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#### Professional Positions:

|           |                                                                            |
|-----------|----------------------------------------------------------------------------|
| 2018+     | Distinguished Professor of Physics, Oregon State University                |
| 2002-2018 | Professor of Physics, Oregon State University                              |
| 2002+     | Adjunct Professor of Chemistry, Oregon State University                    |
| 1994-2002 | Associate Professor of Physics, Oregon State University                    |
| 1995-1996 | Visiting Researcher, Strathclyde University, Scotland                      |
| 1989-1994 | Assistant Professor of Physics, Oregon State University                    |
| 1987-1989 | Post-doctoral Fellow, Technische Universität München (Prof. Helmut Kinder) |
| 1982-1987 | Graduate Research Assistant, Stanford University, CA (Prof. Blas Cabrera)  |

#### Education:

|      |                                                                           |
|------|---------------------------------------------------------------------------|
| 1988 | Ph.D. Physics, Stanford University, Stanford, CA                          |
| 1984 | M.S. Physics, Stanford University, Stanford, CA                           |
| 1981 | B.Sc. (Hons) Physics <i>cum Laude</i> , University of Natal, South Africa |
| 1980 | B.Sc. Physics and Chemistry, University of Natal, South Africa            |

#### Professional Societies:

American Physical Society, Materials Research Society, American Association of Physics Teachers

#### OSU Affiliations:

Materials Synthesis and Characterization Facility, OSU Materials Science Faculty

#### Honours:

|            |                                                                        |
|------------|------------------------------------------------------------------------|
| 2020       | Finalist for CoS Olaf Boedker Award for Advising                       |
| 2016-2020  | Dr. Russ & Dolores Gorman Faculty Scholar                              |
| 2015       | Fellow of The American Physical Society (DCMP)                         |
| 2015       | OSU Alumni Association Distinguished Professor Award                   |
| 2015       | F.A. Gilfillan Memorial Award for Distinguished Scholarship in Science |
| 2015-2020  | Dr. Russ and Dolores Gorman Faculty Scholar                            |
| 2014       | Technical University of Munich Ambassador                              |
| 2007       | Milton Harris Award in Basic Research                                  |
| 2002       | Frederick H. Horne Award for Sustained Excellence in Teaching Science  |
| 1998       | Thomas T. Sugihara Young Faculty Research Award                        |
| 1997, 1995 | Mortar Board Top Prof Award                                            |
| 1993       | Phi Kappa Phi Emerging Scholar Award (OSU Chapter)                     |
| 1991-1993  | Alfred P. Sloan Research Fellowship                                    |
| 1989       | Young Scientist Prize (European Materials Research Society)            |
| 1987-1989  | Alexander von Humboldt Fellowship                                      |
| 1982-1984  | Fulbright Scholarship for graduate study at Stanford University        |

#### National Committees:

|           |                                                                           |
|-----------|---------------------------------------------------------------------------|
| 2015-2017 | CUWiP National Organizing Committee                                       |
| 2013-2015 | APS Committee on Careers and Professional Development (Chair, 2014, 2015) |
| 2015      | NSF MRSEC external reviewer                                               |
| 2008      | NSF NINN Review Committee                                                 |
| 2007-2008 | Chair, APS/AAPT <i>Graduate Education in Physics: Which Way Forward?</i>  |
| 2005-2007 | American Physical Society Committee on Education                          |
| 2002      | National Science Foundation MRSEC Review Panel                            |
| 1994-1995 | National Science Foundation ILI Review Panel                              |

1992 Department of Energy Basic Energy Sciences Program Review Panel

**Professional Development:**

[Building Partnerships Workshop on Water Energy and the Environment for Women Scientists from Morocco, Algeria and Tunisia](#), Casablanca, Morocco, March 2013 (COACH Workshop Facilitator)

[WIC Faculty seminar](#), 2011 (presenter, *Ethics in the WIC curriculum*)

[OSU Leadership Academy](#), 2010-2013 (participant)

[WIC Faculty seminar](#), 2009 (participant)

[Women in Physics group](#), 1996+ (mentor)

