

## 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, Modeling) 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  
Fulbright Scholar, France

Advisor: Rava A. da Silveira, Ph.D., Directeur de Recherche, Département de Physique

**Reczek Laboratory**, Denison University Jan 2018–May 2020  
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) 23<sup>rd</sup> 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, <i>Fulbright U.S. Student Program</i>	2020
Valedictorian, Class of 2020, <i>Denison University</i>	
Provost’s Academic Excellence Award, <i>Denison University</i>	
Phi Beta Kappa (Academic Honor Society), <i>Denison University</i>	
Sigma Xi (Scientific Research Honor Society), <i>Denison University</i>	
William C. Ebaugh Award in Chemistry & Biochemistry, <i>Denison University</i>	
Columbus Chapter ACS Award for Outstanding Senior, <i>American Chemical Society</i>	
Barry Goldwater Scholarship, <i>Barry Goldwater Scholarship Foundation</i>	2019
J. Reid & Polly Anderson Scholarship for Excellence in Science, <i>Denison University</i>	
Department Fellow, Chemistry & Biochemistry, <i>Denison University</i>	
Thomas A. Evans Award in Organic Chemistry, <i>Denison University</i>	
Alpha Epsilon Delta (Pre-Health Honor Society), <i>Denison University</i>	
23 <sup>rd</sup> Annual Posters on the Hill, <i>Council on Undergraduate Research</i>	

## EMPLOYMENT & EXTRACURRICULAR

<b>Kaplan K-12 Learning Services</b> , Live-Online Team	Jan 2018–Present
SHSAT and SAT Prep. Instructor	
<b>Department of Chemistry &amp; Biochemistry</b> , Denison University	Jan 2018–May 2020
Teaching Assistant, Tutor	
<b>Jazz Combo</b> , Denison University	Jan 2018–May 2020
Alto Saxophone	
<b>Residential Communities</b> , Denison University	Jan 2019–Dec 2019
Community Advisor (formerly “Resident Advisor”)	

## SERVICE

<b>FabLab</b> , Collège-Lycée Paul Valéry, Paris, France	Oct 2020–Present
Robotics and Programming Mentor	
<b>Pathways of Central Ohio</b> , Newark, OH	Jun 2018–Mar 2020
Crisis Response Specialist, 2-1-1 Crisis Hotline & National Suicide Prevention Lifeline	
<b>FIRST Robotics</b> , Granville, OH Middle and High Schools	Jan 2018–Mar 2020
Programming Mentor	

## TECHNICAL PROFICIENCIES

### Programming

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

### Data Analysis and DBMS

MATLAB, R, Python, Excel, SQL

### Markup

LaTeX

### 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