




## Jennifer Dionne

Senior Associate Vice Provost for Research Platforms/Shared Facilities, Associate Professor of Materials Science and Engineering and, by courtesy, of Radiology (Molecular Imaging Program at Stanford)

 Resume available Online

### CONTACT INFORMATION

- **Administrator**

Carol Scott - Administrative Associate

**Email** carolscott@stanford.edu

### Bio

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#### BIO

Jennifer Dionne is the Senior Associate Vice Provost of Research Platforms/Shared Facilities and an Associate Professor of Materials Science and Engineering and of Radiology (by courtesy) at Stanford. Jen received her Ph.D. in Applied Physics at the California Institute of Technology, advised by Harry Atwater, and B.S. degrees in Physics and Systems & Electrical Engineering from Washington University in St. Louis. Prior to joining Stanford, she served as a postdoctoral researcher in Chemistry at Berkeley, advised by Paul Alivisatos. Jen's research develops nanophotonic 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 work has been recognized with the Alan T. Waterman Award (2019), an NIH Director's New Innovator Award (2019), a Moore Inventor Fellowship (2017), the Materials Research Society Young Investigator Award (2017), Adolph Lomb Medal (2016), Sloan Foundation Fellowship (2015), and the Presidential Early Career Award for Scientists and Engineers (2014), and was featured on Oprah's list of "50 Things that will make you say 'Wow!'"

#### ACADEMIC APPOINTMENTS

- Associate Professor, Materials Science and Engineering
- Associate Professor (By courtesy), Radiology - Rad/Molecular Imaging Program at Stanford
- Member, Bio-X
- 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- present)
- Director, Photonics at Thermodynamic Limits Energy Frontier Research Center, (2018- present)
- Faculty Co-Director, Stanford Photonics Research Center, (2018- present)

#### HONORS AND AWARDS

- Alan T. Waterman Award, National Science Foundation (2019)
- New Innovator Award, National Institutes of Health (2019)

- 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

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### COURSES

#### 2019-20

- Waves and Diffraction in Solids: MATSCI 195, MATSCI 205, PHOTON 205 (Win)

#### 2018-19

- Electronic Materials Engineering: MATSCI 152 (Spr)
- Science of the Impossible: MATSCI 13SC (Sum)
- Science of the Impossible: MATSCI 82N (Spr)
- Waves and Diffraction in Solids: MATSCI 195, MATSCI 205, PHOTON 205 (Win)

#### 2017-18

- Electronic Materials Engineering: MATSCI 152 (Spr)
- Science of the Impossible: MATSCI 82N (Spr)

- Waves and Diffraction in Solids: MATSCI 195, MATSCI 205, PHOTON 205 (Win)

## STANFORD ADVISEES

### Doctoral Dissertation Reader (AC)

Michael Braun, Sam Girdzis, Maggie Kane, Larissa Kunz, Yitian Zeng, Ze Zhang

### Postdoctoral Faculty Sponsor

Wen-Hui (Sophia) Cheng, Mark Lawrence, Yin Liu, Claire McLellan, Harsha Reddy, Amr Ahmed Essawi Saleh, Dayne Swearer, Hendrik Utzat

### Doctoral Dissertation Advisor (AC)

Daniel Angell, David Barton, Briley Bourgeois, Jason Casar, Sahil Dagli, Jefferson Dixon, Fariah Hayee, Jack Hu, Elissa Klopfer, Chris Siefe, Michelle Solomon, Katherine Sytwu, Loza Tadesse

### Doctoral Dissertation Co-Advisor (AC)

Alan Dai

### Master's Program Advisor

Jacob Knego, Xiang Li

### Doctoral (Program)

David Barton, Briley Bourgeois, Sahil Dagli, Jack Hu, Tzu-Ling Liu, Michelle Solomon

### Postdoctoral Research Mentor

Wen-Hui (Sophia) Cheng, Claire McLellan, Harsha Reddy, Dayne Swearer, Hendrik Utzat