**Conference & Workshop Organization:**

[CUWiP Conference](#), Oregon State University, 15-17 January, 2016 (Co-Chair and fundraiser)

[TOEO-8](#), Waseda University, Tokyo, Japan, May 2013 (International Advisory Committee)

[Physics careers in industry and government](#), Tutorial workshop, Meeting of the American Physical Society, Portland, OR, March 2010 (moderator and co-organizer with S. Zollner)

[Graduate Education in Physics: Which Way Forward?](#) APS/AAPT Conference, College Park, MD, January 2008 (Chair, moderator, fund-raiser)

[APS Northwest Meeting](#), University of Puget Sound, May 2006 (Session Organizer and Chair)

[Materials Research Society Fall Meeting](#), Boston, MA, November 2005 (Symposium Organizer)

[Materials Research Society Fall Meeting](#), Boston, MA, December 2002 (Symposium Organizer)

**Outreach**

*Women in Science*: Panelist for [PNW Women in Science Retreat](#), 8-10 July 2016, Rockaway Beach, OR

*Capitol Hill Visit (Oregon Delegation)*: Visited 5 Oregon representatives and 2 senators to request support for NSF funding, May 2014

[Discovering the Scientist Within](#): AWIS Workshop for middle school girls, for 13 years since 1996.

*Outreach science nights* to Timber Ridge & Periwinkle elementary schools; Lebanon High School invited lecture.

**Grant and Contract Support****A. Current support:**

*Center for Next Generation of Materials by Design: Incorporating Metastability*, W. Tumas (PI), DoE ERFC, 2014-2018 (extended to 2020), \$14,000,000 + \$4,000,000 (OSU \$880,000 + \$150,000) (role: Senior Personnel and Thrust 3 co-leader)

**B. Past support (since 2016)**

*Gorman Faculty Scholar*, J. Tate, Gorman Faculty Scholar Fund, College of Science, Oregon State University, 2015-2018, \$37,500 (role: Endowed Scholar)

*Physics in cells: an interdisciplinary look at molecular motion*, J. Tate, OSU Learning Innovation Grant, 2017-2018, \$10,000 (plus \$6,000 Physics match).

*MRI: Acquisition of a SQUID magnetometer*, A. Jander (PI) and 14 others including **J. Tate**, National Science Foundation, 2017-2018, \$544,459.

*Raman Microscope Variable-temperature Stage*, **J. Tate** (PI) and G. Rorrer, Oregon State University Research Office RERF fund, April-December, 2017, \$70,582 (\$52,936+\$17,646 match).

*MRI: Acquisition of a High Field, Wide Temperature Range Electrical, Magnetic and Thermal Properties*

*Measurement System*, P. Dhagat (PI), **J. Tate**, E. Minot, M. Dolgos, A. Jander National Science Foundation, 2015-2016, \$544,100.

[https://www.nsf.gov/awardsearch/showAward?AWD\\_ID=1532287](https://www.nsf.gov/awardsearch/showAward?AWD_ID=1532287)

*CUWiP Conference 2016*, **Janet Tate**, American Physical Society 1 July 2015 – 30 June 2016, \$19,000

Matching funds: \$35,000 from ONAMI, Hewlett Packard, Vernier, FEI, AAS, OSU offices and private donors.

### Current Research Group:

Graduate Students: Okan Agirseven, Pritha Biswas

Undergraduates: Rohal Kakepoto, James Krebs, Elena Wennstrom, Julian Wulf

### Dissertations supervised (last known positions):

*Characterizing Titania Polymorphs Synthesized From Sputtered Amorphous Precursor Films* (project), David Rivella, Jr., M.S. 2018.

*Synthesis and Analysis of Heterostructural Semiconductor Alloy  $\text{Sn}_x\text{Ca}_y\text{Ch}$  ( $\text{Ch}=\text{S}, \text{Se}$ ) and Nitrides  $\text{Zn}_x\text{W}_y\text{N}$  and  $\text{Zn}_x(\text{W}_y\text{Mo}_z)\text{N}$* , Bethany Matthews, Ph.D. 2018 (PNNL Post-master researcher).

