, J.S., “Organically Modified Chalcogenide (ORMOCHALC) Polymers for Optics,” *Division Selected Presenter*, Washington, DC, **June 2018**

1. *RadTech UV+EB Conference*

**Boyd, D.A.**; Baker, C.C.; Myers, J.D.; Nguyen, V.Q.; McClain, C.C.; Brown, C.G.; Kim, W.; Sanghera, J.S., “The Development of Novel Optical Materials Using Sulfur-Based Chemistry,” Chicago, IL, **May 2018**

1. *American Chemical Society – Polymer Division*

**Boyd, D.A.**; Stewart, M.H.; Susumu, K.; Oh, E.; Brown, C.G.; McClain, C.C.; Gorzkowski, E.P., “Fabrication of Luminescent Quantum Dot Thiol-yne Nanocomposites via UV Photopolymerization,” *Invited Talk*, 255th Annual Meeting, New Orleans, LA, **March 2018**

1. *National Organization of Black Chemists and Chemical Engineers*

**Boyd, D.A.**; Frantz, J.A.; Busse, L.E.; Kim, W.; Bayya, S.S.; Shaw, L.B.; Aggarwal, I.D.; Sanghera, J.S., “Superhydrophobic, Infrared Transmissive Moth Eye-like Substrates For Use In Wet Conditions,” Minneapolis, MN, **Nov. 2017**

1. *Photopolymerization Fundamentals Conference*

**Boyd, D.A.**; Nguyen, V.Q.; McClain, C.C.; Baker, C.C.; Myers, J.D.; Kim, W.; Sanghera, J.S., “Synthesis and Optical Properties of Organically Modified Chalcogenide (ORMOCHALC) Polymers,” *Invited Talk*, Boulder, CO, **Sept. 2017**

1. *American Chemical Society – Polymer Division*

**Boyd, D.A.**; Nguyen, V.Q.; McClain, C.C.; Baker, C.C.; Myers, J.D.; Kim, W.; Sanghera, J.S., “Synthesis and Optical Properties of Organically Modified Chalcogenide (ORMOCHALC) Polymers,” 254th Annual Meeting, Washington, DC, **Aug. 2017**

1. *American Chemical Society – Colloid Division*

**Boyd, D.A.**; Frantz, J.A.; Busse, L.E.; Kim, W.; Bayya, S.S.; Shaw, L.B.; Aggarwal, I.D.; Sanghera, J.S., “Superhydrophobic, Infrared Transmissive Moth Eye-like Substrates For Use In Wet Conditions,” *Best Session Presentation Award Winner*, 254th Annual Meeting, Washington, DC, **Aug. 2017**

1. *SPIE Defense + Security Conference – Window and Dome Technologies and Materials XV*

**Boyd, D.A.**; Frantz, J.A.; Busse, L.E.; Kim, W.; Bayya, S.S.; Aggarwal, I.D.; Sanghera, J.S., “Superhydrophobic, Infrared Transmissive Moth Eye-like Substrates For Use In Wet Conditions,” Anaheim, CA, **April 2017**

1. *National Organization of Black Chemists and Chemical Engineers – NExM Regional Meeting*

**Boyd, D.A.**; Bezares, F.J.; Pacardo, D.B.; Naciri, J.; Shields, A.R.; Taitt, C.R.; Hosten, C.; Ukaegbu, M.; Ligler, F.S., “Fabrication of Multifunctional Microfibers, Films and Nanocomposites via Thiol Click Chemistry,” Pittsburgh, PA, **March 2017**

1. *University of Maryland, College Park – Chemistry Department – ACS Chapter Guest Lecturer*

**Boyd, D.A.**; Bezares, F.J.; Naciri, J.; Pacardo, D.B.; Ligler, F.S., “Sensing Capabilities and Optical Properties of Thiol and Sulfur Based Polymers,” *Invited Talk*, College Park, MD, **March 2017**

1. *National Organization of Black Chemists and Chemical Engineers – Lloyd N. Ferguson Symposium*

