

Christopher J. Tassone, PhD

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Education

Doctor of Philosophy, Physical Chemistry – University of California Los Angeles **2011**
Advisor – Professor Sarah Tolbert

Bachelor of Science, Chemistry, with Honors – Santa Clara University **2004**

Work Experience

Division Director, Materials Science, Stanford Synchrotron Radiation Lightsource **8/1/2020-present**

- Manage the materials science division, one of three science divisions within SSRL. Manage personnel within four teams: one engineering team comprised of 7 engineers, two scientific teams comprised of 11 scientists (not including students and postdocs who comprise the individual research groups), and one operations team consisting of 6 engineers and technicians.
- Develops strategy and manage operations for the 13 beamlines, including scattering, spectroscopy, and imaging, which comprise the materials science user program portfolio at SSRL. Responsibilities include overseeing user scheduling, planning capability development, resource allocation, deploying continuous improvement processes for user experience, developing and deploying user acquisition processes with a focus on diversifying the user community, people management, technical oversight, developing collaborations with industry, and defining of research and development priorities.
- Leading strategic planning and proposal develop for the Major Item of Equipment proposal for the revitalization of the SSRL facility. Led the development of the science cases which motivate new x-ray end stations, as well as the conceptual design, which expand the facility capabilities to address science on a decadal horizon while leveraging the existing 3rd generation accelerator.
- Leading strategic planning for research portfolio across the materials science division. Identifying new sponsors, aligning the research goals of scientist direct reports with sponsor priorities, and investing in the development of capabilities which uniquely position our facility for research by both external users and our scientists. Focus on developing staff scientists' competencies around teaming and communication has resulted in 8.3% compound annual growth rate (CAGR) in the division's external funding portfolio.
- Member of the senior leadership team, and SLAC principal investigator, for the DOE Bio-Optimized Technologies to Keep Thermoplastics out of Landfills and the Environment (BOTTLE) consortium, jointly sponsored by the EERE, Advanced Materials and Manufacturing Technology Office (AMMTO) and the Bioenergy Technology Office (BETO). Responsibilities include developing consortium strategy, project assessment and resource (re)allocation, developing industrial engagement, and aligning SLAC projects with the broader consortium goals and developing inter-institutional collaborations.
- Deputy Director and co-PI for the BES-CSGB FWP, "Integrated Platform to Predict Degradation of Catalysts for Sustainable Conversion of Alternate Feedstocks to Fuels and Chemicals." Coordinating research across a collaborative research effort which includes 3 national laboratories and 5 universities. Defining project key performance indicators, review monthly task progress, coordinate with industrial advisory board, and allocate human capital across project tasks. Project is successfully ingesting data from all 8 project participants to inform artificial intelligence algorithms for the prediction of catalyst degradation rates using short term experimental data and theory.
- Manage a research group consisting of project scientists, postdoctoral scholars, and graduate students with a focus on leveraging advanced characterization and artificial intelligence to elucidate the mechanisms underlying synthesis, processing and function of materials related to the sustainable energy transition.

Hard X-ray Group Leader, SLAC National Accelerator Laboratory **1/1/2018 – 7/31/2020**

- Led one engineering team and one scientific team which comprised the hard x-ray group of the materials science division. Oversaw operation of the 5 hard x-ray scattering beamlines including processes for training and onboarding users and staff, determining R&D priorities, bringing new capabilities into the user program, and day to day logistics for 200 user experiment starts/year.
- Oversaw the design, development and commissioning of the state-of-the-art undulator-based scattering beamline, 17-2. Maintained development schedule, and orchestrated successful redistribution of resources following shelter in place due to the COVID-19 pandemic to mitigate the delays to the beamline commissioning schedule to achieve beamline beneficial use on time.
- Managed a research group consisting of project scientists, postdoctoral scholars, master's students, and undergraduates focused on combining in-situ experimentation, machine learning, and chemistry to develop methods for autonomous x-ray characterization and the elucidation of physics which determine synthesis pathways for kinetically limited systems.