*Heterojunction Assisted Impact Ionization at the  $\text{ZnS}/\text{Si}$  Interface and  $\text{Cu}_x\text{Te}_y\text{S}_z$  Photodiodes*, Christopher Reidy, Ph.D. 2018 (Engineer, Apple, Mountain View CA; Microsoft, Bellevue WA)

*Amorphous  $\text{TiO}_2$ : A Thin Film Synthesis Route to Stabilization of Metastable  $\text{TiO}_2$  Brookite*, James Haggerty, Ph.D. 2018 (Engineer, Intel, Hillsboro, OR)

*Growth and characterization of the p-type semiconductors  $\text{SnS}$  and  $\text{BiCuOSe}$* , Jason Francis, Ph.D. 2013 (UC Berkeley Law School; Wells Fargo, San Francisco, CA; Intel, Hillsboro, OR).

*Development of a Data Acquisition System for a 3 $\omega$ -Thermal Experiment* (project), Matthew Oostman, M.S. 2012 (Shiftboard, Seattle, WA)

*Single crystal growth, powder synthesis and characterization of layered chalcogenide semiconductors*, Annette Richard, CH Ph.D. 2011 (L&E Engineering, Greenwood, IN; Praxair, Indianapolis IN).

*Measurement of optical bandgap energies of semiconductors*, Joshua Russell, M.S. 2010 (co-supervisor; David McIntyre was major professor) (SolarWorld, Hillsboro, OR)

*The synthesis, optical, and transport properties of  $\text{SnZrS}_3$* , Daniel Harada, M.S. 2010 (Support Engineer, Jive Software; Process Engineer, WaferTek, Camas WA).

*$\text{BaCuChF}$  ( $\text{Ch} = \text{S}, \text{Se}, \text{Te}$ ) p-type transparent conductors*, Andriy Zakutayev, M.S. 2009; Ph.D. 2010 (Staff scientist, NREL; formerly post-doc, NREL)

*Growth and characterization of wide-gap semiconducting oxide and chalcogenide thin films by pulsed laser deposition*, Paul Newhouse, Chemistry Ph.D. 2008 (Scientist, Joint Center for Artificial Photosynthesis (JCAP) Pasadena, formerly post doc, University of Wyoming; formerly post-doc, NREL)

*Pulsed laser deposition and thin film properties of p-type  $\text{BaCuSF}$ ,  $\text{BaCuSeF}$ ,  $\text{BaCuTeF}$  and n-type  $\text{Zn}_x\text{In}_y\text{O}_z$  wide band-gap semiconductors*, Robert Kykyneshi, Mat. Sci. Ph.D. 2007 (Post doc, Oregon State Univ.; Instructor, LBCC).

*Characterization of  $\text{MgSnO}_3$  films deposited using RF magnetron sputtering* (project), Matthew Price, M. S. 2005 (Asst. Prof. Ithaca College).

*Zinc tin oxide thin films by pulsed laser deposition for use as transparent thin film transistors*, James Osborne, M. S. October, 2004 (Engineer, Microsoft Corp.)

*Transport properties of  $\text{CuSc}_{1-x}\text{Mg}_x\text{O}_{2+y}$  and  $\text{BaCu}_2\text{S}_2$  transparent semiconductors*, Robert Kykyneshi, M. S. May, 2004. (Post doc, Oregon State Univ.; formerly Instructor, LBCC).

*Analysis of the processing and characterization of p-type  $\text{CuScO}_2$  thin films*, Benjamin Nielsen, M. S. Materials Science, February, 2003 (NTE Albany; formerly Engineer, PMIC Corvallis, OR)

*Optical materials: red TFEL phosphors and p-type transparent conducting oxides*, Andrew Draeseke (ABD Winter 2002). (Startup software company, Fremont CA)

*Magnetization studies of layered TBCCO*, Eric J. M. Moret, Ph.D. 1999 (Engineer, Intel, Hillsboro, OR)

*Critical current distributions in Co-doped  $\text{YBaCuO}$  single crystals* (project), Amy Droegemeier, M.S. 1999 (Wyckam, Portlad; formerly Triquint, Portland)