**Boyd, D.A.**; Baker, C.C.; Myers, J.D.; Nguyen, V.Q.; Drake, G.A.; Bowman, S.R.; Kim, W.; Sanghera, J.S., “ORMOCHALCS: Organically Modified Chalcogenide High-Refractive Index Polymers,” *Award Lecture*, Raleigh, NC, **Nov. 2016**

1. *Ohio State University – Chemistry Department – NOBCChE Chapter Guest Lecturer*

**Boyd, D.A.**; Bezares, F.J.; Naciri, J.; Pacardo, D.B.; Ligler, F.S., “Sensing Capabilities and Optical Properties of Thiol and Sulfur Based Polymers,” *Invited Talk*, Columbus, OH, **Oct. 2016**

1. *American Chemical Society – Polymer Division – Poly. Sci. at the Interface of Industry, Gov’t & Academics*

**Boyd, D.A.**; Baker, C.C.; Myers, J.D.; Nguyen, V.Q.; Drake, G.A.; Bowman, S.R.; Kim, W.; Sanghera, J.S., “ORMOCHALCS: Organically Modified Chalcogenide High-Refractive Index Polymers,” 252th Annual Meeting, Philadelphia, PA, **Aug. 2016**

1. *George Washington University – Chemistry Dept. Colloquium*

**Boyd, D.A.**; Bezares, F.J.; Naciri, J.; Pacardo, D.B.; Ligler, F.S., “Sensing Capabilities and Optical Properties of Thiol and Sulfur Based Polymers,” *Invited Talk*, Washington, DC, **Jan. 2016**

1. *National Organization of Black Chemists and Chemical Engineers – Recent Adv. In Gov. Research*

**Boyd, D.A.**; Bezares, F.J.; Naciri, J.; Pacardo, D.B.; Ligler, F.S., “Sensing Capabilities and Optical Properties of Thiol and Sulfur Based Polymers,” *Session Chair*, 42th Annual National Conference, Orlando, FL, **Sept. 2015**

1. *American Chemical Society – Polymer Division – New Synthesis & Characterization of Polymers*

**Boyd, D.A.**; Bezares, F.J.; Naciri, J.; Pacardo, D.B.; Ligler, F.S., “Sensing Capabilities and Optical Properties of Thiol and Sulfur Based Polymers,” 250th Annual Meeting, Boston, MA, **Aug. 2015**

1. *Zing Conferences – Polymer Chemistry*

**Boyd, D.A.**; Bezares, F.J.; Naciri, J.; Shields, A.R.; Pacardo, D.B.; Ligler, F.S., “Surface Molecule Sensing Via Thiol-Yne Polymers and Nanocomposites,” 4th Zing Polymer Chemistry Conference, Cancun, Mexico, **Dec. 2014**

1. *American Chemical Society – Polymer Division – New Synthesis and Characterization of Polymers*

**Boyd, D.A.**; Bezares, F.J.; Pacardo, D.B.; Naciri, J.; Spillmann, C.M.; Ligler, F.S., “The Fabrication and Optical Properties of Novel Thiol Click Nanocomposite Polymers,” *Session Chair*, 248th Annual Meeting, San Francisco, CA, **Aug. 2014**

1. *National Organization of Black Chemists and Chemical Engineers – Adv. Materials & Nanotechnology*

**Boyd, D.A.**; Shields, A.R.; Fontana, J.; Naciri, J.; Spillmann, C.M.; Howell, P.B.; Ligler, F.S., “Facile Fabrication & Characterization of Thiol Click Nanocomposites,” *Session Chair*, 40th Annual National Conference, Washington, DC, **Oct. 2013**

1. *Photopolymerization Fundamentals Conference*

**Boyd, D.A.**; Shields, A.R.; Fontana, J.; Naciri, J.; Spillmann, C.M.; Howell, P.B.; Ligler, F.S., “The Fabrication & Modification of Novel Thiol Click Polymer Microfibers,” Jackson, WY, **Sept. 2013**