Staff Scientist, SLAC National Accelerator Laboratory **9/1/2013 – 12/31/2018**

- Led the design, build, commissioning and ran user program for the simultaneous small and wide angle scattering materials science beamline at SSRL. Resulting in a doubling of the scientific productivity of the small angle scattering program at SSRL.
- Developed a strong portfolio of external funding, which enabled novel instrument developments within the facility, leading scientific research, and opportunities to develop the scientific workforce. This portfolio of funded projects also developed new core capabilities within the lab focused on the development and use of machine learning for scientific research, in order to impact a broad range of applications in Energy Science.
- Managed and fund raised to support a research group of project scientists, postdoctoral scholars, master's students, and undergraduates focused on combining in-situ experimentation, machine learning, and chemistry to accelerate the discovery of nanomaterials.

Postdoctoral Scholar, SLAC National Accelerator Laboratory **2011 – 2013**

- Designed, and commissioned instruments to enable in-situ characterization of bulk heterojunction inks, thin film printing and thin film solvent annealing.
- Elucidated the role of molecular aggregation in polymer inks to manipulate nucleation and growth during casting of organic thin films.
- Developed experimental approaches and data analyses to understand the role that molecular packing plays in small molecule bulk heterojunction photovoltaics.

Graduate Student Researcher, UCLA Department of Chemistry and Biochemistry **2005 – 2011**

Thesis Title: Investigation into the opto-electronic properties of polymer composites oriented through either self-assembly or inorganic templating

- Led international collaboration with Canon Inc. to tailor polymer opto-electronic properties through confinement into inorganic scaffolds.
- Characterization lead for organic thin films, relating observed structural changes to processing conditions and opto-electronic properties.

Undergraduate Student Researcher, Santa Clara University, Department of Chemistry **2003 – 2004**

- Established a collaborative effort with NASA AMES research center, focused on the design and fabrication of a nanoscale water sensing device for deep space planetary probes.

Galileo Pharmaceuticals **Summer 2003**

- Designed reaction schemes for potentially viable drug candidates, synthesized natural products for potential drug applicants, and scaled up drug candidates entering phase one clinical trials.

Awards and Acknowledgements

Oppenheimer Science & Energy Leadership Program Fellowship. 2024

Funding Awards

Lead-PI, Collaborative Access Agreement, KLA Tencor, 2013-2016

Lead-PI, Lab Directed Research and Development, SLAC National Accelerator Laboratory, “Accelerating Nanoparticle Synthetic Development.” 2015-2017

Lead-PI, Field Work Proposal, DOE-EERE Advanced Manufacturing Office, “Aggregation and Structuring of Materials and Chemicals Data from Diverse Sources.” 2015-2019

Co-PI, Field Work Proposal, DOE-EERE Advanced Manufacturing Office, “In-situ Data Acquisition and Tool Development for Additive Manufacturing Metal Powder Systems.” 2016-2018

Co-PI, Lab Directed Research and Development, Lawrence Berkeley National Laboratory, “X-LAB, A System for Algorithmically Driven Synthesis of Semiconductors for Beyond CMOS Technologies.” 2018-2020

Lead-PI, Lab Directed Research and Development, SLAC National Accelerator Laboratory, “Energy Driven Control of Crystallization and Alloying Pathways.” 2020-2022

Co-PI, Annual Operating Plan, National Alliance for Water Innovation, “Kinetic Modelling and Experimental Validation of Mineralization in High Salinity Brine Solutions without Scale Inhibitors.” 2021-2023

Co-PI, Annual Operating Plan, EERE-SETO, “Total Characterization of Perovskite Films for Enhanced Stability.” 2021-2025.