*Oxygen-deficient  $\text{YBa}_2\text{Cu}_3\text{O}_{6+x}$  films investigated by perturbed angular correlation spectroscopy*, Irene D. Dumkow, Ph. D. 1998 (BSH Bosch und Siemens Hausgeräte GmbH, Germany: Post-doc., Uni. Essen, Germany)

*Neutron irradiation and dc transport in  $\text{YBaCuO}$  single crystals: A study of vortex depinning*, Brandon R. Brown, Ph. D. 1997 (Professor & Chair, University of San Francisco, San Francisco, CA)

*Flux creep in  $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_x$  and  $\text{YBa}_2\text{Cu}_3\text{O}_x$  thin films: Magnetization and susceptibility studies*, Goran Karapetrov, Ph. D. 1996 (Assistant Professor, Drexel University, formerly Staff, Argonne National Laboratory, Argonne, IL)

*Microstructural characterization of  $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$  thin films with time-differential perturbed angular correlation spectroscopy*, Dennis W. Tom, Ph. D., 1996. (Engineer, Microsoft Corporation; formerly Engineer, Hewlett-Packard, Corvallis, OR)

*Critical scaling of thin-film  $\text{YBaCuO}$  and  $\text{NdCeCuO}$  resistivity-current isotherms: Implications for vortex phase transitions and universality*, Jeanette M. Roberts, Ph. D. 1995 (Engineer, Intel, Hillsboro, OR)

*Resistance in superconductors - A comparison of  $\text{Y}_1\text{Ba}_2\text{Cu}_3\text{O}_{6+x}$  and  $\text{Nd}_{2-x}\text{Ce}_x\text{CuO}_{4-y}$  thin films*, Bianca A. Hermann, M.S. 1992. (teacher; formerly C3 Professor of Physics, Ludwig Maximillian Universität, München)

#### Post Doctoral Associates:

2001 - 2003: Hiroshi Yanagi, Ph. D. (Professor of Applied Chemistry, Yamashi University)

1999 -2001: M. K. Jayaraj, Ph. D. (Professor of Physics, Cochin University)

1998 - 1999: Valentina Dimitrova, Ph. D. (Program manager, Intel Corporation)

#### Visitors:

June – Dec 2015: Chiyuki Sato, Yamanashi University

June – Dec 2008: Honglyoul Ju, Joon-Chul Moon, Yonsei University

#### Scientific Collaborators (current):

David GINLEY (NREL), Brian GORMAN (CSM), Stephen Kevan (UO), Douglas KEZSLER (OSU), Stephan LANY (NREL), Corinne Manogue (Paradigms group at OSU), David MCINTYRE (OSU), Laura SCHELHAS (NREL), Michael TONEY (SLAC), William TUMAS (NREL), John Wager (OSU), Hiroshi YANAGI (Yamanashi), Andriy ZAKUTAYEV (NREL)

**Invited Talks: (71 total)**

1. 15 May, 2020 WIC Seminar Series, Oregon State University  
Storyboarding approach to technical reports (presenter and panelist)
2. 12 November, 2019 Iota Sigma Pi Women in Chemistry Honor Society inaugural meeting,  
OSU  
Networking
3. 25 July, 2018 Thomas Young Center Energy Materials Workshop: From Atoms to  
Applications  
Metastability as a tool for materials exploration (plenary)
4. 11 May, 2018 OSU Distinguished Professor Lecture  
With a little help from my friends: collaborative materials research and incorporating research into  
the undergraduate curriculum
5. 4 April 2017 253<sup>rd</sup> American Chemical Society National Meeting  
Chalcogenide semiconductors as p-type transparent conductors, absorbers and alloys
6. 9 May 2016 Gilfillan Lecture, Oregon State University  
It's a Materials World
7. 14 April 2016 Materials Science seminar, OSU  
Growth and Characterization of Metastable Heterostructural Alloys: a Novel Method for Materials  
Optimization (by student Bethany Matthews)

