

**Nicholas D. Ball, Ph. D.**  
**Assistant Professor of Chemistry**  
**June 2018**

**EDUCATION:**

**University of Michigan – Ann Arbor**, Ann Arbor, Michigan 2005 - 2010  
Doctor of Philosophy in Chemistry, Organic Chemistry  
Advisor: Professor Melanie S. Sanford  
Dissertation Title: Synthesis and Reactivity of Palladium Trifluorides and Fluorides Towards Aryl C–CF<sub>3</sub> and C–F Bond Formation  
Thesis Defense: December 11, 2010; Degree Conferred April 2011.

**Macalester College**, St. Paul, Minnesota 2001 - 2005  
Bachelor of Arts in Chemistry  
Research Advisor: Professor Ronald G. Brisbois  
Academic Advisor: Professor Jan Serie

**EMPLOYMENT:**

**Pomona College** – Claremont, California 2015 - present  
Assistant Professor of Chemistry

**Amherst College** – Amherst, Massachusetts 2013 - 2015  
Assistant Professor of Chemistry

**California Institute of Technology** – Pasadena, California 2011 - 2013  
NIH (F32) Postdoctoral Fellow and Postdoctoral Fellow in Chemical Engineering  
Advisor: Professor David A. Tirrell

**FELLOWSHIPS AND GRANTS**

Professional Development Network Grant (\$2,500) 2017 - 2018  
Wig Fund Curriculum Development Grant (\$600) 2015 - 2016  
American Chemical Society Petroleum Research Fund UNI (\$55,000) July 2014 - August 2018  
NSF CAREER 2016, Reviewed, not funded  
Research Corporation Cottrell Scholar Program 2016, Reviewed, not funded

**HONORS AND AWARDS**

Wig Distinguished Professor Award (Pomona College) 2018  
Ruth L. Kirschstein Postdoctoral National Research Service Award (F32) 2011 - 2014  
Ruth L. Kirschstein Postdoctoral National Research Service Award (F32) 2011 - 2014  
Ruth L. Kirschstein Predoctoral National Research Service Award (F31) 2009 - 2011  
Beckman Scholars Award 2003 - 2004  
ACS Scholars Award 2001 - 2005

## PUBLICATIONS:

The following publications are all peer-reviewed articles. \*Indicates undergraduate students

## INDEPENDENT CAREER:

Mukherjee, P.; Woroch, C. P. W. ('19)\*; Cleary, L.; Rusznak, M. ('18)\*; Franzese, R. W. ('19)\*; Reese, M. R.; Tucker, J. W.; Humphrey, J. M. ('19); Etuk, S. M. ('20)\*; Kwan, S. C.\*; am Ende, C. W.\*, and Ball, N. D.\*Sulfonamide Synthesis via Calcium Triflimide Activation of Sulfonyl Fluorides. *Org. Lett.* **2018**, ASAP. [\[link\]](#)

Tribby, A. L. ('17)\*; Rodríguez, I. ('16)\*; Shariffudin, S. (AC '15); **Ball, N. D.**; Pd-Catalyzed Conversion of Aryl Iodides to Sulfonyl Fluorides Using SO<sub>2</sub> Surrogate DABSO and Selectfluor. *J. Org. Chem.* **2017**, 82, 2294-2299. [\[link\]](#)

- This work is highlighted in a virtual issue of *Organometallics* featuring undergraduate research programs [\[link\]](#)
- Ranked a highly cited paper by Web of Science

## PREVIOUS PUBLICATIONS:

Racowski, J. M.; **Ball, N. D.**; Sanford, M. S. Aryl C–H Activation at Pd(IV) Centers. *J. Am. Chem. Soc.* **2011**, 133, 18022-18025. [\[link\]](#)

- One of the Top 20 most read JACS articles in October 2011

**Ball, N. D.**; Gary, J. B.; Ye, Y.; Sanford, M. S. Mechanistic and Computational Studies of Oxidatively-Induced Aryl–CF<sub>3</sub> Bond-Formation at Pd: Rational Design of Room Temperature Aryl Trifluoromethylation. *J. Am. Chem. Soc.* **2011**, 133, 7577-7584. [\[link\]](#)