## Publications

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## PUBLICATIONS

- **Toward rapid infectious disease diagnosis with advances in surface-enhanced Raman spectroscopy.** *The Journal of chemical physics*  
Tadesse, L. F., Safir, F., Ho, C., Hasbach, X., Khuri-Yakub, B. P., Jeffrey, S. S., Saleh, A. A., Dionne, J.  
2020; 152 (24): 240902
- **Revealing multiple classes of stable quantum emitters in hexagonal boron nitride with correlated optical and electron microscopy.** *Nature materials*  
Hayee, F., Yu, L., Zhang, J. L., Ciccarino, C. J., Nguyen, M., Marshall, A. F., Aharonovich, I., Vuckovic, J., Narang, P., Heinz, T. F., Dionne, J. A.  
2020
- **High Quality Factor Dielectric Metasurfaces for Ultraviolet Circular Dichroism Spectroscopy** *ACS PHOTONICS*  
Hu, J., Lawrence, M., Dionne, J. A.  
2020; 7 (1): 36–42
- **Nanophotonic Platforms for Chiral Sensing and Separation.** *Accounts of chemical research*  
Solomon, M. L., Saleh, A. A., Poulikakos, L. V., Abendroth, J. M., Tadesse, L. F., Dionne, J. A.  
2020
- **Dynamic Focusing with High-Quality-Factor Metalenses.** *Nano letters*  
Klopfer, E., Lawrence, M., Barton, D. R., Dixon, J., Dionne, J. A.  
2020
- **Sub-20 nm Core-Shell-Shell Nanoparticles for Bright Upconversion and Enhanced Forster Resonant Energy Transfer.** *Journal of the American Chemical Society*  
Siefe, C., Mehlenbacher, R. D., Peng, C. S., Zhang, Y., Fischer, S., Lay, A., McLellan, C. A., Alivisatos, A. P., Chu, S., Dionne, J. A.  
2019
- **Nanoscale nonreciprocity via photon-spin-polarized stimulated Raman scattering.** *Nature communications*  
Lawrence, M., Dionne, J. A.