**COURSES TAUGHT**

|           |                                         |
|-----------|-----------------------------------------|
| PH202     | Introductory Physics                    |
| PH211     | General Physics with Calculus           |
| PH212     | General Physics with Calculus           |
| PH221H    | Introductory Physics Honors Recitation  |
| PH222H    | Introductory Physics Honors Recitation  |
| PH223H    | Introductory Physics Honors Recitation  |
| PH314     | Introductory Modern Physics             |
| PH317X    | Experimental Physics                    |
| PH317     | Experimental Physics                    |
| PH320     | Paradigms: Symmetries and Idealizations |
| PH331     | Physics of Music                        |
| PH401     | Research                                |
| PH403     | Thesis                                  |
| PH421     | Paradigms: Oscillations                 |
| PH424     | Paradigms in Physics: 1-D Waves         |
| PH426     | Paradigms: Central Forces               |
| PH427     | Paradigms in Physics: Periodic Systems  |
| PH451     | Capstones in Physics: Quantum Physics   |
| PH451/551 | Quantum Physics                         |
| PH452/552 | Quantum Physics                         |
| PH453/553 | Quantum Physics                         |
| PH475     | Solid State Physics                     |
| PH575     | Solid State Physics                     |

|       |                                         |
|-------|-----------------------------------------|
| PH481 | Physical Optics                         |
| PH607 | TA seminar                              |
| PH607 | Teaching seminar                        |
| PH607 | Research seminar                        |
| PH652 | Solid State Physics                     |
| PH671 | Solid State Physics, Electron Transport |
| PH672 | Solid State Physics                     |
| PH673 | Solid State Physics                     |

**ADVISING****Thesis Committees:**

|                            |                   |                     |                  |
|----------------------------|-------------------|---------------------|------------------|
| Pritha Biswas              | Physics           | Ph. D. (2023)       | Major Professor  |
| Okan Agirseven             | Materials Science | Ph. D. (2021)       | Major Professor  |
| David Rivella              | Physics           | M. S. 2018, project | Major Professor  |
| Bethany Matthews           | Physics           | Ph. D. 2018         | Major Professor  |
| Christopher Reidy          | Physics           | Ph. D. 2018         | Major Professor  |
| James Haggerty             | Physics           | Ph. D. 2018         | Major Professor  |
| Jason Francis              | Physics           | Ph. D. 2013         | Major Professor  |
| Annette Richard            | Chemistry         | Ph. D. 2011         | Major Professor  |
| Andriy Zakutayev           | Physics           | Ph. D. 2010         | Major Professor  |
| Paul Newhouse              | Chemistry         | Ph. D. 2008         | Major Professor  |
| Robert Kykyneshi           | Materials Science | Ph. D. 2007         | Major Professor  |
| Andrew Draeseke            | Physics           | Ph.D. (ABD 2002)    | Major Professor  |
| Eric Moret                 | Physics           | Ph. D. 1999         | Major Professor  |
| Irene Dumkow               | Physics           | Ph. D. 1998         | Major Professor  |
| Brandon Brown              | Physics           | Ph. D. 1997         | Major Professor  |
| Goran Karapetrov           | Physics           | Ph. D. 1996         | Major Professor  |
| Dennis Tom                 | Physics           | Ph. D. 1995         | Major Professor  |
| Jeanette Roberts           | Physics           | Ph. D. 1995         | Major Professor  |
| James Haggerty             | Physics           | M. S. 2018, project | Major Professor  |
| Bethany Matthews           | Physics           | M. S. 2017, project | Major Professor  |
| Kai Zhan                   | Physics           | M. S. 2014          | Major Professor  |
| Matthew Oostman            | Physics           | M. S. 2012, project | Major Professor  |
| Daniel Harada              | Physics           | M. S. 2010          | Major Professor  |
| Matthew Price              | Physics           | M. S. 2005, project | Major Professor  |
| James Osborne              | Physics           | M. S. 2004          | Major Professor  |
| Robert Kykyneshi           | Physics           | M. S. 2004          | Major Professor  |
| Benjamin Nielsen           | Materials Science | M. S. 2004          | Major Professor  |
| Bianca Hermann             | Physics           | M. S. 1992          | Major Professor  |
| Rodney Snyder              | Physics           | B. S. Hons 2014     | Major Professor  |
| River Wiedle               | Physics           | B. S. Hons 2013     | Major Professor  |
| Evan deBlander             | Physics           | B. S. Hons 2009     | Major Professor  |
| Dara Easley                | Physics           | B. S. Hons 2002     | Major Professor  |
| Derek Tucker               | Physics           | B. S. Hons 2002     | Major Professor  |
| Izak McGieson              | Physics           | Ph.D. (2023)        | Committee member |
| Greg Giesbers              | Physics           | Ph. D. (2021)       | Committee member |
| Daniel McCulley            | Physics           | Ph.D. (2020)        | Committee member |
| Nicole Quist               | Physics           | Ph. D. (2020)       | Committee member |
| Vidhara H. Pathirannehlege | Chemistry         | Ph. D. (2022)       | Committee member |

