

# CURRICULUM VITAE

## Personal Details

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**Gender:** Female  
**Nationality:** Dutch  
**Marital status:** Married, 2 children (born July 2015 and April 2018)

## Appointments

**Since June 2021** Department Head at the Helmholtz Center Berlin for Materials and Energy and Adjunct Assistant Professor of Chemistry at the University of Illinois Urbana-Champaign  
**2015 - 2021** Assistant Professor at the University of Illinois Urbana-Champaign, Department of Chemistry and the Materials Research Laboratory, affiliated with the Department of Materials Science and Engineering, Urbana, USA  
**2013 - 2015** Project group leader at the Max Planck Institute (MPI) for Biophysical Chemistry, Göttingen, affiliated with the Deutsches Elektronen Synchrotron (DESY), Hamburg, Germany

## Professional Preparation

**2011-2013** Postdoctoral Scholar in the group of Prof. A.H. Zewail (Nobel Laureate in Chemistry, 1999) at the California Institute of Technology (Caltech), Pasadena, USA  
**2006–2010** PhD at the École Polytechnique Fédérale de Lausanne (EPFL) and the Swiss Light Source (SLS), Paul Scherrer Institute (PSI), Switzerland  
Supervisor: Prof. Majed Chergui  
**2005–2006** Master in Chemistry at the Eidgenössische Technische Hochschule (ETH) in Zürich, Switzerland (*with distinction*)  
**2002–2005** Bachelor in Chemistry at the ETH in Zürich, Switzerland (*with distinction*)

## Awards & Fellowships

**2022 - 2027** Funding of first-time professorial appointments of excellent women scientists (W2/W3), Initiative and Networking Fund of the President of the Helmholtz Association (€2.145M)  
**2018 - 2023** Packard Fellowship in Science and Engineering, The David and Lucile Packard Foundation (\$875,000)  
**2018 - 2023** National Science Foundation (NSF) CAREER award (\$626,944)  
**2014** Sofja Kovalevskaja Award of the Alexander von Humboldt Foundation, Germany (€1.6M)  
**2014** Independent Max Planck Research Group appointed by the President of the Max Planck Society  
**2010** Prospective Researcher Fellowship of the Swiss National Science Foundation  
**2007** Swiss Chemical Society (SCS) prize, SCS Fall Meeting, Lausanne  
**2006** Doctoral fellowship awarded by the Doctoral School of Photonics, EPFL

## Third-Party Funding

09/2020 – 09/2023	Department of Energy (DOE) Solar Photochemistry Program, <b>individual grant</b> (\$497,268)
05/2020 – 05/2021	NSF Illinois Materials Research Science and Engineering Center (I-MRSEC) Seed Program, UIUC, <b>co-PI</b> (\$90,000)
04/2020 – 03/2021	Strategic Research Initiative Program, Grainger College of Engineering, UIUC, 2020 Phase I funding, <b>co-PI</b> (\$70,000)
03/2019 – 02/2020	NSF CHE CSDM-A Graduate Research Supplement for Veterans, supplement to CAREER award, <b>individual grant</b> (\$63,976)
08/2018 – 07/2021	NSF Major Research Instrumentation grant, <b>lead-PI</b> (\$561,254)
09/2018 – 08/2020	American Chemical Society (ACS) Petroleum Research Fund (PRF) Doctoral New Investigator (DNI) grant, <b>individual grant</b> (\$110,000)