SLAC Lead – Consortium Annual Operating Plan, DOE-EERE Bio Energy Technologies Office/Advanced Manufacturing Office, “Bio-Optimized Technologies to keep Thermoplastics out of Landfills and the Environment (BOTTLE)” 2020-2026

Deputy Director, BES-CSGB FWP, “Integrated Platform to Predict Degradation of Catalysts for Sustainable Conversion of Alternate Feedstocks to Fuels and Chemicals.” 2023-2025

Mentorship: Current and Past Research Group Members

Project Scientist	Postdoctoral Scholar	PhD Student	Master’s Student	Undergraduate Summer Intern
Lenson Pellouchoud	Karsten Bruening	Herbert Silva	Ekaterina Tcarev	Keli Thurston
Richard Walroth	Liheng Wu	Sathya Chitturi		Allison Ong
Vivek Thampy	Amanda Fournier	Alexis Voulgaropoulos		Christopher Jackson
	Anthony Yu-Ming Fong	Ruth Arwani		Chayse Lavallis
	Sarah Hesse			Raul Girbal
	Anjani Maurya			Steven Lin
	Sen Liu			Ereni Delis
	Peiyu Quan			

	Zihengyu Chen			
	Dongjae Shin			

Academic & Institutional Service

Organizer, SSRL/LCLS User Meeting Workshop “In-situ/operando Characterization of Soft Materials.” 2014

Organizer, SSRL Scattering School 2014

Organizer, SSRL Scattering School 2016

Committee Member, SULI Undergraduate Intern Selection Committee 2016

Organizer, canSAS-IX workshop 2017

Organizer, SSRL Scattering School 2018

Organizer, SSRL/LCLS User Meeting Workshop “Machine Learning for X-ray Science: From Machine Optimization to Experimental Planning” 2018

Reviewer, NSLS-II Quadrennial Review. 2020

Member 5-way Lightsource “Diversity, Equity, Accessibility, and Inclusion” Working Group 2020-2022

Member of the SLAC Public Lecture Committee, 2020-Present

Secondment to the SLAC DEIA office, 2022-2025

Member 5-way Lightsource “Lightsources beyond the Roadmap” Working Group 2023-2024

Organizer, SSRL/LCLS User Meeting Workshop “User Facilities in the Age of Big Science” 2024

Reviewer, Wallenberg Initiative Materials Science for Sustainability (WISE), Conceptual and Technical Design Review. 2024-2025

Selected Invited Talks

“ML Enabled Data Analysis and Experimental Steering for Autonomous Measurements” Machine Learning for X-ray and Neutron Science. 2025

“Using Artificial Intelligence to Discover Novel Catalysts, and Accelerate the Change to Sustainable Feedstocks within the Chemicals Industry.” ACS Fall Meeting. 2023

“Sourcing Carbon from Waste Plastics.” ACS Spring Meeting 2023.

“SMASH-ML - Methods for Accelerating Materials Design.” Invited Lecture, Apple. 2019

“Sourcing Carbon from Waste Plastics.” ACS Spring Meeting 2023.

Publication List: H-index 44, i10-index 73, Total citations 7987

1. Ayzner, AL; Wanger, DD; **Tassone, CJ**; Schwartz, BJ; Tolbert, SH. “Room to improve Conjugated Polymer-Based Solar Cells: Understanding How Thermal Annealing Affects the Fullerene Component of a Bulk heterojunction Photovoltaic Device.” *J. Phys Chem C*. 112 (48). 2008.

2. Ayzner, AL; **Tassone, CJ**; Tolbert, SH; Schwartz, BJ. “Reappraising the Need for Bulk Heterojunctions in Polymer-Fullerene Photovoltaics: The Role of Carrier Transport in All-Solution-Processed p3HT/PCBM Bilayer Solar Cells.” *J. Phys Chem C*. 113 (46). 2009.