2019; 10 (1): 3297

- **Small Alkaline-Earth-based Core/Shell Nanoparticles for Efficient Upconversion** *NANO LETTERS*  
Fischer, S., Mehlenbacher, R. D., Lay, A., Siefe, C., Alivisatos, A., Dionne, J. A.  
2019; 19 (6): 3878–85
- **Bimetallic nanostructures: combining plasmonic and catalytic metals for photocatalysis** *ADVANCES IN PHYSICS-X*  
Sytwu, K., Vadai, M., Dionne, J. A.  
2019; 4 (1)
- **Bright sub-20-nm cathodoluminescent nanoprobe for electron microscopy** *NATURE NANOTECHNOLOGY*  
Prigozhin, M. B., Maurer, P. C., Courtis, A. M., Liu, N., Wisser, M. D., Siefe, C., Tian, B., Chan, E., Song, G., Fischer, S., Aloni, S., Ogletree, D., Barnard, et al  
2019; 14 (5): 420–+
- **Light years: Combined optical and environmental electron microscopy to visualize photonic processes with atomic-scale resolution**  
Dionne, J. A.  
AMER CHEMICAL SOC.2019
- **Unraveling the origin of chirality from plasmonic nanoparticle-protein complexes.** *Science (New York, N.Y.)*  
Zhang, Q., Hernandez, T., Smith, K. W., Hosseini Jebeli, S. A., Dai, A. X., Warning, L., Baiyasi, R., McCarthy, L. A., Guo, H., Chen, D. H., Dionne, J. A., Landes, C. F., Link, et al  
2019; 365 (6460): 1475–78
- **Rapid identification of pathogenic bacteria using Raman spectroscopy and deep learning.** *Nature communications*  
Ho, C. S., Jean, N., Hogan, C. A., Blackmon, L., Jeffrey, S. S., Holodniy, M., Banaei, N., Saleh, A. A., Ermon, S., Dionne, J.  
2019; 10 (1): 4927
- **Optically Robust and Biocompatible Mechanosensitive Upconverting Nanoparticles.** *ACS central science*  
Lay, A., Sheppard, O. H., Siefe, C., McLellan, C. A., Mehlenbacher, R. D., Fischer, S., Goodman, M. B., Dionne, J. A.  
2019; 5 (7): 1211–22
- **Enantiospecific Optical Enhancement of Chiral Sensing and Separation with Dielectric Metasurfaces** *ACS PHOTONICS*  
Solomon, M. L., Hu, J., Lawrence, M., Garcia-Etxarri, A., Dionne, J. A.  
2019; 6 (1): 43–49
- **Optical Helicity and Optical Chirality in Free Space and in the Presence of Matter** *Symmetry 2019, 11(9)*  
Poulikakos, L. V., Dionne, J. A., Garcia-Etxarri, A.  
2019; 11 (9)
- **In-situ observation of plasmon-controlled photocatalytic dehydrogenation of individual palladium nanoparticles** *NATURE COMMUNICATIONS*  
Vadai, M., Angell, D. K., Hayee, F., Sytwu, K., Dionne, J. A.  
2018; 9
- **In-situ observation of plasmon-controlled photocatalytic dehydrogenation of individual palladium nanoparticles.** *Nature communications*  
Vadai, M., Angell, D. K., Hayee, F., Sytwu, K., Dionne, J. A.  
2018; 9 (1): 4658
- **Equilibration of Photogenerated Charge Carriers in Plasmonic Core@Shell Nanoparticles** *JOURNAL OF PHYSICAL CHEMISTRY C*  
Parente, M., Sheikholeslami, S., Naik, G., Dionne, J. A., Baldi, A.  
2018; 122 (41): 23631–38
- **Active polarization control with a parity-time-symmetric plasmonic resonator** *PHYSICAL REVIEW B*  
Baum, B., Lawrence, M., Barton, D., Dionne, J., Alaeian, H.  
2018; 98 (16)
- **Visualizing Facet-Dependent Hydrogenation Dynamics in Individual Palladium Nanoparticles.** *Nano letters*  
Sytwu, K., Hayee, F., Narayan, T. C., Koh, A. L., Sinclair, R., Dionne, J. A.  
2018
- **Plasmonic approaches for visualizing and controlling intercalation-driven phase transformations**  
Dionne, J., Hayee, F., Vadai, M., Angell, D., Sytwu, K.

