# Eugenia S. Vasileiadou, Ph.D.

Los Angeles, CA

#### **EDUCATION**

Google Scholar evasileiadou@g.ucla.edu

**University of California, Los Angeles** (September 2023 – present) Postdoctoral Scientist, Department of Chemistry and Biochemistry

**California Institute of Technology** (April 2022 - June 2023) Postdoctoral Scientist, Department of Chemistry and Chemical Engineering

**Northwestern University** (April 2022) Ph.D. in Chemistry, Solid State & Materials Subdivision

**Aristotle University of Thessaloniki,** Greece (June 2017) B.S. in Chemistry; Dean's Distinction; Rank: 1/180

# **RESEARCH AND PROFESSIONAL EXPERIENCE**

**University of California, Los Angeles,** Department of Chemistry and Biochemistry, Los Angeles, CA <u>Postdoctoral Scientist (Sept. 2023 - present);</u>

Synthesis of infrared emitting materials and the development of spectroscopic tools to interrogate the photophysics of nanocrystal emitters in the infrared spectrum.

# Flion Energy Inc. at the California Institute of Technology, Pasadena, CA

Postdoctoral Scientist (April 2022 - June 2023);

Synthesis of battery cathode materials, structural characterization, engineering of lithium- and fluoride-ion battery cells and electrochemical investigation of designed battery cells operating at room temperature.

#### Northwestern University, Department of Chemistry, Evanston, IL

Dr. John N. Nicholson Research Fellow, Ph.D. Candidate (Nov. 2017 - April 2022);

Exploratory synthesis, structure-property-stability characterization, and thin film fabrication of novel, hybrid halide perovskites for optoelectronic applications. Research with use of facilities at Argonne National Laboratory.

#### Searle Center for Advanced Teaching and Learning, Northwestern University, Evanston, IL

<u>Teaching Consultant</u> (Oct. 2021 - April 2022) and <u>Graduate Teaching Fellow</u> (July 2020 – June 2021): Leading formative discussions on learning objectives, analyzing qualitative and quantitative pedagogical data to create reports. Conducting teaching observations, designing my own pedagogical research project, and leading department- and university-wide presentations and workshops.

# Archaeological Museum of Thessaloniki: Laboratory of Archaeometry and Physical Chemistry Research, Greece Undergraduate Research Assistant (Aug. 2016 - Feb. 2017)

Study of non-destructive X-ray fluorescence spectroscopy for the chemical, mineralogical, and structural characterization of ancient ceramic and metallic artifacts from the Hellenistic Period.

Florida International University (FIU), Department of Chemistry and Biochemistry, Miami, FL

NSF - Research Experience for Undergraduates (REU) Fellow (Summers 2015, 2016);

Coordination study of sulfonamide ligand precursors with transition and lanthanide metals for nuclear waste management applications. Research in collaboration with the Savannah River National Laboratory.

Aristotle University of Thessaloniki (AUTh): Department of Chemistry, Thessaloniki, Greece

Undergraduate Research Assistant (Aug. 2015 - Feb. 2017)

Collaboration on Undergraduate Diploma Thesis and FIU research.

# FELLOWSHIPS & AWARDS

• Inclusive Graduate Education Network (IGEN) Travel Grant, NSF INCLUDES Alliance, June 2023.

•Dr. John N. Nicholson Research Fellowship, Northwestern University (Sept. 2019 – April 2022)

•Women+ Symposium Award for Exceptional Achievement in the Field of Chemistry amongst all Greek Women Chemists, Women+ Symposium in collaboration with the Greek Chemists Association (Oct. 2021)

• Searle Center Graduate Teaching Fellow, Searle Center, Northwestern University (July 2020 - June 2021)

# •NSF-Graduate Research Fellowship Program, Honorable Mention (May 2019)

•Hierarchical Materials Cluster Program Fellowship, Northwestern University (Dec. 2018 - Mar. 2019) Fellowship promoting cross-disciplinary research and training. Awarded to second year graduate students.