3. Tremolet de Villers, B; **Tassone, CJ**; Tolbert, SH; Schwartz, BJ. "Improving the Reproducibility of P3HT: PCBM Solar Cells by Controlling the PCBM/Cathode Interface." **J. Phys Chem C**. 113 (44). 2009.
4. Craig, IM; **Tassone, CJ**; Tolbert, SH; Schwartz, BJ. "Second Harmonic Generation in Conjugated Polymer Films: A sensitive probe of how bulk polymer crystallinity changes with spin speed." **J. Chem. Phys.** 132 (1). 2010.
5. **Tassone, CJ**; Ayzner, AL; Kennedy, RD; Halim, M; So, M; Rubin, Y; Tolbert, SH; Schwartz, BJ. "Using Pentaarylfullerenes to Understand Network Formation in Conjugated Polymer-Based Bulk-Heterojunction Solar Cells." **J. Phys. Chem. C**. 115. 2011.
6. Trinh, C; Whited, MT; Steiner, A; **Tassone, CJ**; Toney, MF; Thompson, ME. "Chemical Annealing of Zinc Tetraphenylporphyrin Films: Effects on Film Morphology and Organic Photovoltaic Performance" **Chem. Mater.** 24 (13). 2012.
7. Wang, H; Mei, J; Liu, P; Schmidt, K; Jimenez-Oses, G; Osuna, S; Lang, L; **Tassone, CJ**; Zoombelt, AP; Sokolov, AN; Houk, KN; Toney, MF; Bao, Z. "Scalable and Selective Dispersion of Semiconducting Arc-Discharged Carbon Nanotubes by Dithiafulvalene/Thiophene Copolymers for Thin Film Transistors" **ACS Nano**. 7(3). 2013.
8. Trinh, C; Kirlikovali, KO; Bartynski, A; **Tassone, CJ**; Toney, MF; Burkhard, GF; McGehee, MD; Djurovich, PI; Thompson, ME. "Efficient Energy Sensitization of C₆₀ and Application in Organic Photovoltaics." **JACS**. 135(32). 2013.
9. Chen, MS; Lee, OP; Niskala, JR; Yiu, AT; Tassone, CJ; Schmidt, K; Beaujuge, PM; Onishi, SS; Toney, MF; Zettle, A; Frechet; JMJ. "Enhanced Solid-State Order and Field-Effect Hole Mobility through Control of Nanoscale Polymer Aggregation." **JACS**. 135 (51). 2013.
10. Schmidt, K; **Tassone, CJ**; Niskala, J; Yiu, A; Lee, O; Weiss, TM; Wang, C; Beaujuge, P; Fréchet, JM; Toney, MF. "Observation of Early Onset Polymer Aggregation in Solution Induced by the Addition of Chloronaphthalene." **AdvMater**. 26 (2). 2014.
11. Bartelt, JA; Douglas, JD; Mateker, WR; Labban, AE; **Tassone, CJ**; Toney, MF; Frechet, LML; Beaujuge, PM; McGehee, MD. "Controlling Solution-Phase Polymer Aggregation with Molecular Weight and Solvent Additives to Optimize Polymer-Fullerene Bulk Heterojunction Solar Cells." **Adv. Ener. Mater.** 4(9). 2014.
12. Lee, W-Y; Giri, G; Diao, Y; **Tassone, CJ**; Matthews, JF; Sorensen, ML; Mannsfeld; SCB; Chen, W-C; Fong, HH; Tok, KB-H; Toney, MF; He, M; Bao, Z. "Effect of Non-Chlorinated Mixed Solvents on Charge Transport and Morphology of Solution-Processed Polymer Field-Effect Transistors." **Adv. Func. Mater.** 24(23). 2014.
13. Warman, J; Cabanetos, C; Labban, AE; Hansen, MR; **Tassone, CJ**; Toney, MF; Beaujuge, PM. "Ordering Effects in Benzo [1, 2-b: 4, 5-b'] difuran-thieno [3, 4-c] pyrrole-4, 6-dione Polymers with > 7% Solar Cell Efficiency." **Adv. Mater.** 26 (25) 2014.
14. Labban, AE; Warnan, J; Cabanetos, C; Ratel, O; **Tassone, CJ**; Toney, MF; Beaujuge, PM. "Dependence of Crystallite Formation and Preferential Backbone Orientations on the Side Chain Pattern in PBDTPD Polymers" **ACS Appl. Mater. Interfaces**. 6 (22) 2014.
15. Unger, EL; Bowring, AR; **Tassone, CJ**; Pool, VL; Gold-Parker, A; Chaechoen, R; Stone, KH; Hoke, ET; Toney, MF; McGehee, MD. "Chloride in lead chloride-derived organo-metal halides for perovskite-absorber solar cells" **Chem. Mater.** 26 (24) 2014.

