HARPER OKLAHOMA WEEKS WALLACE

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EDUCATION

École Normale Supérieure, PSL Research University, Paris, France Sep 2020–Present
M.Sc., Cognitive Science (Neuroscience, Modelling) Anticipated completion: Jun 2022

Denison University, Granville, OH Aug 2017–May 2020
B.S., Biochemistry, *Summa Cum Laude*, ΦBK, Recog. of Thesis Rank: 1 / 569; GPA: 4.00 / 4

RESEARCH EXPERIENCE

da Silveira Laboratory, École Normale Supérieure Aug 2020–Present
Graduate Research Assistant; Fulbright Scholar, France
Advisor: Rava A. da Silveira, Ph.D., Directeur de Recherche, Département de Physique

Reczek Laboratory, Denison University Jan 2018–May 2020
Undergraduate Research Assistant
Advisor: Joseph J. Reczek, Ph.D., Professor, Department of Chemistry & Biochemistry
Thesis: Controlled alignment of donor-acceptor columnar liquid crystals and interrogation of optical properties for applications in data storage and encryption

PUBLICATIONS & PRESENTATIONS

Wallace HOW, Fikri K, Weinstein JN, Weeks WB. Improving economic conditions associated with declining ACSCs, elective surgeries, and care quality but increasing costs. *Medical Care*. (In press)

Wallace HOW, Fikri K, Weinstein JN, Weeks WB. Improving economic conditions matter for mortality: Changes in local economic distress associated with mortality among Medicare fee-for-service beneficiaries between 2003 and 2015. *J Gen Intern Med*, **2021**. https://doi.org/10.1007/s11606-020-06410-z.

Van Winkle M, **Wallace HOW**, Smith N, Pomerene AT, Wood, MG, Kaehr B, Reczek JJ. Direct-write orientation of charge-transfer liquid crystals enables polarization-based coding and encryption. *Sci Rep–UK, 10*, 15352, **2020**. https://doi.org/10.1038/s41598-020-72037-z.

Wallace HOW, Reczek JJ. Higher-order molecular control of self-assembling DACLCs. Poster session presented at Fundamental Research in Colloids, Surfaces & Nanomaterials Session; Division of Colloid and Surface Chemistry; American Chemical Society National Meeting; **2020** Mar 22–26; Philadelphia, PA. (Held online due to COVID-19)

Wallace HOW, Reczek JJ. Technology applications of self-assembling DACLCs: Information storage and encryption techniques. Poster session presented at:

(a) 23rd Annual Posters on the Hill (CUR); **2019** Apr 30; Washington, DC.
(b) Undergraduate Research Session; American Chemical Society National Meeting; **2019** Mar 31–Apr 4; Orlando, FL.

PATENT APPLICATION

Kaehr BJ, Reczek JJ, Van Winkle M, **Wallace HOW**. "Polarization-based coding and encryption using charge-transfer materials," Continuation-in-Part of U.S. Patent Application No. 16,200,413, November 26, 2018.

SELECTED AWARDS & HONORS

Fulbright Research/Study Grant, France, *Fulbright U.S. Student Program* 2020
Valedictorian, Class of 2020, *Denison University*
Provost's Academic Excellence Award, *Denison University*
Phi Beta Kappa (Academic Honor Society), *Denison University*
Sigma Xi (Scientific Research Honor Society), *Denison University*
William C. Ebaugh Award in Chemistry & Biochemistry, *Denison University*
Columbus Chapter ACS Award for Outstanding Senior, *American Chemical Society*
Barry Goldwater Scholarship, *Barry Goldwater Scholarship Foundation* 2019
J. Reid & Polly Anderson Scholarship for Excellence in Science, *Denison University*
Department Fellow, Chemistry & Biochemistry, *Denison University*
Thomas A. Evans Award in Organic Chemistry, *Denison University*
Alpha Epsilon Delta (Pre-Health Honor Society), *Denison University*
23rd Annual Posters on the Hill, *Council on Undergraduate Research*

EMPLOYMENT & EXTRACURRICULAR

Kaplan K-12 Learning Services, Live-Online Team Jan 2018–Present
SHSAT and SAT Prep. Instructor

Department of Chemistry & Biochemistry, Denison University Jan 2018–May 2020
Teaching Assistant, Tutor

Jazz Combo, Denison University Jan 2018–May 2020
Alto Saxophone

Residential Communities, Denison University Jan 2019–Dec 2019
Community Advisor (formerly "Resident Advisor")

SERVICE

FabLab, Collège-Lycée Paul Valery, Paris, France Oct 2020–Present
Robotics and Programming Mentor

Pathways of Central Ohio, Newark, OH Jun 2018–Mar 2020
Crisis Response Specialist, 2-1-1 Crisis Hotline & National Suicide Prevention Lifeline

FIRST Robotics, Granville, OH Middle and High Schools Jan 2018–Mar 2020
Programming Mentor

TECHNICAL PROFICIENCIES

Programming
Python, Java, C#, C++, Obj-C, Swift

Markup
LaTeX

Data Analysis and DBMS
MATLAB, R, Python, Excel, SQL

French
Advanced reading, writing, and speaking

PERSONAL ACHIEVEMENTS

The Prouty 2018–2019
Cycled two century rides along the Connecticut River in Vermont and New Hampshire

Camino Portugues 2016
Cycled the historic 633-km pilgrimage from Lisbon, Portugal to Santiago de Compostela, Spain