•Scholarship, 5th International Youth Academy, Economic Policy Institute-Hanns Seidel Foundation (July 2017)

•NSF-REU Fellowship, Department of Chemistry, FIU (Summer 2016)

•Academic Excellence Scholarship, Department of Studies, AUTh, Greece (Feb. 2016)

•Scholarship, 4<sup>th</sup> International Symposium of Intermetallic Compounds in Catalysis, European Cooperation in Science and Technology (COST) Action, Santa Margherita, Italy (Apr. 2014)

•Scholarship, Training School on Surface Structure Determination by Low Energy Electron Diffraction (LEED), Chemistry Department, University of Reading, U.K. (Feb. 2014)

# **PROFESSIONAL CERTIFICATES, HONORS, DISTINCTIONS**

• <u>Future Faculty Conference</u> at the University of Chicago (June 2023)

• <u>Management for Scientists and Engineers Certificate</u>, Kellogg School of Management, Northwestern University (Summer 2021)

• <u>NextProf Science Workshop</u>, University of Michigan (May 2021)

• <u>Teaching Certificate Program</u>, Searle Center, Northwestern University (Sept. 2019 - June 2020)

• Phi Lambda Upsilon Graduate Chemistry Honors Society, Northwestern University (Sept. 2019 - present)

• Dean's Distinction "Hypatia Award", Faculty of Sciences, AUTh, Greece (July 2017)

• Greek Chemists Association's Academic Excellence Award, Greek Chemists Association, Greece (July 2017)

• High Honors Undergraduate Student, Chemistry Department, AUTh, Greece (June 2014 - June 2016)

# PEER-REVIEWED PUBLICATIONS

[18] Introduction to the Chemistry of Alternative Battery Technologies: Survey of Liquid Electrolytes in Next Generation, Fluoride-Ion Batteries;

Eugenia S. Vasileiadou\*, Pablo A. Romero, Journal of Advanced Technological Education, 2023, 2 (2).

[17] <u>Novel 3D Cubic Topology in Hybrid Lead Halides with a Symmetric Aromatic Triammonium Exhibiting Water</u> <u>Stability</u>;

<u>Eugenia S. Vasileiadou</u>, Imra S. Tajuddin, Michael C. De Siena, Vladislav V. Klepov, Mikaël Kepenekian, George Volonakis, Jacky Even, Lukasz Wojtas, Ioannis Spanopoulos, Xiuquan Zhou, Abishek K. Iyer, Julie L. Fenton, William R. Dichtel, Mercouri G. Kanatzidis, *Chemistry of Materials*, **2023**, *35* (14), 5267-5280.

[16] <u>Chemical Behavior and Local Structure of the Ruddlesden–Popper and Dion–Jacobson Alloyed Pb/Sn Bromide 2D</u> <u>Perovskites;</u>

Ping Fu,<sup>†</sup> Michael A. Quintero, <sup>†</sup> <u>Eugenia S. Vasileiadou</u>, <sup>†</sup> Parth Raval, Claire Welton, Yukun Liu, Christos Malliakas, Yi Yang, George Volonakis, Mikaël Kepenekian, Craig Laing, Vinayak P. Dravid, Jacky Even, G. N. Manjunatha Reddy, Can Li, Edward H. Sargent, Mercouri G. Kanatzidis, *Journal of the American Chemical Society*, **2023**, *145* (29), 15997-16014.

<sup>H</sup> equal contribution

[15] <u>Thick-Layer Lead Iodide Perovskites with Bifunctional Organic Spacers Allylammonium and</u> <u>Iodopropylammonium Exhibiting Trap-State Emission;</u>

Eugenia S. Vasileiadou, Xinyi Jiang, Mikaël Kepenekian, Jacky Even, Michael De Siena, Ioannis Spanopoulos, Daniel Friedrich, Emily A. Weiss, Mercouri G. Kanatzidis, *Journal of the American Chemical Society*, **2022**, 144, 14, 6390–6409.

