Stanford



Jennifer Dionne

Professor of Materials Science and Engineering, Senior Fellow at the Precourt Institute for Energy and Professor, by courtesy, of Radiology (Molecular Imaging Program at Stanford)

Resume available Online

CONTACT INFORMATION

- **Administrator**

  Elizabeth Barbosa - Administrative Associate

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Bio

BIO

Jennifer (Jen) Dionne is a Professor of Materials Science and Engineering and, by courtesy, of Radiology at Stanford. She is also a Chan Zuckerberg Biohub Investigator, deputy director of Q-NEXT (a DOE National Quantum Initiative), and co-founder of Pumpkinseed, a company developing quantum sensors to understand and optimize the immune system. From 2020-2023, Jen served as Stanford's Inaugural Vice Provost of Shared Facilities, raising capital to modernize instrumentation, fund experiential education, foster staff development, and support new and existing users of the shared facilities. Jen received her B.S. degrees in Physics and Systems Science and Mathematics from Washington University in St. Louis, her Ph. D. in Applied Physics at the California Institute of Technology in 2009, and her postdoctoral training in Chemistry at Berkeley. As a pioneer of nanophotonics, she is passionate about developing methods to observe and control chemical and biological processes as they unfold with nanometer scale resolution, emphasizing critical challenges in global health and sustainability. Her research has developed culture-free methods to detect pathogens and their antibiotic susceptibility; amplification-free methods to detect and sequence nucleic acids and proteins; and new methods to image light-driven chemical reactions with atomic-scale resolution. Jen's work has been featured in NPR, the Economist, Science, and Nature, and recognized with the NSF Alan T. Waterman Award, a NIH Director's New Innovator Award, a Moore Inventor Fellowship, and the Presidential Early Career Award for Scientists and Engineers. She was also featured on Oprah's list of "50 Things that will make you say 'Wow'!". She also perceives outreach as a critical component of her role and frequently collaborates with visual and performing artists to convey the beauty of science to the broader public.

ACADEMIC APPOINTMENTS

- Professor, Materials Science and Engineering
- Senior Fellow, Precourt Institute for Energy
- Professor (By courtesy), Radiology - Rad/Molecular Imaging Program at Stanford
- Member, Bio-X
- Member, Cardiovascular Institute
- Affiliate, Precourt Institute for Energy
- Member, Wu Tsai Neurosciences Institute

ADMINISTRATIVE APPOINTMENTS

- Senior Associate Dean of Research for Platforms/Shared Facilities, Stanford, (2020- present)
- Co-Director, TomKat Center for Sustainable Energy, (2019-2021)
- Director, Photonics at Thermodynamic Limits Energy Frontier Research Center, (2018- present)
- Faculty Co-Director, Stanford Photonics Research Center, (2018- present)

HONORS AND AWARDS

- Chan Zuckerberg Biohub Investigator, Chan Zuckerberg Biohub (2022)
- Keck Foundation Fellowship, Physical Sciences, Keck Foundation (2022)
- Alan T. Waterman Award, National Science Foundation (2019)
- New Innovator Award, National Institutes of Health (2019)
- Moore Inventor Fellowship, Moore Foundation (2018)
- Materials Research Society Outstanding Young Investigator, Materials Research Society (2017)
- Nano Letters Young Investigator Lectureship, American Chemical Society (2017)
- Tau Beta Pi Teaching Honor Roll, Tau Beta Pi, Stanford (2017)
- Adolph Lomb Medal, Optical Society of America (2016)
- Outstanding Undergraduate Engineering Professor, Tau Beta Pi (2016)
- Camille Dreyfus Teacher-Scholar Award, Dreyfus Foundation (2015)
- Sloan Research Fellowship, Sloan Foundation (2015)
- Presidential Early Career Award in Science and Engineering, United States government (2014)
- Kavli Early Career Lectureship in Nanoscience, Materials Research Society (2013)
- Oprah's 50 things that will make you say 'Wow!', Oprah Magazine (2013)
- Outstanding Young Alumni Award, Washington University in St. Louis (2012)
- CAREER Award, National Science Foundation (2011)
- TR35, Technology Review (2011)
- Frederick E. Terman Fellow, Stanford University (2010)
- Robert Noyce Family Faculty Fellow, Robert Noyce Scholarship & Fellowship Programs (2010)
- Young Investigator, Air Force Office of Scientific Research (2010)
- Francis Clauser Prize, Clauser family (2009)
- Gold Award, Materials Research Society (2008)