1. *American Chemical Society – Polymer Division*

**Boyd, D.A.**; Shields, A.R.; Fontana, J.; Naciri, J.; Spillmann, C.M.; Howell, P.B.; Ligler, F.S., “Microfluidic Fabrication and Modification of Thiol Click Polymer Fibers,” 246th Annual Meeting, Indianapolis, IN, **Sept. 2013**

1. *Gordon Research Seminar – Polymers*

**Boyd, D.A.**; Shields, A.R.; Fontana, J.; Naciri, J.; Spillmann, C.M.; Howell, P.B.; Ligler, F.S., “Fabrication and Modification of Thiol Click Polymer Microfibers,” Mount Holyoke, South Hadley, MA, **June 2013**

1. *Western Michigan University, Chemistry Seminar*

**Boyd, D.A.**; Shields, A.R.; Fontana, J.; Naciri, J.; Spillmann, C.M.; Howell, P.B.; Ligler, F.S., “Modifiable Thiol Click Fibers Fabricated Via Hydrodynamic Focusing,” *Invited Talk*, Kalamazoo, MI, **Nov. 2012**

1. *National Organization of Black Chemists and Chemical Engineers – Materials Science*

**Boyd, D.A.**; Shields, A.R.; Fontana, J.; Naciri, J.; Spillmann, C.M.; Howell, P.B.; Ligler, F.S., “Modifiable Thiol Click Fibers Fabricated Via Hydrodynamic Focusing,” 39th Annual National Conference, Washington, DC, **Sept. 2012**

1. *Naval Research Laboratory Postdoctoral Colloquium Series*

**Boyd, D.A.**; Shields, A.R.; Fontana, J.; Naciri, J.; Spillmann, C.M.; Howell, P.B.; Ligler, F.S., “Fabrication and Modification of Multifunctional Thiol Click Fibers,” *Invited Talk*, Washington, DC, **June 2012**

1. *Purdue Indiana Notre Dame University (PINDU) Conference*

**Boyd, D.A.**; Cao, Z.; Fanwick, P.E.; Song, Y.; Ren, T., “Fc-Fc Equatorial Electronic Communication Through Diruthenium Paddlewheel Complexes,” *Best Oral Presentation Award Winner*, PINDU Annual Inorganic Chemistry Conference, West Lafayette, IN, **Oct. 2010**

1. *Dow Chemical Company – Building Engineering and Science Talent (BEST) Symposium*

**Boyd, D.A.**; Crutchley, R.J.; Fanwick, P.E.; Ren, T., “Fc-Fc Electronic Interaction Through Equatorial Pathways of a Diruthenium Core,” Two Minute Drill, Midland, MI, **Sept. 2010**

1. *National Organization of Black Chemists and Chemical Engineers*

**Boyd, D.A.**; Crutchley, R.J.; Fanwick, P.E.; Ren, T., “Preparation and Voltammetric Study of Diruthenium Paddlewheel Complexes Bearing Equatorial Ferrocene Substituents,” 37th Annual National Conference, Atlanta, GA, **April 2010**

#### Poster Presentations

1. *United States Pentagon – NRL Representative*

**Boyd, D.A.\***; Baker, C.C.; Nguyen, V.Q.; Drake, G.A.; Myers, J.D.; Kim, W.; Sanghera, J.S., “Organically Modified Chalcogenides (ORMOCHALCS) for Optics,” Naval Research & Development Establishment Section 219/Naval Innovative Science & Engineering Exhibition, Arlington, VA, **April 2016**

1. *Zing Conferences – Polymer Chemistry*

**Boyd, D.A.\***; Shields, A.R.; Naciri, J.; Bezares, F.J.; Pacardo, D.B.; Ligler, F.S., “Thiol-Based Chemistry: A Versatile Tool For The Production of Novel Materials,” 4th Zing Polymer Chemistry Conference, Cancun, Mexico, **Dec. 2014**