16. Wang, H; Hsieh, B; Jimenez-Oses, G; Liu, O; **Tassone, CJ**; Diao, Y; Lei, T; Houk, KN; Bao, Z. "Solvent Effects on Polymer Sorting of Carbon Nanotubes with Applications in Printed Electronics." **Small**. 11 (1) 2015.
17. Rosu, C; Kleinhenz, N; Choi, D; **Tassone, CJ**; Zhang, X; Park, JO; Srinivasarp, M; Russo, PS; Reichmanis, E. "Protein-assisted Assembly of π -conjugated Polymers." **Chem. Mater**. 28 (2) 2015.
18. Reinspach, JA; Diao, Y; Giri, G; Sachse, T; England, K; Zhou, Y; **Tassone, CJ**; Worfolk, BJ; Presselt, M; Toney, MF; Mannsfeld, S; Bao, Z. "Tuning the Morphology of solution-sheared P3HT:PCBM Films." **ACS Appl. Mater**. 8 (3) 2016.
19. Rivnay, J; Inal, S; Collins, BA; Sessolo, M; Stavrinidou, E; Strakosas, X; **Tassone, CJ**; Delongchamp, DM; Malliaras, GG. "Structural control of mixed ionic and electronic transport in conducting polymers." **Nat. Comm**. 7. 2016.
20. Santra, PK; Palmstrom, AF; **Tassone, CJ**; Bent, SF. "Molecular ligands control superlattice structure and crystallite orientation in colloidal quantum dot solids." **Chem. Mater**. 28 (19) 2016.
21. Schelhas, LT; Christians, JA; Berry, JJ; Toney, MF; **Tassone, CJ**; Luther, JM; Stone, KH. "Monitoring a Silent Phase Transition in $\text{CH}_3\text{NH}_3\text{PbI}_3$ Solar Cells via Operando X-ray Diffraction." **ACS Ener. Lett**. 1(5) 2016.
22. Strand, MB; Leong, GJ; **Tassone, CJ**; Larsen, B; Neyerlin, KC; Gorman, B; Diercks, DR; Pylypenko, S; Pivovar, B; Richards, RM. "Mechanistic Study of Shape-Anisotropic Nanomaterials Synthesized via Spontaneous Galvanic Displacement." **J. Phys. Chem. C**. 120 (43) 2016.
23. Gu, X; Yan, H; Kurosawa, T; Schroeder, BC; Gu, KL; Zhou, Y; To, JWF; Oosterhout, SD; Savikhin, V; Molina-Lopez, F; **Tassone, CJ**; Mannsfeld, SCB; Wang, C; Toney, MF; Bao, Z. "Comparison of the Morphology Development of Polymer-Fullerene and Polymer-Polymer Solar Cells during Solution-Shearing Blade Coating." **Adv. Ener. Mater**. 6(22) 2016.
24. Rolston, N; Printz, AD; Hilt, F; Hovish, MQ; Bruning, K; **Tassone, CJ**; Dauskardt, RH. "Improved Stability and Efficiency of Perovskite Solar Cells with Submicron Flexible Barrier Films Deposited in Air." **J. Mater. Chem. A**. 5 (44) 2017.
25. Bergsman, DS; Closser, RG; **Tassone, CJ**; Clemens, BM; Nordlund, D; Bent, SF. "Effect of Backbone Chemistry on the Structure of Polyurea Films Deposited by Molecular Layer Deposition." **Chem. Mater**. 29 (3) 2017.
26. Rosu, C; **Tassone, CJ**; Chu, PH; Balding, PL; Gorman, A; Hernandez, JL; Hawkridge, M; Roy, A; Negulescu, II; Russo, PS; Reichmanis, Elsa. "Polypeptide-assisted organization of π -conjugated polymers into responsive, soft 3D networks." **Chem. Mater**. 29 (12) 2017.
27. Gu, X; Zhou, Y; Gu, K; Kurosawa, T; Guo, YL; Yunke, L; Haoran, S; Bob C; Yan, H; Molina-Lopez, F; **Tassone, CJ**; Wang, C; Mannsfeld, SCB; Yan, H; Zhao, D; Toney, MF; Bao, Z. "Roll-to-Roll Printed Large-Area All-Polymer Solar Cells with 5% Efficiency Based on a Low Crystallinity Conjugated Polymer Blend." **Adv. Ener. Mater**. 7(14) 2017.
28. Wu, L; Willis, JJ; McKay, IS; Diroll, BT; Qin, J; Cargnello, M; **Tassone, CJ**. "High-temperature crystallization of nanocrystals into three-dimensional superlattices." **Nature**. 548 (7666) 2017.
29. Willis, JJ; Goodman, ED; Wu, L; Riscoe, AR; Martins, P; **Tassone, CJ**; Cargnello, M. "Systematic Identification of Promoters for Methane Oxidation Catalysts Using Size-and Composition-Controlled Pd-Based Bimetallic Nanocrystals." **J. Am. Chem. Soc**. 139 (4) 2017.