AMER CHEMICAL SOC.2018

- **In-situ visualization of plasmon-induced hydrogenation reactions in individual palladium nanocubes**  
Vadai, M., Angell, D., Hayee, F., Sytwu, K., Dionne, J.  
AMER CHEMICAL SOC.2018
- **Electric field sensitive upconverting nanoparticles: Toward background free in vivo action potential imaging**  
Mehlenbacher, R., Siefe, C., Lay, A., Dionne, J.  
AMER CHEMICAL SOC.2018
- **Exploring nanoparticle architecture to design small, bright upconverting nanoparticles for bioimaging**  
Siefe, C., Mehlenbacher, R., Fischer, S., Lay, A., Dionne, J.  
AMER CHEMICAL SOC.2018
- **In-situ observation of plasmon-driven hydrogenation reactions within Au@Pd coreshell nanoparticles**  
Sytwu, K., Vadai, M., Hayee, F., Koh, A., Sinclair, R., Dionne, J.  
AMER CHEMICAL SOC.2018
- **Mechanosensitive upconverting nanoparticles for visualizing mechanical forces in vivo**  
Lay, A., Siefe, C., Fischer, S., Mehlenbacher, R., Das, A., Nekimken, A., Ke, F., Mao, W., Pruitt, B., Cohen, B., Alivisatos, P., Goodman, M., Dionne, et al  
AMER CHEMICAL SOC.2018
- **Nanophotonic approaches to observe and control atomic and molecular processes**  
Dionne, J.  
AMER CHEMICAL SOC.2018
- **Response to "Comment on 'Enantioselective Optical Trapping of Chiral Nanoparticles with Plasmonic Tweezers'"** *ACS PHOTONICS*  
Zhao, Y., Dionne, J.  
2018; 5 (6): 2535–36
- **The social scientist** *NATURE NANOTECHNOLOGY*  
Dionne, J. A.  
2018; 13 (5): 434
- **Roadmap on plasmonics** *JOURNAL OF OPTICS*  
Stockman, M. I., Kneipp, K., Bozhevolnyi, S. I., Saha, S., Dutta, A., Ndukaife, J., Kinsey, N., Reddy, H., Guler, U., Shalaev, V. M., Boltasseva, A., Gholipour, B., Krishnamoorthy, et al  
2018; 20 (4)
- **Improving Quantum Yield of Upconverting Nanoparticles in Aqueous Media via Emission Sensitization** *NANO LETTERS*  
Wisser, M. D., Fischer, S., Siefe, C., Alivisatos, A., Salleo, A., Dionne, J. A.  
2018; 18 (4): 2689–95
- **Chemically Responsive Elastomers Exhibiting Unity-Order Refractive Index Modulation.** *Advanced materials (Deerfield Beach, Fla.)*  
Wu, D. M., Solomon, M. L., Naik, G. V., Garcia-Etxarri, A., Lawrence, M., Salleo, A., Dionne, J. A.  
2018; 30 (7)
- **Nonreciprocal Flat Optics with Silicon Metasurfaces** *NANO LETTERS*  
Lawrence, M., Barton, D. R., Dionne, J. A.  
2018; 18 (2): 1104–9
- **Nanomaterials for in vivo imaging of mechanical forces and electrical fields** *NATURE REVIEWS MATERIALS*  
Mehlenbacher, R. D., Kolbl, R., Lay, A., Dionne, J. A.  
2018; 3 (2)
- **Broadband and wide-angle nonreciprocity with a non-Hermitian metamaterial** *PHYSICAL REVIEW B*  
Barton, D. R., Alaeian, H., Lawrence, M., Dionne, J.  
2018; 97 (4)
- **Bright, Mechanosensitive Upconversion with Cubic-Phase Heteroepitaxial Core-Shell Nanoparticles.** *Nano letters*  
Lay, A., Siefe, C., Fischer, S., Mehlenbacher, R. D., Ke, F., Mao, W. L., Alivisatos, A. P., Goodman, M. B., Dionne, J. A.