PROFESSIONAL EDUCATION

- PhD, California Institute of Technology , Applied Physics (2009)
- MS, California Institute of Technology , Applied Physics (2005)
- BS, Washington University in St. Louis , Physics (2003)
- BS, Washington University in St. Louis , Systems Science and Mathematics (2003)

LINKS

- http://dionne.stanford.edu: http://dionne.stanford.edu

Teaching

COURSES

2026-27

- Science of the Impossible: MATSCI 82N (Spr)

2025-26

- Science of the Impossible: MATSCI 82N (Spr)

2024-25

- Science of the Impossible: MATSCI 82N (Spr)

2023-24

- Science of the Impossible: MATSCI 82N (Spr)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Joao Azaro Berenguer, Johan Carlstrom, Micah Lawrence, Joshua Reynolds, Yixuan Shao, Abigail Stein

Postdoctoral Faculty Sponsor

Rachel Chan, Sangeon Jun, Serin Lee, Mingsheng Li, Punnag Padhy, Rajarshi Samajdar, Ojasvi Verma, Yanyu Xiong, Matthew Ye, Lin Yuan, Yigao Yuan

Doctoral Dissertation Advisor (AC)

Priyanuj Bordoloi, Hamish Carr Delgado, Chih-Yi Chen, Remi Dado, Varun Dolia, Antony Georgiadis, Isabella He, Liam Herndon, Amy McKeown-Green, Baba Ogunlade, Darrell Omo-Lamai, Logan Russo, Cindy Shi, Jiyong Shim

Master's Program Advisor

Malaya Gaerlan

Publications

PUBLICATIONS

- **Atomic-Scale Moiré and Electronic Structure Analysis of Twisted Epitaxial MoS2-Au-MoS2 Heterostructures.** *Nano letters*
  Cui, Y., Xu, K., Ren, P., Yuan, L., Czaja, P., Barnum, A., Sarkar, P., Altman, A., Bustillo, K., Kundu, S., Ramdas, A., Wang, X., Wan, et al
  2026
- **A Humidity-Tolerant Photocatalyst for Methane Removal.** *Environmental science & technology*
  Kessler, M. I., Randall, R., Wan, G., Xu, K., Zhang, Y., Dionne, J. A., Jackson, R. B., Majumdar, A.
  2026
- **Twisted Tin-Chloride Perovskite Single-Crystal Heterostructures.** *Angewandte Chemie (International ed. in English)*
  Cleron, J. L., Chen, C. Y., Pan, F., Saha, S., Marlton, F. P., Stolz, R. M., Li, J., Dionne, J. A., Liu, F., Filip, M. R., Karunadasa, H. I.
  2025: e20140
- **Atmospheric-pressure ammonia synthesis on AuRu catalysts enabled by plasmon-controlled hydrogenation and nitrogen-species desorption** *NATURE ENERGY*
  Yuan, L., Bourgeois, B. B., Begin, E., Zhang, Y., Dai, A. X., Cheng, Z., Mckeown-Green, A. S., Xue, Z., Cui, Y., Xu, K., Wang, Y., Jones, M. R., Majumdar, et al
  2025
- **Room-temperature valley-selective emission in Si-MoSe2 heterostructures enabled by high-quality-factor chiroptical cavities.** *Nature communications*

Pan, F., Li, X., Johnson, A. C., Dhuey, S., Saunders, A., Hu, M. X., Dixon, J. P., Dagli, S., Lau, S. C., Weng, T., Chen, C. Y., Zeng, J. H., Apte, et al
2025