30. Rosu, C; Chu, PH; **Tassone, CJ**; Park, K; Balding, PL; Park, JO; Srinivasarao, M; Reichmanis, E; "Polypeptide Composite Particle-Assisted Organization of π -Conjugated Polymers into Highly Crystalline 'Coffee Stains'." **ACS Appl. Mater. Inter.** 9 (39) 2017.
31. Willis, JJ; Gallo, A; Sokaras, D; Aljama, H; Nowak, SH; Goodman, ED; Wu, L; **Tassone, CJ**; Jaramillo, TF; Abild-Pedersen, F; Carnigello, M. "Systematic Structure–Property Relationship Studies in Palladium-Catalyzed Methane Complete Combustion." **ACS Catal.** 7 (11) 2017.
32. Margulis, K; Zhang, X; Joubert, LM; Bruening, K; **Tassone, CJ**; Zare, RN; Waymouth, RM. "Formation of Polymeric Nanocubes by Self-Assembly and Crystallization of Dithiolane-Containing Triblock Copolymers." *Angw. Chem.* 129 (51) 2017.
33. Hilt, F; Hovish, MQ; Rolston, NJ; Bruening, K; **Tassone, CJ**; Dauskardt, RH. *Rapid Route to Efficient, Scalable, and Robust Perovskite Photovoltaics in Air.* **Ener. Environ. Sci.** 2018.
34. Bruening, K; **Tassone, CJ**. "Antisolvent Processing of Lead Halide Perovskite Thin Films Studied by in-situ X-ray Diffraction." **J. Mat. Chem. A.** 2018.
35. Wu, L; Lian, H; Willis, JJ; Goodman, ED; McKay, IS; Qin, J; **Tassone, CJ**; Cargnello, M. "Tuning Precursor Reactivity Towards Nanometer Size Control in Palladium Nanoparticles Studied by in-situ Small Angle X-ray Scattering." **Chem. Mater.** 30 (30) 2018.
36. Guzelturk, B; Belisle, RA; Smith, MD; Bruening, K; Prasanna, R; Yuan, Y; Gopalan, V; **Tassone, CJ**; Karanadasa, HI, McGehee, MD; Lindenberg, AM. "Terahertz Emission from Hybrid Perovskites Driven by Ultrafast Charge Separation and Strong Electron-Phonon Coupling." **Adv. Mater.** 30 (11) 2018.
37. Calta, NP; Wang, J; Kiss, AM; Martin, AA; Depond, PJ; Guss, GM; Thampy, V; Fong, AY; Weker, JN; Stone, KH; **Tassone, CJ**; Kramer, MJ; Toney, MF; Van Buuren, A; Matthews, MJ. "An Instrument for in-situ Time-Resolved X-ray Imaging and Diffraction of Laser Powder Bed Fusion Additive Manufacturing Processes." **Rev. Sci. Inst.** 89 (5) 2018.
38. Wu, L; Fournier, A; Willis, JJ; Cargnello, M; **Tassone, CJ**. "In Situ Scattering Guides the Synthesis of Uniform PtSn Nanocrystals." **Nano Lett.** 2018.
39. Pandolfi, RJ; Allan, DB; Arenholz, E; Barroso-Luque, L; Campbell, SI; Caswell, TA; Blair, A; De Carlo, F; Fackler, S; Fournier, AP; Freychet, G; Fukuto, M; Gursoy, D; Jiang, Z; Krishnan, H; Kumar, D; Kline, RJ; Li, R; Liam, C; Marchesini, S; Mehta, A; N'Diaye, AT; Parkinson, DY; Parks, H; Pelloucou, LA; Perciano, T; Ren, F; Sahoo, S; Stzalka, J; Sunday, D; **Tassone, CJ**; Ushizima, D; Venkatakrishnan, S; Yager, KG; Zwart, P; Sethian, JA; Hexemer, A. "Xi-cam: A Versatile Interface for data Visualization and Analysis." **J. Synch. Rad.** 25 (4) 2018.
40. Stone, KHI Gold-Parker, A; Pool, VL; Unger, EL; Bowring, AR; McGehee, MD; Toney, MF, **Tassone, CJ**. "Transformation from Crystalline Precursor to Perovskite in $PbCl_2$ Derived $MAPbI_3$." **Nat. Comm.** 9 (1) 2018.
41. Dou, B; Whitaker, JB; Bruening, K; Moore, DT; Wheeler, LM; Ryter, J; Breslin, NJ; Berry, JJ; Garner, SM; Barnes, F; Shaheen, SE; **Tassone, CJ**, Shu, K; van Hest, MFAM. "Roll-to-Roll Printing of Perovskite Solar Cells." **ACS Ener. Lett.** 2018.