2018

- **In-situ visualization of solute-driven phase coexistence within individual nanorods.** *Nature communications*  
Hayee, F., Narayan, T. C., Nadkarni, N., Baldi, A., Koh, A. L., Bazant, M. Z., Sinclair, R., Dionne, J. A.  
2018; 9 (1): 1775
- **Subwavelength-scale plasmon waveguides** *Surface Plasmon Photonics*  
Atwater, H., Dionne, J., Sweatlock, L.  
edited by Brongersma, M., L., Kik, P., G.  
Dordrecht, NL: Springer.: 87–104
- **Temperature-dependent optical properties of titanium nitride** *APPLIED PHYSICS LETTERS*  
Briggs, J. A., Naik, G. V., Zhao, Y., Petach, T. A., Sahasrabudhe, K., Goldhaber-Gordon, D., Melosh, N. A., Dionne, J. A.  
2017; 110 (10)
- **Enhancing Enantioselective Absorption Using Dielectric Nanospheres** *ACS PHOTONICS*  
Ho, C., Garcia-Etxarri, A., Zhao, Y., Dionne, J.  
2017; 4 (2): 197-203
- **Direct visualization of hydrogen absorption dynamics in individual palladium nanoparticles** *NATURE COMMUNICATIONS*  
Narayan, T. C., Hayee, F., Baldi, A., Koh, A. L., Sinclair, R., Dionne, J. A.  
2017; 8
- **Direct visualization of hydrogen absorption dynamics in individual palladium nanoparticles.** *Nature communications*  
Narayan, T. C., Hayee, F., Baldi, A., Leen Koh, A., Sinclair, R., Dionne, J. A.  
2017; 8: 14020-?
- **Nanoscale control and quantification of enantioselective optical forces** *Nature Nanotechnology*  
Zhao, Y., Saleh, A., van de Haar, M., Baum, B., Briggs, J. A., Lay, A., Reyes-Becerra, O. A., Dionne, J. A.  
2017: 1055–59
- **Hot-Carrier-Mediated Photon Upconversion in Metal-Decorated Quantum Wells.** *Nano letters*  
Naik, G. V., Welch, A. J., Briggs, J. A., Solomon, M. L., Dionne, J. A.  
2017; 17 (8): 4583–87
- **Nanoscale control and quantification of enantioselective optical forces.** *Nature nanotechnology*  
Zhao, Y., Saleh, A. A., van de Haar, M. A., Baum, B., Briggs, J. A., Lay, A., Reyes-Becerra, O. A., Dionne, J. A.  
2017; 12 (11): 1055–59
- **Grating-flanked plasmonic coaxial apertures for efficient fiber optical tweezers.** *Optics express*  
Saleh, A. A., Sheikhoelislami, S., Gastelum, S., Dionne, J. A.  
2016; 24 (18): 20593-20603
- **Enhancing Quantum Yield via Local Symmetry Distortion in Lanthanide-Based Upconverting Nanoparticles** *ACS PHOTONICS*  
Wisser, M. D., Fischer, S., Maurer, P. C., Bronstein, N. D., Chu, S., Alivisatos, A. P., Salleo, A., Dionne, J. A.  
2016; 3 (8): 1523-1530
- **Reconstructing solute-induced phase transformations within individual nanocrystals** *NATURE MATERIALS*  
Narayan, T. C., Baldi, A., Koh, A. L., Sinclair, R., Dionne, J. A.  
2016; 15 (7): 768-?
- **Roadmap on optical energy conversion** *JOURNAL OF OPTICS*  
Boriskina, S. V., Green, M. A., Catchpole, K., Yablonovitch, E., Beard, M. C., Okada, Y., Lany, S., Gershon, T., Zakutayev, A., Tahersima, M. H., Sorger, V. J., Naughton, M. J., Kempa, et al  
2016; 18 (7)
- **Towards nanoscale multiplexing with parity-time-symmetric plasmonic coaxial waveguides** *PHYSICAL REVIEW B*  
Alaeian, H., Baum, B., Jankovic, V., Lawrence, M., Dionne, J. A.  
2016; 93 (20)