- **Resonant metasurface-enabled quantum light sources for single-photon emission and entangled photon-pair generation.** *Nanophotonics (Berlin, Germany)*
  Pan, F., Bordoloi, P., Chen, C. Y., Dionne, J. A.
  2025; 14 (23): 3861-3870
- **Integrative Approaches to Reveal Catalyst Dynamics: Bridging Operando Techniques, Theory, and Artificial Intelligence.** *ACS nano*
  Lee, T. H., Lee, S., Yuan, L., Dionne, J. A., Park, J.
  2025
- **Upconverting microgauges reveal intraluminal force dynamics in vivo.** *ArXiv*
  Casar, J. R., McLellan, C. A., Shi, C., Stiber, A., Lay, A., Siefe, C., Parakh, A., Gaerlan, M., Gu, W., Goodman, M. B., Dionne, J. A.
  2025
- **Upconverting microgauges reveal intraluminal force dynamicsin vivo.** *ArXiv*
  Casar, J. R., McLellan, C. A., Shi, C., Stiber, A., Lay, A., Siefe, C., Parakh, A., Gaerlan, M., Gu, W., Goodman, M. B., Dionne, J. A.
  2025
- **Resonant metasurface-enabled quantum light sources for single-photon emission and entangled photon-pair generation** *NANOPHOTONICS*
  Pan, F., Bordoloi, P., Chen, C., Dionne, J. A.
  2025
- **The Next 25 Years of Nanoscience and Nanotechnology: A Nano Letters Roadmap** *NANO LETTERS*
  Shim, W., Natelson, D., Arbiol, J., Besley, E., Dionne, J. A., Herrmann, C., Jariwala, D., Lau, C., Li, L., Manna, L., Nam, K., Nie, G., Prieto, et al
  2025; 25 (34): 12789-12798
- **Low-energy nuclear fusion boosted by electrochemistry** *NATURE*
  McKeown-Green, A., Dionne, J. A.
  2025; 644 (8077): 614-615
- **GHz-Speed Wavefront Shaping Metasurface Modulators Enabled by Resonant Electro-Optic Nanoantennas.** *Advanced materials (Deerfield Beach, Fla.)*
  Dagli, S., Shim, J., Carr Delgado, H., Balch, H. B., Abdollahramezani, S., Chen, C. Y., Dolia, V., Klopfer, E., Dixon, J., Hu, J., Ogunlade, B., Song, J. H., Brongersma, et al
  2025: e06790
- **Catalight-An Open-Source Automated Photocatalytic Reactor Package Illustrated through Plasmonic Acetylene Hydrogenation** *JOURNAL OF PHYSICAL CHEMISTRY A*
  Bourgeois, B. B., Dai, A. X., Carlin, C. C., Yuan, L., Al-Zubeidi, A., Cheng, W., Swearer, D. F., Dionne, J. A.
  2025: 6170-6178
- **Increasing the Structural Chirality of Metal Nanocrystals Created by Circularly Polarized Light via Surface Ligand Engineering.** *Small (Weinheim an der Bergstrasse, Germany)*
  Qiao, T., Bordoloi, P., Ashworth, A. E., Miyashita, T., Mirmohammadi, S. S., Dionne, J. A., Tang, M. L.
  2025: e2502440
- **Photons continue to surprise: a conversation with Harry Atwater** *ADVANCED PHOTONICS*
  Dionne, J.
  2025; 7 (3)
- **Upconverting microgauges reveal intraluminal force dynamics in vivo**
  Casar, J. R., Goodman, M. B., Dionne, J. A., Mclellan, C. A., Shi, C., Gaerlan, M., Stiber, A.
  CELL PRESS.2025
- **Bacterial Wastewater-Based Epidemiology Using Surface-Enhanced Raman Spectroscopy and Machine Learning.** *Nano letters*
  Herndon, L. K., Zhang, Y., Safir, F., Ogunlade, B., Balch, H. B., Boehm, A. B., Dionne, J. A.
  2025

- **Upconverting microgauges reveal intraluminal force dynamics in vivo.** *Nature*
  Casar, J. R., McLellan, C. A., Shi, C., Stiber, A., Lay, A., Siefe, C., Parakh, A., Gaerlan, M., Gu, X. W., Goodman, M. B., Dionne, J. A.
  2025; 637 (8044): 76-83

- **High-throughput antibody screening with high-quality factor nanophotonics and bioprinting.** *ArXiv*
  Abdollahramezani, S., Omo-Lamai, D., Bosman, G., Hemmatyar, O., Dagli, S., Dolia, V., Chang, K., Güsken, N. A., Delgado, H. C., Boons, G. J., Brongersma, M. L., Safir, F., Khuri-Yakub, et al
  2024