|                           |                 |               |                  |
|---------------------------|-----------------|---------------|------------------|
| Alyssa Adams              | Chemistry       | Ph. D. (2020) | Committee member |
| Heather Forsythe          | Biochem/BioPhys | Ph. D. (2019) | GCR              |
| Yunfei Bo                 | EECS            | Ph. D. (2020) | GCR              |
| Trujillo-Herrera, Cinthya | EECS            | M.S. (2021)   | GCR              |

**Undergraduate Research supervision:**

Rohal Kakepoto, Julian Wulf, Elena Wennstrom, Joseph Krebs, Acacia Patterson, Cameron Stewart, Kelda Diffendaffer, Patrick Berry, Ryan Lance, Aaron Dethlefs, Hazel Betz, James May, Michael Forkner, Katie Banowetz, Joshua Stahly, Joshua Mutch, Scott Hutchings, Alex Poff, Kathleen Stevens Prudell, Aaron Kratzer, Daniel Speer, Rodney Snyder, River Wiedle, Casey Hines, Ben Howorth, Novela Auparay, Rachel Waite, Evan deBlander, Alden Jurling, Joe Kinney Dave Mack, Susan Guyler, Briony Horgan, Nicholas Lane, Dara Easley, Levi Kilcher, Derek Tucker, Ross Brody, Diedrich Schmidt, Nate Bezayiff, Joe Neal, Brandon van Leer, Andrew Fowler, Amy Spofford Kaizerman, Jeff Arasmith, Anupama Bhat Kaul

*REU undergraduates:* Emily Thomas, Rose Baunach, James Cutz, Nicola Schmidt, Elia Nelson, Megan van der Burch, Karen Hirst, Kim Schulze, Sean Herring, Jill Riley, Chris Tebow

**DEPARTMENTAL SERVICE**

P&T committee  
 Awards Committee (Chair)  
 Solid State and Optics Seminar organizer (Spring)  
 Upper division curriculum group  
 Advisory Committee (Department, elected)  
 Admissions Committee  
 Comprehensive Exam Committee  
 Yunker lecture organizer  
*Physicists for Inclusion in Science* Group Advisor  
 Departmental 3-yr review committees  
*Women in Physics* student group Advisor

**UNIVERSITY SERVICE****Committees:**

College of Science Promotion and Tenure Committee (elected)  
 MASC Internal Advisory Board  
 SciRIS-II review committee  
 Provost CIC Advisory Committee  
 WIC Advisory Committee  
 Dean's Advisory Committee (College of Science, invited)  
 Faculty Senate (elected)  
 Undergraduate Research Advisory Committee  
 CoS Strategic Planning Committee  
 UCSEE Sub-Committee on Academic Support Services

**Ad hoc service & workshops:**

Advance Training Workshop (31 May, 2018, participant)  
 CV-writing workshop, OSU undergrads  
 U-Succeed Panel, Leadership for minority students

**PUBLICATIONS**ResearcherID B-9544-2012; <http://www.researcherid.com/rid/B-9544-2012>ORCID 0000-0001-7555-7151; <http://orcid.org/0000-0001-7555-7151>**Peer-reviewed journal articles since 2017 (of 76 total):**