- **Enantioselective Optical Trapping of Chiral Nanoparticles with Plasmonic Tweezers** *ACS PHOTONICS*  
Zhao, Y., Saleh, A. A., Dionne, J. A.  
2016; 3 (3): 304-309
- **Fully CMOS-compatible titanium nitride nanoantennas** *APPLIED PHYSICS LETTERS*  
Briggs, J. A., Naik, G. V., Petach, T. A., Baum, B. K., Goldhaber-Gordon, D., Dionne, J. A.  
2016; 108 (5)
- **Evolution of Plasmonic Metamolecule Modes in the Quantum Tunneling Regime.** *ACS nano*  
Scholl, J. A., Garcia-Etxarri, A., Aguirregabiria, G., Esteban, R., Narayan, T. C., Koh, A. L., Aizpurua, J., Dionne, J. A.  
2016; 10 (1): 1346-1354
- **Plasmonics feature issue: publisher's note** *OPTICAL MATERIALS EXPRESS*  
Boltasseva, A., Dionne, J.  
2015; 5 (12): 2978-2978
- **Localized fields, global impact: Industrial applications of resonant plasmonic materials** *MRS BULLETIN*  
Dionne, J. A., Baldi, A., Baum, B., Ho, C., Jankovic, V., Naik, G. V., Narayan, T., Scholl, J. A., Zhao, Y.  
2015; 40 (12): 1138-1145
- **Feature issue introduction: plasmonics** *OPTICAL MATERIALS EXPRESS*  
Boltasseva, A., Dionne, J.  
2015; 5 (11): 2698-2701
- **Photon upconversion with hot carriers in plasmonic systems** *APPLIED PHYSICS LETTERS*  
Naik, G. V., Dionne, J. A.  
2015; 107 (13)
- **Polymer lattices as mechanically tunable 3-dimensional photonic crystals operating in the infrared** *APPLIED PHYSICS LETTERS*  
Chernow, V. F., Alaeian, H., Dionne, J. A., Greer, J. R.  
2015; 107 (10)
- **Controlling electric, magnetic, and chiral dipolar emission with PT-symmetric potentials** *PHYSICAL REVIEW B*  
Alaeian, H., Dionne, J. A.  
2015; 91 (24)
- **Nanoscale optical tomography with cathodoluminescence spectroscopy** *NATURE NANOTECHNOLOGY*  
Atre, A. C., Brenny, B. J., Coenen, T., Garcia-Etxarri, A., Polman, A., Dionne, J. A.  
2015; 10 (5): 429-436
- **Strain-induced modification of optical selection rules in lanthanide-based upconverting nanoparticles.** *Nano letters*  
Wisser, M. D., Chea, M., Lin, Y., Wu, D. M., Mao, W. L., Salleo, A., Dionne, J. A.  
2015; 15 (3): 1891-1897
- **Lights, nano, action! New plasmonic materials and methods to probe nanoscale phenomena** *MRS BULLETIN*  
Dionne, J. A.  
2015; 40 (3): 264-270
- **A parity-time symmetric coherent plasmonic absorber-amplifier** *JOURNAL OF APPLIED PHYSICS*  
Baum, B., Alaeian, H., Dionne, J.  
2015; 117 (6)
- **Probing Complex Reflection Coefficients in One-Dimensional Surface Plasmon Polariton Waveguides and Cavities Using STEM EELS.** *Nano letters*  
Schoen, D. T., Atre, A. C., Garcia-Etxarri, A., Dionne, J. A., Brongersma, M. L.  
2015; 15 (1): 120-126
- **Upconversion for Enhanced Photovoltaics** *3rd Physics of Sustainable Energy (PSE) Conference*  
Briggs, J. A., Wu, D. M., Atre, A. C., Garcia-Etxarri, A., Dionne, J. A.  
AMER INST PHYSICS.2015: 33-43