- **Heart cockle shells transmit sunlight to photosymbiotic algae using bundled fiber optic cables and condensing lenses.** *Nature communications*
  McCoy, D. E., Burns, D. H., Klopfer, E., Herndon, L. K., Ogunlade, B., Dionne, J. A., Johnsen, S.
  2024; 15 (1): 9445

- **Author Correction: Highly confined epsilon-near-zero and surface phonon polaritons in SrTiO3membranes.** *Nature communications*
  Xu, R., Crassee, I., Bechtel, H. A., Zhou, Y., Bercher, A., Korosec, L., Rischau, C. W., Teyssier, J., Crust, K. J., Lee, Y., Gilbert Corder, S. N., Li, J., Dionne, et al
  2024; 15 (1): 8545

- **Nano Letters Seed Grants, Take Two** *NANO LETTERS*
  Odom, T. W., Besley, E., Colvin, V., Dionne, J. A., Herrmann, C., Nie, G., Prieto, A. L., van der Zande, A. M., Wang, H.
  2024

- **p53 Regulates Nuclear Architecture to Reduce Carcinogen Sensitivity and Mutagenic Potential.** *bioRxiv : the preprint server for biology*
  King, D. A., McCoy, D. E., Perdyan, A., Mieczkowski, J., Douki, T., Dionne, J. A., Herrera, R. E., Morrison, A. J.
  2024

- **Targeted materials discovery using Bayesian algorithm execution** *NPJ COMPUTATIONAL MATERIALS*
  Chitturi, S. R., Ramdas, A., Wu, Y., Rohr, B., Ermon, S., Dionne, J., da Jornada, F. H., Dunne, M., Tassone, C., Neiswanger, W., Ratner, D.
  2024; 10 (1)

- **The role of the plasmon in interfacial charge transfer.** *Science advances*
  Ostovar, B., Lee, S. A., Mehmood, A., Farrell, K., Searles, E. K., Bourgeois, B., Chiang, W. Y., Misiura, A., Gross, N., Al-Zubeidi, A., Dionne, J. A., Landes, C. F., Zanni, et al
  2024; 10 (27): eadp3353

- **Very-large-scale integrated high quality factor nanoantenna pixels.** *Nature nanotechnology*
  Dolia, V., Balch, H. B., Dagli, S., Abdollahramezani, S., Carr Delgado, H., Moradifar, P., Chang, K., Stiber, A., Safir, F., Lawrence, M., Hu, J., Dionne, J. A.
  2024

- **From Genotype to Phenotype: Raman Spectroscopy and Machine Learning for Label-Free Single-Cell Analysis.** *ACS nano*
  Zhang, Y., Chang, K., Ogunlade, B., Herndon, L., Tadesse, L. F., Kirane, A. R., Dionne, J. A.
  2024

- **Rapid, antibiotic incubation-free determination of tuberculosis drug resistance using machine learning and Raman spectroscopy.** *Proceedings of the National Academy of Sciences of the United States of America*
  Ogunlade, B., Tadesse, L. F., Li, H., Vu, N., Banaei, N., Barczak, A. K., Saleh, A. A., Prakash, M., Dionne, J. A.
  2024; 121 (25): e2315670121

- **Highly confined epsilon-near-zero and surface phonon polaritons in SrTiO3 membranes.** *Nature communications*
  Xu, R., Crassee, I., Bechtel, H. A., Zhou, Y., Bercher, A., Korosec, L., Rischau, C. W., Teyssier, J., Crust, K. J., Lee, Y., Gilbert Corder, S. N., Li, J., Dionne, et al
  2024; 15 (1): 4743

- **Spectroscopy in Nanoscopic Cavities: Models and Recent Experiments.** *Annual review of physical chemistry*
  Bourgeois, M. R., Pan, F., Anyanwu, C. P., Nixon, A. G., Beutler, E. K., Dionne, J. A., Goldsmith, R. H., Masiello, D. J.
  2024; 75 (1): 509-534

- **MicrobioRaman: an open-access web repository for microbiological Raman spectroscopy data.** *Nature microbiology*