1. *Novel phase diagram behavior and materials design in heterostructural semiconductor alloys*, A. M. Holder, S. Siol, P. F. Ndione, H. Peng, A. M. Deml, B. E. Matthews, L. T. Schelhas, M. F. Toney, R. G. Gordon, W. Tumas, J. D. Perkins, D. S. Ginley, B. P. Gorman, J. Tate, A. Zakutayev, S. Lany, *Science Advances* 3(6) e1700270 (2017).  
doi: [10.1126/sciadv.1700270](https://doi.org/10.1126/sciadv.1700270)
2. *Using heterostructural alloying to tune the structure and properties of the thermoelectric  $\text{Sn}_{1-x}\text{Ca}_x\text{Se}$* , B. E. Matthews, A. M. Holder, L. T. Schelhas, S. Siol, J. W. May, M. R. Forkner, D. Vigil-Fowler, M. F. Toney, J. D. Perkins, B. P. Gorman, A. Zakutayev, S. Lany, J. Tate, *J. Mater. Chem. A* 5, 16873-16882 (2017).  
doi: [10.1039/C7TA03694A](https://doi.org/10.1039/C7TA03694A)
3. *High-fraction brookite films from amorphous precursors*, J. E. S. Haggerty, L. T. Schelhas, D. A. Kitchaev, J. S. Mangum, L. M. Garten, W. Sun, K. H. Stone, J. D. Perkins, M. F. Toney, G. Ceder, D. S. Ginley, B. P. Gorman, J. Tate, *Scientific Reports* 7, 15232 (2017).  
doi: [10.1038/s41598-017-15364-y](https://doi.org/10.1038/s41598-017-15364-y)
4. *Selective brookite polymorph formation related to the amorphous precursor state in  $\text{TiO}_2$  thin films*, J. S. Mangum, O. Agirseven, J. E. S. Haggerty, J. D. Perkins, L. T. Schelhas, D. A. Kitchaev, L. M. Garten, D. S. Ginley, M. F. Toney, J. Tate, B. P. Gorman, *J. Non-Crystalline Solids* 505, 109-114 (2019).  
doi: [10.1016/j.jnoncrysol.2018.10.049](https://doi.org/10.1016/j.jnoncrysol.2018.10.049)
5. *A map of the inorganic ternary metal nitrides*, W. Sun, C. J. Bartel, E. Arca, S. R. Bauers, B. Matthews, B. Orvañanos, B.-R. Chen, M. F. Toney, L. T. Schelhas, W. Tumas, J. Tate, A. Zakutayev, S. Lany, A. M. Holder, G. Ceder, *Nature Materials* 18, 732–739 (2019).  
doi: <https://doi.org/10.1038/s41563-019-0396-2>
6. *Templated growth of metastable polymorphs on amorphous substrates with seed layers*, Y. Han, R. Trottier, S. Siol, B. Matthews, M. Young, C. B. Musgrave, S. Lany, J. Tate, Q. Zhang, A. M. Holder, A. Zakutayev, *Physical Review Applied* 13, 014012 (2020).
7. *Crystallization of  $\text{TiO}_2$  polymorphs from RF-sputtered, amorphous thin-film precursors*, O. Agirseven, D.T. Rivella, Jr., J.E.S. Haggerty, P.O. Berry, K. Diffendaffer, A. Patterson, J. Krebs, J.S. Mangum, B.P. Gorman, J.D. Perkins, B.R. Chen, L.T. Schelhas, J. Tate, *AIP Advances* 10 (2020).  
doi: <https://doi.org/10.1063/1.5140368>

**Conference Report:**

1. *Graduate Education in Physics: Which Way Forward?* Janet Tate, Theodore Hodapp, Chandralekha Singh, Michael Thoennessen, (A report of the 2008 Graduate Conference on Education) American Physical Society (2009).  
[http://www.aps.org/programs/education/graduate/upload/2008-APS-Graduate-Education-Conference-Report\\_v0213.pdf](http://www.aps.org/programs/education/graduate/upload/2008-APS-Graduate-Education-Conference-Report_v0213.pdf)

**Conference Proceedings and Abstracts: 142**