42. Bruening, K; Dou, B; Simonaitis, J; Lin, YY; van Hest, MFAM, **Tassone, CJ**. "Scalable Fabrication of Perovskite Solar Cells to Meet Climate Targets." **Joule**. 2018.
43. Jurow, MJ; Morgensern, T; Eisler, C; Kang, J; Penzo, E; Do, M; Engelmayer, M; Osowiecki, WT; Bekenstein, Y; **Tassone, CJ**; Wang, LW; Alivisatos, AP; Brutting, W; Liu, Y. "Manipulating the Transition Dipole Moment of CsPbBr₃ Perovskite Nanocrystals for Superior Optical Properties." **Nano Lett**. 2018.
44. Gorman, A; Zhang, X; Risteen, B; **Tassone, CJ**; Russo, PS. "Characterization of Submicron Bubbles Formed by the Hydrophobin Cerato-ulmin." **J. Phys Chem. B**. 2019.
45. Martin, AA; Calta, NP; Khairallah, SA; Wang, J; Depond, PJ; Fong, AY; Thampy, V; Guss, GM; Kiss, AM; Stone, KH; **Tassone, CJ**; Weker, JN; Toney, MF; van Buuren, A; Matthews, MJ. "Dynamics of pore formation during laser powder bed fusion additive manufacturing." **Nat. Comm**. 2019.
46. Kiss, AM; Fong, AY; Calta, NP; Thampy, V; Martin, AA; Depond, PJ; Wang, J; Matthews, MJ; Ott, RT; **Tassone, CJ**; Stone, KH; Kramer, MJ; van Buuren, A; Toney, MF; Weker, JN. "Laser-Induced Keyhole Defect Dynamics during Metal Additive Manufacturing." **Adv. Eng. Mater**. 2019
47. Moral, RF; Bonato, LG; Germino, JC; Oliveira, WXC; Kamat, R; Xu, J; **Tassone, CJ**; Stranks, SD; Toney, MF; Nogueira, AF. "Synthesis of Polycrystalline Ruddlesden-Popper Organic Lead Halides and Their Growth Dynamics." **Chem. Matter**. 2019
48. Hovish, MQ; Rolston, N; Bruning, K; Hilt, F; **Tassone, CJ**; Dauskardt, RH. "Crystallization kinetics of rapid spray plasma processed multiple cation perovskites in open air." **J. Mat. Chem. A**. 2020
49. Marchezi, PE; Therezio, EM; Szostak, R; Loureiro, HC; Bruening, K; Gold-Parker, A; Melo, MA; **Tassone, CJ**; Tolentino, HCN; Toney, MF; Nogueira, AF. "Degradation mechanisms in mixed-cation and mixed-halide Cs_xFa_{1-x}Pb(Br_γI_{1-γ})₃ perovskite films under ambient conditions." **J. Mat. Chem. A**. 2020