## Oral Presentations

### Invited talks

1. Materials Research Society (MRS) Spring meeting, Honolulu, Hawaii, invited in the symposium "CH01 - Frontier of In Situ Materials Characterization - From New Instrumentation and Method to Imaging Aided Materials Design", May 2022
2. Pacificchem 2020, Honolulu, HI, invited two speak in three symposia: "Solutions to the Energy- and Environmental-Related Problems by Cutting-Edge Accelerator-Based Techniques", "Ultrafast Phenomena in Transition Metal-Containing Systems", and "Ultrafast Structural Dynamics in Condensed Matter", December 2021 (**virtual**)
3. *Fast electrons and hard X-rays for unraveling light-induced dynamics in energy materials*, invited seminar Max Born Institute, Berlin, December 2021 (**virtual**)
4. *Fast electrons and hard X-rays for unraveling light-induced dynamics in energy materials*, invited seminar UniSysCat Cluster of Excellence, Berlin, November 2021 (**virtual**)
5. *Fast electrons and hard X-rays for unraveling charge carrier dynamics*, invited seminar SFB 1073, University of Göttingen, October 2021 (**virtual**)
6. *Transient lensing from an electron gas imaged by ultrafast electron microscopy*, Microscopy & Microanalysis (M&M) Meeting invited in the symposium "P11 - Fast and Ultrafast Dynamics Using Electron Microscopy", Pittsburgh, PA, USA, August 2021 (**virtual**)
7. *Ultrafast Imaging and Spectroscopy of Strongly Cooperative Spin-Crossover Nanomaterials*, Journées Matière de la Condensée 17 (JMC17), August 2021 (**virtual**)
8. *Transient lensing from an electron gas imaged by ultrafast electron microscopy*, Collaborative Research Center 1242 "Non-equilibrium dynamics in condensed matter in the time domain", June 2021 (**virtual**)
9. American Chemical Society (ACS) Fall Meeting, San Francisco, CA, invited to the "Addressing Chemical Complexity with Nonlinear Optical Microscopy" symposium, August 2020 (**virtual**)
10. *Fast and Curious: Unraveling Atomic-Scale Dynamics in Solar Energy Conversion*, 2020 US Kavli Frontiers of Science Symposium, Seattle, WA, March 2020 (**cancelled**)
11. *Development of a Dynamic Environment Transmission Electron Microscope for the Study of (Ultra)Fast Phenomena in Nanoscale Materials*, EM-Situ'19 Workshop, Harvard University, Boston, MA, USA, December 2019
12. *Unraveling atomic-scale dynamics in solar energy conversion using fast electrons and hard X-rays*, Advanced Photon Source Upgrade (APS-U) workshop on time-resolved chemistry and catalysis, Chicago, IL, October 2019
13. *Fast and Curious: Unraveling Atomic-Scale Dynamics in Solar Energy Conversion*, 31<sup>st</sup> Packard Fellows Meeting, Monterey, CA, September 2019

14. *Development of a Dynamic Environment Transmission Electron Microscope at the University of Illinois*, Frontiers of electron Microscopy and Materials Science (FEMMS), Asheville, NC, September 2019
15. *Development of a Dynamic Environment Transmission Electron Microscope for the Study of Fast Phenomena in Nanoscale Materials*, M&M Meeting, Portland, OR, USA, August 2019 (**cancelled due to family emergency**)
16. *Development of a Dynamic Environment Transmission Electron Microscope for the Study of Fast Phenomena in Nanoscale Materials*, Femtosecond Electron Imaging and Spectroscopy 4 (FEIS-4), Lincoln, NE, USA, May 2019
17. *Ultrafast transmission electron microscopy for the study of light-induced phase transitions in strongly cooperative spin-crossover materials*, International Conference on Phase Transition and Dynamical Properties of Spin Transition Materials (PDSTM2019), Gainesville, FL, USA, May 2019
18. *Development of a Dynamic Environment Transmission Electron Microscope for the Study of Fast Phenomena in Nanoscale Materials*, Materials Research Society (MRS) Spring Meeting, Phoenix, TX, USA, April 2019
19. *Ultrafast transmission electron microscopy for the study of light-induced phase transitions in strongly cooperative spin-crossover materials*, American Chemical Society (ACS) Spring Meeting, Orlando, FL, USA, April 2019
20. *Ultrafast Electron Microscopy: a New Tool to Study Chemical Dynamics at the Nanoscale*, The Ohio State University, Department of Materials Science and Engineering, OH, USA, February 2019
21. *Ultrafast Electron Microscopy: a New Tool to Study Chemical Dynamics at the Nanoscale*, ETH Zürich, Laser Seminar, Switzerland, October 2018
22. *Ultrafast Structural Probing of Light-Induced Spin Crossover Dynamics*, "Light-Induced Processes" session of the 2018 Conductivity and Magnetism in Molecular Materials Gordon Research Conference (GRC), Bryant University, RI, USA, August 2018
23. *Development of a Dynamic Environmental TEM at the University of Illinois*, Telluride Science Research Center Workshop on "Development of an Integrated Transmission Electron Microscope", Telluride, CO, USA, June 2018
24. *Ultrafast Electron Microscopy: a New Tool to Study Structural Dynamics at the Nanoscale* Department of Chemical Engineering and Materials Science, University of Minnesota, MN, USA, October 2017
25. *Ultrafast core-level spectroscopy in 4D-electron microscopy*, Electron Microscopy with High Time Resolution Workshop (EMHTR2017), Strasbourg, France, May 2017
26. *Ultrafast core-level spectroscopy in 4D-electron microscopy*, 5<sup>th</sup> Banff Meeting on Structural Dynamics, Banff, Alberta, Canada, February 2017
27. *Ultrafast Electron Microscopy: Single-Nanoparticle Dynamics and Core-Level Spectroscopy*, Ahmed Zewail Memorial Symposium, Caltech, Pasadena, CA, USA, January 2017
28. *Ultrafast core-level spectroscopy in 4D-electron microscopy*, CMD26, European Physical Society - Condensed Matter Division, Groningen, The Netherlands, September 2016
29. *Ultrafast Electron Microscopy: a New Tool to Study Structural Dynamics at the Nanoscale*, Chemical Sciences and Engineering Colloquium, Argonne National Laboratory, IL, USA, February 2016
30. 45th World Chemistry Congress (IUPAC-2015), Busan, Korea, August 2015 (**declined due to pregnancy**)
31. 2015 Microscopy & Microanalysis (M&M) Meeting, Portland, OR, August 2015 (**declined due to pregnancy**)
32. SAGAMORE XVIII, Santa Margherita di Pula, Sardinia, Italy, June 2015 (**declined due to pregnancy**)
33. *4D Ultrafast Electron Microscopy*, 4<sup>th</sup> Banff Meeting on Structural Dynamics, Banff, Alberta, Canada, February 2015
34. *Ultrafast Electron Microscopy: a New Tool to Study Structural Dynamics at the Nanoscale*, Physics@Veldhoven conference, The Netherlands, January 2015