Lee, K. S., Landry, Z., Athar, A., Alcolombri, U., Pramoj Na Ayutthaya, P., Berry, D., de Bettignies, P., Cheng, J. X., Csucs, G., Cui, L., Deckert, V., Dieing, T., Dionne, et al
2024

- **Toward "super-scintillation" with nanomaterials and nanophotonics.** *Nanophotonics*
  Carr Delgado, H., Moradifar, P., Chinn, G., Levin, C. S., Dionne, J. A.
  2024; 13 (11): 1953-1962

- **Toward "super-scintillation" with nanomaterials and nanophotonics** *NANOPHOTONICS*
  Delgado, H., Moradifar, P., Chinn, G., Levin, C. S., Dionne, J. A.
  2024

- **Solution-phase sample-averaged single-particle spectroscopy of quantum emitters with femtosecond resolution.** *Nature materials*
  Shi, J., Shen, Y., Pan, F., Sun, W., Mangu, A., Shi, C., McKeown-Green, A., Moradifar, P., Bawendi, M. G., Moerner, W. E., Dionne, J. A., Liu, F., Lindenberg, et al
  2024

- **Unraveling sources of emission heterogeneity in Silicon Vacancy color centers with cryo-cathodoluminescence microscopy.** *Proceedings of the National Academy of Sciences of the United States of America*
  Angell, D. K., Li, S., Utzat, H., Thurston, M. L., Liu, Y., Dahl, J., Carlson, R., Shen, Z. X., Melosh, N., Sinclair, R., Dionne, J. A.
  2024; 121 (14): e2308247121

- **Millimeter-Scale Exfoliation of hBN with Tunable Flake Thickness for Scalable Encapsulation** *ACS APPLIED NANO MATERIALS*
  McKeown-Green, A. S., Zeng, H. J., Saunders, A. P., Li, J., Shi, J., Shen, Y., Pan, F., Hu, J., Dionne, J. A., Heinz, T. F., Wu, S. M., Zheng, F., Liu, et al
  2024

- **Tuning the Chiral Growth of Plasmonic Bipyramids via the Wavelength and Polarization of Light.** *Nano letters*
  Qiao, T., Bordoloi, P., Miyashita, T., Dionne, J. A., Tang, M. L.
  2024

- **Quantitative gas-phase transmission electron microscopy: Where are we now and what comes next?** *MRS BULLETIN*
  Jinschek, J. R., Helveg, S., Allard, L. F., Dionne, J. A., Zhu, Y., Crozier, P. A.
  2024

- **Advancing precision cancer immunotherapy drug development, administration, and response prediction with AI-enabled Raman spectroscopy.** *Frontiers in immunology*
  Chadokiya, J., Chang, K., Sharma, S., Hu, J., Lill, J. R., Dionne, J., Kirane, A.
  2024; 15: 1520860

- **Nanoscale and ultrafast in situ techniques to probe plasmon photocatalysis** *CHEMICAL PHYSICS REVIEWS*
  Carlin, C. C., Dai, A. X., Al-Zubeidi, A., Simmerman, E. M., Oh, H., Gross, N., Lee, S. A., Link, S., Landes, C. F., da Jornada, F. H., Dionne, J. A.
  2023; 4 (4)

- **Accelerating Quantum Materials Development with Advances in Transmission Electron Microscopy.** *Chemical reviews*
  Moradifar, P., Liu, Y., Shi, J., Siukola Thurston, M. L., Utzat, H., van Driel, T. B., Lindenberg, A. M., Dionne, J. A.
  2023

- **High-Throughput Screening of Optical Properties of Glass-Supported Plasmonic Nanoparticles Fabricated by Polymer Pen Lithography** *JOURNAL OF PHYSICAL CHEMISTRY C*
  Gross, N., Wang, W., Brasel, S., Searles, E. K., Bourgeois, B., Dionne, J. A., Landes, C. F., Link, S.
  2023; 127 (39): 19607-19619

- **The carotenoid redshift: Physical basis and implications for visual signaling.** *Ecology and evolution*
  McCoy, D. E., Shultz, A. J., Dall, J. E., Dionne, J. A., Johnsen, S.
  2023; 13 (9): e10408