Ye, Y.; **Ball, N. D.**; Kampf, J. W.; Sanford, M. S. Oxidation of Catalytically Relevant Palladium Dimer with “CF<sub>3</sub>”: Formation and Reactivity of a Monomeric Palladium(IV) Aquo Complex. *J. Am. Chem. Soc.* **2010**, 132, 14682-14687. [\[link\]](#)

**Ball, N. D.**; Kampf, J. W.; Sanford, M. S. Aryl C–CF<sub>3</sub> Bond Forming Reductive Elimination from a Palladium(IV) Complex. *J. Am. Chem. Soc.* **2010**, 132, 2878-2879. [\[link\]](#)

- One of the Top 20 most read JACS articles in February 2010

**Ball, N. D.**; Kampf, J. W.; Sanford, M. S. Synthesis and Reactivity of Palladium(II) Fluoride Complexes Containing Nitrogen-Donor Ligands. *Dalton Trans.* **2010**, 39, 632-640. [\[link\]](#)

- Invited manuscript for the “New Talent” issue

**Ball, N. D.**; Sanford, M. S. Synthesis and Reactivity of a Mono-σ-Aryl Palladium(IV) Fluoride Complex. *J. Am. Chem. Soc.* **2009**, 131, 3796-3797. [\[link\]](#)

- Highlighted in: *Chem. Eng. News* **2008**, 86 (35), 53-56.
- One of the Top 20 most read JACS articles in February 2009

## PROFESSIONAL PRESENTATIONS:

**Ball, N. D.**; Woroch, C. P.\*; Rusznak, M.; Cleary, L., Mukherjee, P.; am Ende, C.; Reese, M. R.; Tucker, J. W.; Humphrey J. M.; Franzese\*, R. W.; Etuk\*, S.M.; Kwan, S. C.\* Lewis Acid-Mediated Activation of Aryl and Alkyl Sulfonyl Fluoride towards Sulfonamides. Invited Oral Presentation. American Chemical Society National Meeting, New Orleans, LA, March 2018.

**Ball, N. D.;** Rodriguez, I; Tribby, A. L.\*; Shariffudin, S.\* One-Pot Pd-catalyzed Synthesis of Aromatic Sulfonyl Fluorides. Poster Presentation. Japanese-American Kavli Frontiers in Science Symposium (National Academy of Sciences), Irvine, CA December 2016.

**Ball, N. D.;** Rodríguez, I.; Tribby, A. L.\*; Shariffudin, S.\* One-pot Pd-catalyzed Synthesis of Aromatic Sulfonyl Fluorides. Oral Presentation 252nd American Chemical Society National Meeting, Philadelphia, PA, August 2016.

**Ball, N. D.;** Rodríguez, I.; Tribby, A. L.\*; Shariffudin, S.\* Investigation of Aromatic Sulfonyl Fluoride Reactivity with O- and N- nucleophiles. 252nd American Chemical Society National Meeting, Poster Presentation, Philadelphia, PA, August 2016.

**Ball, N. D.** ACS Scholars Program Rising Stars in Academe. Oral Presentation and Panelist. 250<sup>th</sup> American Chemical Society National Meeting and Exposition, Philadelphia, PA, August 2, 2015.

## OTHER PRESENTATIONS:

**Ball, N. D.,** Woroch, C. P.\* Pollution to Products: Adventures in Sulfur . Oral Presentation. Pomona College Torchbearers Reception, Beverly Hills, CA, March 8, 2017.