35. *Ultrafast Electron Microscopy: A New Tool to Study Chemical Dynamics at the Nanoscale*, Physical Chemistry Seminar, École Polytechnique Fédérale de Lausanne, Switzerland, April 2014
36. *Fundamental Ultrafast Processes in Light-Energy Conversion*, Fassberg Seminar, Max Planck Institute for Biophysical Chemistry, Göttingen, Germany, March 2014
37. *Ultrafast Electron Microscopy: a New Tool to Study Chemical Dynamics at the Nanoscale*, The 28th Meeting of the European Crystallographic Association, The University of Warwick, United Kingdom, August 2013
38. *Ultrafast Electron Microscopy of Photoswitching Materials*, American Chemical Society (ACS) meeting, New Orleans, LA, USA, April 2013
39. *Ultrafast Electron Microscopy - Visualizing Structural Dynamics of Materials*, Institute for Complex Molecular Systems, TU Eindhoven, The Netherlands, December 2012
40. *Time-Resolved XAS experiments at the Swiss Light Source: Present Status and Future*, Workshop "New Developments in Time-Resolved Studies with Synchrotron Radiation", European Synchrotron Radiation Facility (ESRF), Grenoble, France, February 2011
41. *Ultrafast X-ray and optical spectroscopy of metal complexes in solution*, Photonics Day, EPFL, Lausanne, Switzerland, November 2010
42. *Femtosecond wavepacket dynamics in dimetal complexes*, Max-Born-Institut für Nichtlineare Optik und Kurzzeitspektroskopie, Berlin, Germany, November 2009
43. *Ultrafast X-ray Absorption Spectroscopy on Metal Complexes in Solution - Structural determination of the triplet excited state of PtPOP*, Chemistry Department, SUNY Buffalo, NY, USA, October 2008
44. *Ultrafast Structural Dynamics in Coordination Compounds Studied by Time-Resolved Optical and X-Ray Spectroscopies*, Department of Chemistry, The University of Sheffield, United Kingdom, October 2007

#### **Contributed talks**

1. *Single-nanoparticle Phase Transitions Visualized by Ultrafast Electron Microscopy*, Ultrafast Phenomena XIV, Okinawa, Japan, July 2014
2. *Retrieving photochemically active structures by ultrafast optical and X-ray spectroscopies*, Swiss Chemical Society Fall Meeting, Lausanne, September 2009
3. *Retrieving photochemically active structures using time-resolved EXAFS spectroscopy*, XAFS XIV, Camerino, Italy, July 2009
4. *Pump-probe Chemistry Studied by Ultrafast X-Ray Techniques*, SLS Symposium, PSI Villigen, October 2007
5. *Ultrafast Structural Dynamics in Organometallic Platinum Complexes*, Swiss Chemical Society Fall Meeting, EPFL, September 2007

### **Synergistic Activities**

- Participation in the evaluation round of the Postdoc Office at HZB, May 5, 2022
- Invited member of the Diversity Lab on bilingual communication at HZB, since January 2022
- Invited member of the strategic board for career support, "HZB Succeed", since January 2022
- HZB contact person for the "Von Materie zu Materialien und Leben" (MML) topic "Materials - Quantum, Complex and Functional Materials" (RT2) in the POF IV program, since November 2021
- Organizing chair (together with Dwayne Miller) of the biennial 7th Banff Meeting on Structural Dynamics, 2019-2022 (member of International Organization Committee since 2017)
- Organizing a symposium "Bridging the fundamental electron dose gap for observing atom processes in complex materials in their native environments" at the M&M conference, Milwaukee, August 2-6, 2020. Co-organizers: Joerg Jinschek (OSU), Stig Helveg (Haldor Topsoe), Dalaver H. Anjum (KAUST)