- **Progress and Prospects in Optical Ultrafast Microscopy in the Visible Spectral Region: Transient Absorption and Two-Dimensional Microscopy.** *The journal of physical chemistry. C, Nanomaterials and interfaces*
  Gross, N., Kuhs, C. T., Ostovar, B., Chiang, W. Y., Wilson, K. S., Volek, T. S., Faitz, Z. M., Carlin, C. C., Dionne, J. A., Zanni, M. T., Gruebele, M., Roberts, S. T., Link, et al
  2023; 127 (30): 14557-14586

- **Rapid genetic screening with high quality factor metasurfaces.** *Nature communications*
  Hu, J., Safir, F., Chang, K., Dagli, S., Balch, H. B., Abendroth, J. M., Dixon, J., Moradifar, P., Dolia, V., Sahoo, M. K., Pinsky, B. A., Jeffrey, S. S., Lawrence, et al
  2023; 14 (1): 4486

- **Progress and Prospects in Optical Ultrafast Microscopy in the Visible Spectral Region: Transient Absorption and Two-Dimensional Microscopy** *JOURNAL OF PHYSICAL CHEMISTRY C*
  Gross, N., Kuhs, C. T., Ostovar, B., Chiang, W., Wilson, K. S., Volek, T. S., Faitz, Z. M., Carlin, C. C., Dionne, J. A., Zanni, M. T., Gruebele, M., Roberts, S. T., Link, et al
  2023

- **Linking Atomic and Reactor Scale Plasmon Photocatalysis in Acetylene Hydrogenation with Optically Coupled ETEM.** *Microscopy and microanalysis : the official journal of Microscopy Society of America, Microbeam Analysis Society, Microscopical Society of Canada*
  Bourgeois, B., Carlin, C., Angell, D., Swearer, D., Cheng, W. H., Dai, A., Yuan, L., Dionne, J.
  2023; 29 (Supplement_1): 1298-1299

- **Sustainable chemistry with plasmonic photocatalysts.** *Nanophotonics (Berlin, Germany)*
  Yuan, L., Bourgeois, B. B., Carlin, C. C., da Jornada, F. H., Dionne, J. A.
  2023; 12 (14): 2745-2762

- **Through thick and thin: how optical cavities control spin.** *Nanophotonics (Berlin, Germany)*
  Dixon, J., Pan, F., Moradifar, P., Bordoloi, P., Dagli, S., Dionne, J.
  2023; 12 (14): 2779-2788

- **Controlling Valley-Specific Light Emission from Monolayer MoS2 with Achiral Dielectric Metasurfaces.** *Nano letters*
  Liu, Y., Lau, S. C., Cheng, W., Johnson, A., Li, Q., Simmerman, E., Karni, O., Hu, J., Liu, F., Brongersma, M. L., Heinz, T. F., Dionne, J. A.
  2023

- **Predicting tuberculosis drug resistance with machine learning-assisted Raman spectroscopy.** *ArXiv*
  Ogunlade, B., Tadesse, L. F., Li, H., Vu, N., Banaei, N., Barczak, A. K., Saleh, A. A., Prakash, M., Dionne, J. A.
  2023

- **Kinetics and mechanism of light-induced phase separation in a mixed-halide perovskite** *MATTER*
  Peng, S., Wang, Y., Braun, M., Yin, Y., Meng, A. C., Tan, W., Saini, B., Severson, K., Marshall, A. F., Sytwu, K., Baniecki, J. D., Dionne, J., Cai, et al
  2023; 6 (6): 2052-2065

- **Nanophotonics for a sustainable future** *PHYSICS TODAY*
  Dionne, J. A., Dagli, S., Shalaev, V. M.
  2023; 76 (6): 24-31

- **Sustainable chemistry with plasmonic photocatalysts** *NANOPHOTONICS*
  Yuan, L., Bourgeois, B. B., Carlin, C. C., da Jornada, F. H., Dionne, J. A.
  2023

- **A thermally controlled high-Q metasurface lens** *APPLIED PHYSICS LETTERS*
  Klopfer, E., Delgado, H., Dagli, S., Lawrence, M., Dionne, J. A.
  2023; 122 (22)

- **Through thick and thin: how optical cavities control spin** *NANOPHOTONICS*
  Dixon, J., Pan, F., Moradifar, P., Bordoloi, P., Dagli, S., Dionne, J.
  2023