[14] <u>Shedding Light on the Stability and Structure-Property Relationship of Two-Dimensional Lead Bromide Perovskites;</u> <u>Eugenia S. Vasileiadou</u>, Ido Hadar, Mikaël Kepenekian, Jacky Even, Qing Tu, Christos Malliakas, Daniel Friedrich, Ioannis Spanopoulos, Justin M. Hoffman, Vinyak P. Dravid, M. G. Kanatzidis, *Chemistry of Materials*, **2021**, 33, 13, 5085–5107.

[13] Structure-Property Relationships and Idiosyncrasies of Bulk, 2D Hybrid Lead Bromide Perovskites;

Eugenia S. Vasileiadou, Mercouri G. Kanatzidis, Israel Journal of Chemistry, **2021**, 61, 1-37. Invited Review Article for the Special Issue in Honor of the 2021 Wolf Prize in Chemistry [12] Insight on the Stability of Thick Layers in 2D Ruddlesden-Popper and Dion-Jacobson Lead Iodide Perovskites; Eugenia S. Vasileiadou, Bin Wang, Ioannis Spanopoulos, Ido Hadar, Alexandra Navrotsky, Mercouri G. Kanatzidis, *Journal of the American Chemical Society*, **2021**, 143, 6, 2523–2536.

[11] <u>Unveiling the Fatigue Behavior of 2D Hybrid Organic–Inorganic Perovskites: Insights for Long-Term Durability;</u> Doyun Kim, <u>Eugenia S. Vasileiadou</u>, Ioannis Spanopoulos, Xuguang Wang, Jinhui Yan, Mercouri G. Kanatzidis, Qing Tu, *Advanced Science*, **2023**, *10* (26), 2303133.

[10] Design rules for obtaining narrow luminescence from semiconductors made in solution;

Hao Nguyen, Grant Dixon, Florence Dou, Shaun Gallagher, Stephen Gibbs, Dylan Ladd, Emanuele Marino, Justin Ondry, James Shanahan, <u>Eugenia S.Vasileiadou</u>, Stephen Barlow, Daniel Gamelin, David Ginger, David Jonas, Mercouri Kanatzidis, Seth Marder, Daniel Morton, Christopher Murray, Jonathan Owen, Dmitri Talapin, Michael Toney, Brandi Cossairt, *Chemical Reviews*, **2023**, *123* (12), 7890-7952.

Invited Thematic Review

[9] <u>Abnormal In-Plane Thermomechanical Behavior of 2D Hybrid Organic-Inorganic Perovskite:</u>

Doyun Kim, <u>Eugenia S. Vasileiadou</u>, Ioannis Spanopoulos, Mercouri G. Kanatzidis, Qing Tu, ACS Applied Materials & Interfaces, **2023**, *15* (6), 7919-7927.

[8] <u>Coupling Photogeneration with Thermodynamic Modeling of Light-Induced Alloy Segregation Enables the Discovery of Stabilizing Dopants;</u>

Tong Zhu<sup>†</sup>, Sam Teale<sup>†</sup>, Luke Grater<sup>†</sup>, <u>Eugenia S. Vasileiadou</u>, Jonathan Sharir-Smith, Bin Chen, Mercouri G. Kanatzidis, Edward H. Sargent, *Submitted*.

[7] <u>Understanding Instability in Formamidinium Lead Halide Perovskites: Kinetics of Transformative Reactions at Grain</u> and Subgrain Boundaries;

Parth Raval, Rhiannon M. Kennard, <u>Eugenia S. Vasileiadou</u>, Clayton J. Dahlman, Ioannis Spanopoulos, Michael L. Chabinyc, Mercouri Kanatzidis and G. N. Manjunatha Reddy, *ACS Energy Letters*, **2022**, 1534-1543.

[6] <u>Film Formation Mechanism in Mixed Dimensional 2D/3D Halide Perovskite Films Revealed by In-Situ Grazing-Incidence Wide-Angle X-ray Scattering;</u>

Justin M. Hoffman, Ido Hadar, Xiaotong Li, Weijun Ke, <u>Eugenia S. Vasileidou</u>, Joseph Strzalka, Lin X. Chen, Mercouri G. Kanatzidis, *Chem*, **2022**.