- Co-organizer of the "In situ and ultrafast electron microscopy" symposium at the Frontiers of Electron Microscopy and Materials Science (FEMMS), Asheville, NC, September 2019
- Co-organizer of the "Chemical Applications of Ultrafast X-ray/XUV Spectroscopy and Scattering Symposium" at the 256<sup>th</sup> ACS National Fall Meeting, Boston, August 2018
- Invited member of the SwissFEL Review Committee, Paul Scherrer Institute, Switzerland, since October 2018 (twice yearly)
- Invited speaker/panelist for the Illinois Female Engineers in Academia Training (iFEAT) program, Fall 2016 - Spring 2018
- Faculty member and judge at the "Introduce a Girl to Engineering Day", Materials Science and Engineering Department, UIUC, Feb. 2017
- Elected member of the APS User Office Steering Committee (APSUO), Argonne National Laboratory, 2016-2019
- Member of the Graduate Student Admission Committee, Department of Chemistry, UIUC, Fall 2015-2020
- Member of the MRL Facilities Committee, Materials Research Laboratory, UIUC, 2016-2020
- Member of the REU Organization Committee, Department of Chemistry, UIUC, 2016-2018
- Member of the MRL Safety Committee, Materials Research Laboratory, UIUC, 2016-2020
- Banff International Advisory Committee for the Banff Meeting on Structural Dynamics, since 2017
- Peer-reviewing work for: *Science*, *Nature Materials*, *Science Bulletin*, *Scientific Reports*, *PNAS*, *JACS*, *ACS Energy Mat.*, *ACS Appl. Mat & Interf.*, *CPL*, *JCP*, *JPC*, *JPCL*, *JPB*, *J. Synchr. Rad.*, *APL*, *J. Phys. Condens. Matter*, *Ultramicroscopy*, *Structural Dynamics*, etc.
- Proposal review for the Arnold and Mabel Beckman Foundation, DOD AFOSR, NSF, ACS PRF, University of Strasbourg Institute for Advanced Study (USIAS), Netherlands Organization for Scientific Research (NWO), Swiss National Science Foundation (SNSF), Arnold and Mabel Beckman Foundation

## Mentoring Activities

- **Current group members:** Postdoctoral scholars: Thomas Rossi (HZB); Graduate students: Tyler Haddock (UIUC), Conner Dykstra (shared with Josh Vura-Weis, UIUC), Rachel Wallick (UIUC), Frank Alcorn (shared with Prashant Jain, UIUC), Jack Burke (shared with Josh Vura-Weis, UIUC).
- **Graduated students:** Jocelyn Lai, M.S. (UIUC, 2017, jointly supervised with Prof. Jian-Min Zuo); Thomas Dixon, M.S. (UIUC, 2017); Ryan Cornelius, M.S. (UIUC, 2020); Cecilia Gentle, PhD (UIUC, 2020); Allan Sykes, PhD (UIUC, 2021)
- Physical Chemistry Graduate Student Advisor, UIUC, 2016-2017, 2017-2018
- Summer Research Opportunity Program (SROP) Mentor, UIUC, Summer 2016
- Faculty member of 17 thesis committees at UIUC (excl. own students): Drishty Guin, Bailey Jackson, Kimberly Lundberg, Elena Montoto-Blanco, Brian Nguyen, Kris Benke, Alexander Moore, Zacchary Gosage, Sean Carney, Lawrence Salvati, Matthew Kottwitz, Dinumol Devasia, Ryan Ash, Joseph Flannigan (MatSE), Alison Wallum, Yusef Shari'ati, Reed Mingione

## Teaching Activities

- Undergraduate-level course: "CHEM 442 - Physical Chemistry I: Quantum Mechanics & Spectroscopy", Spring 2017, Fall 2017, Fall 2018, Fall 2019, UIUC
- Graduate-level course: "CHEM 590 X - Materials Characterization at Large-Scale X-Ray Facilities", Spring 2016, 2018, and 2020, UIUC
- Cottrell Scholars Collaborative (CSC) New Faculty Development Workshop participant, May 2016

- Master-level course "Structural Determination at Large-Scale X-ray Facilities", SS 2014, University of Göttingen, Germany
- "Week Zero" Chemistry lectures for prospective graduate students of the International Max Planck Research School (IMPRS) in Molecular Biology, Georg-August University Göttingen and Max Planck Institute for Biophysical Chemistry, Göttingen, October 2014

## **Outreach Activities**

- Dissemination of research conducted at large-scale facilities; organization of a "three-day synchrotron boot camp" for undergraduate and first-year graduate students, organization of a behind-the-scenes tour of the Advanced Photon Source at Argonne National Laboratory, 2018-2020
- Science demonstrations at primarily low-income middle schools in Champaign county (part of the "Science in Action" program in collaboration with David Sarlah), UIUC, 2018-2020
- Full-day science demonstrations during the "Girls Learning About Materials" day camp for middle-school girls, UIUC, 2018-2020

Berlin, February 9, 2022