50. Beal, RE; Hagstrom, NZ; Barrier, J; Gold-Parker, A; Prasanna, R; Bush, KA; Passarello, D; Schelhas, LT; Bruning, K; **Tassone, CJ**; Steinruck; H-G; McGehee, MD; Toney, MF; Nogueira, AF. "Structural origins of light-induced phase segregation in organic-inorganic halide perovskite photovoltaic materials." **Matter**. 2020
51. Thampy, V; Fong, AY; Calta, NP; Wang, J; Martin, AA; Depond, PJ; Kiss, AM; Guss, G; Xing, Q; Ott, RT; van Buuren, A; Toney, MF; Weker, JN; Kramer, MH, Matthews, MJ; **Tassone, CJ**; Stone, KH. "Subsurface cooling rates and microstructural response during laser based metal additive manufacturing." **Sci Reports**. 2020.
52. Abelsamie, M; Xu, JX; Bruning, K; **Tassone, CJ**; Steinruck; H-G; Toney, MF. "Impact of Processing on Structural and Compositional Evolution in Mixed Metal Halide Perovskites during Film Formation." **Adv. Func. Mater**. 2020.
53. Calta, NP; Thampy, V; Lee, DRC; Martin, AA; Ganeriwala, R; Wang, J; Depond, PJ; Roehling, TT; Fong, AY; Kiss, AM; **Tassone, CJ**; Stone, KH; Weker, JN; Toney, MF; van Buuren, AW; Matthews, MJ. "Cooling dynamics of two titanium alloys during laser powder bed fusion probed with in situ x-ray imaging and diffraction." **Mater. & Des**. 2020.

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55. Fong, AY; Pellouchoud, L; Davidson, M; Walroth, RC; Church, C; Tcareva, E; Wu, L; Peterson, K; Meredig, B; **Tassone, CJ**. "Utilization of machine learning to accelerate colloidal synthesis and discovery." **J. Chem. Phys.** 2021
56. Cendra, C; Balhorn, L; Zhang, W; O'Hara, K; Bruening, K; **Tassone, CJ**; Steinruck, H-G; Liang, M; Toney, MF; McCullouch, I; Chabiny, ML; Salleo, A; Takacs, CJ. "Unraveling the Unconventional Order of a High Mobility Idacenodithiophene-Bezaothiadiazole Copolymer." **ACS Macro Lett.** 2021.
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Patents

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