[5] Entropy stabilization effects and ion migration in 3D "hollow" halide perovskites;

K. Jayanthi, Ioannis Spanopoulos, Nourdine Zibouche, Albert Voskanyan, <u>Eugenia S. Vasileiadou</u>, M. Saiful Islam, Alexandra Navrotsky and Mercouri G. Kanatzidis, *Journal of the American Chemical Society*, **2022**, 144, 18, 8223–8230.

[4] <u>Distance Dependence of Förster Resonance Energy Transfer Rates in Perovskite Quantum Wells via Control of Organic Spacer Length;</u>

Shobhana Panuganti, Lucas Vazquez Besteiro, <u>Eugenia S. Vasileiadou</u>, Alexander O. Govorov, Stephen K. Gray, Mercouri G. Kanatzidis, Richard D. Schaller, *Journal of the American Chemical Society*, **2021**, 143, 11, 4244–4252.

[3] <u>In-Plane Mechanical Properties of Two-Dimensional Hybrid Organic–Inorganic Perovskite Nanosheets: Structure–</u> <u>Property Relationships:</u>

Doyun Kim, <u>Eugenia S. Vasileiadou</u>, Ioannis Spanopoulos, Mercouri G. Kanatzidis, Qing Tu, *ACS Applied Materials & Interfaces*, **2021**, 13, 27, 31642–31649.

[2] <u>Exploring the Factors Affecting the Mechanical Properties of 2D Hybrid Organic-Inorganic Perovskites;</u> Qing Tu, Ioannis Spanopoulos, <u>Eugenia S. Vasileiadou</u>, Xiaotong Li, Mercouri G. Kanatzidis, Gajendra S. Shekhawat, Vinayak P. Dravid, *ACS Applied Materials & Interfaces*, **2020**, 12, 18, 20440–20447.

[1] <u>Aquabis(2,2'-bipyridine- $\kappa^2 N, N'$ )chloridonickel(II) chloride chloroform monosolvate hemihydrate;</u> <u>E. Vasileiadou</u>, P. A. Angaridis, R. G. Raptis, L. Mathivathanan, *IUCrData*, 1 (11), x161834, **2016**. *The most read article in IUCrData in the last six months (Jan. 2017 - Apr. 2017)*.

#### LEADERSHIP AND COMMUNITY SERVICE

• <u>inSTEM Mentor</u>, *National Science and Technology Medals Foundation*, (November 2023 – present)

- <u>Caltech Connections</u> Mentor, California Institute of Technology, (December 2022 August 2023)
- Mentor, Greek Women in STEM (Nov. 2020 present)

• ChemUnity Peer Mentor, Department of Chemistry, Northwestern University (June 2018 - April 2022)

• Workshop Vice Chair for the <u>Gender Equity in Academic Research Symposium (GEARS)</u>, Graduate Women Across Northwestern (GWAN), Northwestern University (Nov. 2019 - June 2021)

- Volunteer, Science Policy Outreach Task Force (SPOT), Northwestern University (Oct. 2019)
- Volunteer, Science in the Classroom (SITC), Chemistry Department, Northwestern University (Sept. 2019 Mar. 2020)

• Volunteer, Inside the Lab program, Northwestern University (Aug. 2019)

# **LANGUAGES:**

English: Native speaker

- Proficiency Level Certificate in English C2, University of Michigan (2008)
- Advanced Level Certificate in English C1, University of Michigan (2007)

# Greek-Ancient Greek: Native Speaker

# French: Proficient

Diploma C1: Diplôme Approfondi de Langue Française (DALF), Centre International d'Études Pédagogiques (2011)
Diplôme d'études en Langue Française (DELF), Centre International d'Études Pédagogiques (2010)

# German: Elementary

• Certificate: Zertifikat Deutsch Stufe A2, Foreign Languages Teaching Center, Aristotle University of Thessaloniki (2016)

• Certificate: Zertifikat Deutsch Stufe A1, Foreign Languages Teaching Center, Aristotle University of Thessaloniki (2015)