1. *Gordon Research Conference – Polymers Meeting*

**Boyd, D.A.**; Shields, A.R.; Fontana, J.; Naciri, J.; Spillmann, C.M.; Howell, P.B.; Ligler, F.S.\*, “The Fabrication and Modification of Thiol Click Polymer Microfibers,” South Hadley, MA, **June 2013**

1. *University of Maryland CMNS Postdoc Poster Symposium*

**Boyd, D.A.**; Shields, A.R.; Fontana, J.; Naciri, J.; Spillmann, C.M.; Howell, P.B.; Ligler, F.S.\*, “Multifunctional Polymer Fibers Formed Via Thiol-Click Chemistry & Hydrodynamic Focusing,” College Park, MD, **March 2012**

1. *Photopolymerization Fundamentals Meeting*

**Boyd, D.A.**; Shields, A.R.; Naciri, J.; Spillmann, C.M.; Howell, P.B.; Ligler, F.S.\*, “Hierarchically Structured Polymer Fibers,” Breckenridge, CO, **June 2011**

1. *Gordon Research Seminar and Conference – Inorganic Chemistry Meeting*

**Boyd, D.A.**; Cao, Z.; Ren, T.\*, “Synthesis and Analysis of Novel Diruthenium Paddlewheel Complexes Peripherally Modified by Ferrocene Carboxylate Ligands,” Biddeford, ME, **June 2010**

1. *Purdue Indiana Notre Dame University (PINDU) Inorganic Chemistry Conference*

**Boyd, D.A.**; Crutchley, R.J.; Fanwick, P.E.; Ren, T.\*, “Preparation and Voltammetric Study of Diruthenium Paddlewheel Complexes Bearing Equatorial Ferrocene Substituents,” South Bend, IN, **Nov. 2009**

1. *Procter & Gamble Research & Technical Careers in Industry (RTCI) Conference*

**Boyd, D.A.**; Ren, T.\* “Preparation Of New Diruthenium Complexes For Use As Novel Redox Probes,” Cincinnati, OH, **June 2009**

1. *National Organization of Black Chemists and Chemical Engineers National Conference*

**Boyd, D.A.**; Ren, T.\* “Novel Diruthenium Bound Nucleobase Complexes: Towards Therapeutic Detection Agents,” St. Louis, MO, **April 2009**

1. *Purdue Indiana Notre Dame University (PINDU) Inorganic Chemistry Conference*

**Boyd, D.A.**; Ren, T.\* “Novel Diruthenium Bound Nucleobase Complexes: Towards Therapeutic Detection Agents,” Bloomington, IN, **Nov. 2008**

1. *National Organization of Black Chemists and Chemical Engineers Midwest Regional Conference*

**Boyd, D.A.**; Ren, T.\* “Novel Diruthenium Bound Nucleobase Complexes: Towards Therapeutic Detection Agents,” Indianapolis, IN, **Oct. 2008**

#### Reviewer Assignments

Journals

* **Nature Publishing Group:** Nature Communications
* **ACS:** Journal of the American Chemical Society, Langmuir, Chemistry of Materials, Macromolecules, Analytical Chemistry, ACS Applied Materials & Interfaces, ACS Macro Letters, ACS Materials Letters, Journal of Physical Chemistry, ACS Catalysis, ACS Sustainable Chemistry & Engineering, ACS Omega, Journal of Chemical Education
* **RSC:** Journal of Materials Chemistry A, Polymer Chemistry, Chemical Communications
* **Wiley:** Angewandte Chemie, Advanced Optical Materials, Macromolecular Rapid Communications, Macromolecular Materials & Engineering, Macromolecular Chemistry & Physics, Chemistry – European Journal, ChemPhotoChem, JoVE
* **SPIE:** Optical Engineering
* **Elsevier:** Inorganica Chimica Acta
* **MDPI:** Metals, Sensors, Polymers

Funding Agencies

* American Chemical Society – Petroleum Research Fund
* National Science Foundation – Polymers Program – Division of Materials Research

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YouTube Channel: <https://www.youtube.com/c/drboydthechemist>

**C&EN “Talented 12” Address:** <https://www.youtube.com/watch?v=39FTvk02Dzc>