**Ball, N. D.** Career Panel: Rising Stars in Academe. Panelist. Beckman Symposium, Irvine, CA, August 6, 2016.

## COLLEGE SERVICE:

|   |                         |
|---|-------------------------|
| Member, Pomona College Ad Hoc Committee on Promotion and Tenure                         | 2016 - 2018             |
| Member, Chemistry Department Professional Development Committee                         | 2016 - Spring 2018      |
| Pomona College Chemistry Department Seminar Coordinator for the 5C Chem. Seminar series | Fall 2016 - Spring 2018 |
| Faculty liaison to the Pomona College Chemistry Department student liaisons             | 2016 - Fall 2017        |

## COURSES TAUGHT:

CHEM 110a – Organic Chemistry I (Fall 2015, 2016, and 2017)  
CHEM 110AL – Organic Chemistry I Lab (Fall 2015 and 2016)  
CHEM 110BL – Organic Chemistry I Lab (Spring 2016 and 2017)  
CHEM 147 – Inorganic Chemistry (Spring 2016 and 2017)

## PROFESSIONAL MEMBERSHIP AND ACTIVITIES:

Reviewer for the following publications: 2012 - present

Journal of the American Chemical Society, Proceeding of the National Academy of Sciences,  
Journal of Organic Chemistry, Chemical Reviews, Chemical Science, Coordination Chemistry Reviews,  
Organic Letters, and Accounts of Chemical Research, Beilstein Journal of Organic Chemistry

American Chemical Society 2001 - present

## STUDENTS MENTORED IN RESEARCH PROGRAM:

### Pomona College

|  |                           |
|--|---------------------------|
| Christian Woroch (Chemistry '19, Pomona College; <b>Amgen, Beckman and ACS Scholar</b> )   | Summer 2016 - current     |
| Mark Rusnak (Chemistry '18, <b>Thesis Student</b> , Pomona College, Vanderbilt Med School) | September 2016 - May 2018 |

|  |                         |
|--|-------------------------|
| Neil Chan (Chemistry '18, <b>Thesis Student</b> , Pomona College, Ph.D. program UCLA)            | Summer 2016 - May 2018  |
| Ryan Franzese (Chemistry '19, Pomona College)  | Summer 2017 - May 2018  |
| Nicholas Lewis (Chemistry '19, Pomona College)   | Summer 2017 - May 2018  |
| Christopher Ahn (Biochemistry'18, <b>Thesis Student</b> , Claremont McKenna College)             | Summer 2017             |
| Sarah Etuk (Neuroscience'19, Pomona College)   | Summer 2017             |
| Edward Gao (Chemistry '19, Pomona College)   | Summer 2017             |
| Sabrina Kwan (Chemistry '20, Pomona College)   | Summer 2017             |
| Bryan Santti (Molecular Biology, '19, Pomona College)  | Summer 2017             |
| Ashish Streatfield (Chemistry '17, <b>Thesis Student</b> , Pomona College)                       | Summer 2016 - May 2017  |
| Melissa Petito (Neuroscience'19, Pomona College)   | Summer 2016 - Dec 2016  |
| Cynthia Nyongesa ('19, Pomona College)   | Summer 2016             |
| Ariana Tribby (Chemistry '17, Pomona College, Ph.D. program Caltech)                             | Summer 2015 - June 2016 |
| Phillip Clayman (Chemistry '16, <b>Thesis Student</b> , Pomona College, Ph.D. program Princeton) | Summer 2015 - May 2016  |
| Ismerai Rodriguez (Chemistry'16, <b>Thesis Student</b> , Pomona College)                         | Summer 2015 - May 2016  |
| Evan DeLorenzo (Media Studies '17, Pomona College)   | Summer 2015             |

### Amherst College

|   |                         |
|---|-------------------------|
| Joyce Wamala ('17E)   | Spring 2015             |
| Daniela Garcia ('14; Post-Baccalaureate Scholar)                            | Fall 2014 - Spring 2015 |
| Stuart McKenzie (Chemistry, '16)  | Summer 2014             |
| Shamira Shariffudin (Chemistry, '15, <b>Thesis Student</b> )                | Summer 2014 - current   |
| John Stockman (Chemistry, '15, <b>Thesis Student</b> )                      | Summer 2014 - current   |
| Conner Reilly (Chemistry, '16)  | Winter 2014 - current   |
| Xiao Xiao (Chemistry, '16)  | Winter 2014 - current   |
| Christine Bierema (Chemistry, '14, <b>Thesis Student</b> , Summa Cum Laude) | Summer 2013 - 2014      |