- **LiH formation and its impact on Li batteries revealed by cryogenic electron microscopy.** *Science advances*
  Vilá, R. A., Boyle, D. T., Dai, A., Zhang, W., Sayavong, P., Ye, Y., Yang, Y., Dionne, J. A., Cui, Y.
  2023; 9 (12): eadf3609

- **Combining Acoustic Bioprinting with AI-Assisted Raman Spectroscopy for High-Throughput Identification of Bacteria in Blood.** *Nano letters*
  Safir, F., Vu, N., Tadesse, L. F., Firouzi, K., Banaei, N., Jeffrey, S. S., Saleh, A. A., Khuri-Yakub, B. P., Dionne, J. A.
  2023

- **Universal Narrowband Wavefront Shaping with High Quality Factor Meta-Reflect-Arrays.** *Nano letters*
  Lin, L., Hu, J., Dagli, S., Dionne, J. A., Lawrence, M.
  2023
- **Mechanism for plasmon-generated solvated electrons.** *Proceedings of the National Academy of Sciences of the United States of America*
  Al-Zubeidi, A., Ostovar, B., Carlin, C. C., Li, B. C., Lee, S. A., Chiang, W., Gross, N., Dutta, S., Misiura, A., Searles, E. K., Chakraborty, A., Roberts, S. T., Dionne, et al
  2023; 120 (3): e2217035120
- **Announcing the Winner of the Inaugural Nano Letters Seed Grant Program, North America Region** *NANO LETTERS*
  Dionne, J. A., Xiong, Q.
  2022
- **High-Quality-Factor Silicon-on-Lithium Niobate Metasurfaces for Electro-optically Reconfigurable Wavefront Shaping.** *Nano letters*
  Klopfer, E., Dagli, S., Barton, D. 3., Lawrence, M., Dionne, J. A.
  1800
- **Lattice-Resolution, Dynamic Imaging of Hydrogen Absorption into Bimetallic AgPd Nanoparticles.** *ACS nano*
  Angell, D. K., Bourgeois, B., Vadai, M., Dionne, J. A.
  1800
- **Engineering Bright and Mechanosensitive Alkaline-Earth Rare-Earth Upconverting Nanoparticles.** *The journal of physical chemistry letters*
  McLellan, C. A., Siefe, C., Casar, J. R., Peng, C. S., Fischer, S., Lay, A., Parakh, A., Ke, F., Gu, X. W., Mao, W., Chu, S., Goodman, M. B., Dionne, et al
  2022: 1547-1553
- **Rapid genetic screening with high quality factor metasurfaces.** *ArXiv*
  Hu, J., Safir, F., Chang, K., Dagli, S., Balch, H. B., Abendroth, J. M., Dixon, J., Moradifar, P., Dolia, V., Sahoo, M. K., Pinsky, B. A., Jeffrey, S. S., Lawrence, et al
  2021
- **A tribute to Mark Stockman** *NANOPHOTONICS*
  Shalaev, V. M., Dionne, J., Boltasseva, A.
  2021; 10 (14): 3569-3585
- **Advancing Plasmon-Induced Selectivity in Chemical Transformations with Optically Coupled Transmission Electron Microscopy.** *Accounts of chemical research*
  Swearer, D. F., Bourgeois, B. B., Angell, D. K., Dionne, J. A.
  2021
- **Interpretable Classification of Bacterial Raman Spectra with Knockoff Wavelets.** *IEEE journal of biomedical and health informatics*
  Chia, C., Sesia, M., Ho, C. S., Jeffrey, S. S., Dionne, J. A., Candes, E., Howe, R. T.
  2021; PP
- **Single Particle Cathodoluminescence Spectroscopy with Sub-20 nm, Electron-Stable Phosphors** *ACS PHOTONICS*
  Swearer, D. F., Fischer, S., Angell, D. K., Siefe, C., Alivisatos, A., Chu, S., Dionne, J. A.
  2021; 8 (6): 1539-1547
- **Self-Isolated Raman Lasing with a Chiral Dielectric Metasurface.** *Physical review letters*
  Dixon, J., Lawrence, M., Barton, D. R., Dionne, J.
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