- **Strain-induced modification of optical selection rules in lanthanide-based upconverting nanoparticles** *Nano Letters*  
Wisser, M., Chea, M., Lin, Y., Wu, D., Mao, W. L., Salleo, A., Dionne, J.  
2015; 1891–97
- **In situ detection of hydrogen-induced phase transitions in individual palladium nanocrystals** *NATURE MATERIALS*  
Baldi, A., Narayan, T. C., Koh, A. L., Dionne, J. A.  
2014; 13 (12): 1143-1148
- **In situ detection of hydrogen-induced phase transitions in individual palladium nanocrystals.** *Nature materials*  
Baldi, A., Narayan, T. C., Koh, A. L., Dionne, J. A.  
2014; 13 (12): 1143-1148
- **Plasmon-Enhanced Upconversion** *JOURNAL OF PHYSICAL CHEMISTRY LETTERS*  
Wu, D. M., Garcia-Etxarri, A., Salleo, A., Dionne, J. A.  
2014; 5 (22): 4020-4031
- **Plasmon-Enhanced Upconversion.** *journal of physical chemistry letters*  
Wu, D. M., Garcia-Etxarri, A., Salleo, A., Dionne, J. A.  
2014; 5 (22): 4020-4031
- **Parity-time-symmetric plasmonic metamaterials** *PHYSICAL REVIEW A*  
Alaeian, H., Dionne, J. A.  
2014; 89 (3)
- **Non-Hermitian nanophotonic and plasmonic waveguides** *PHYSICAL REVIEW B*  
Alaeian, H., Dionne, J. A.  
2014; 89 (7)
- **A metafluid exhibiting strong optical magnetism.** *Nano letters*  
Sheikholeslami, S. N., Alaeian, H., Koh, A. L., Dionne, J. A.  
2013; 13 (9): 4137-4141
- **Surface-enhanced circular dichroism spectroscopy mediated by nonchiral nanoantennas** *PHYSICAL REVIEW B*  
Garcia-Etxarri, A., Dionne, J. A.  
2013; 87 (23)
- **NANOPLASMONICS Plasmons rock in metal bands** *NATURE MATERIALS*  
Dionne, J. A.  
2013; 12 (5): 380-381
- **A Broadband Negative Index Metamaterial at Optical Frequencies** *ADVANCED OPTICAL MATERIALS*  
Atre, A. C., Garcia-Etxarri, A., Alaeian, H., Dionne, J. A.  
2013; 1 (4): 327-333
- **Narrow-bandwidth solar upconversion: Case studies of existing systems and generalized fundamental limits** *JOURNAL OF APPLIED PHYSICS*  
Briggs, J. A., Atre, A. C., Dionne, J. A.  
2013; 113 (12)
- **Observation of Quantum Tunneling between Two Plasmonic Nanoparticles** *NANO LETTERS*  
Scholl, J. A., Garcia-Etxarri, A., Koh, A. L., Dionne, J. A.  
2013; 13 (2): 564-569
- **Plasmons rock in metal bands** *Nature Materials* 12  
Dionne, J.  
2013: 380
- **Toward Efficient Optical Trapping of Sub-10-nm Particles with Coaxial Plasmonic Apertures** *NANO LETTERS*  
Saleh, A. A., Dionne, J. A.  
2012; 12 (11): 5581-5586



- **Plasmonics: Metal-worthy methods and materials in nanophotonics** *MRS BULLETIN*  
Dionne, J. A., Atwater, H. A.  
2012; 37 (8): 717-724
- **Plasmon nanoparticle superlattices as optical-frequency magnetic metamaterials** *OPTICS EXPRESS*  
Alaeian, H., Dionne, J. A.  
2012; 20 (14): 15781-15796
- **Opportunities and Challenges of Using Plasmonic Components in Nanophotonic Architectures** *IEEE JOURNAL ON EMERGING AND SELECTED TOPICS IN CIRCUITS AND SYSTEMS*  
Wassel, H. M., Dai, D., Tiwari, M., Valamehr, J. K., Theogarajan, L., Dionne, J., Chong, F. T., Sherwood, T.  
2012; 2 (2): 154-168
- **Quantum plasmon resonances of individual metallic nanoparticles** *NATURE*  
Scholl, J. A., Koh, A. L., Dionne, J. A.  
2012; 483 (7390): 421-U68
- **Toward high-efficiency solar upconversion with plasmonic nanostructures** *JOURNAL OF OPTICS*  
Atre, A. C., Garcia-Etxarri, A., Alaeian, H., Dionne, J. A.  
2012; 14 (2)
- **Optimized light absorption in Si wire array solar cells** *JOURNAL OF OPTICS*  
Alaeian, H., Atre, A. C., Dionne, J. A.  
2012; 14 (2)
- **Waveguides with a silver lining: Low threshold gain and giant modal gain in active cylindrical and coaxial plasmonic devices** *PHYSICAL REVIEW B*  
Saleh, A. A., Dionne, J. A.  
2012; 85 (4)
- **Mirror, Mirror** *Physics 5*  
Dionne, J.  
2012: 38
- **Controlling the Interplay of Electric and Magnetic Modes via Fano-like Plasmon Resonances** *NANO LETTERS*  
Sheikholeslami, S. N., Garcia-Etxarri, A., Dionne, J. A.  
2011; 11 (9): 3927-3934
- **Realistic upconverter-enhanced solar cells with non-ideal absorption and recombination efficiencies** *JOURNAL OF APPLIED PHYSICS*  
Atre, A. C., Dionne, J. A.  
2011; 110 (3)
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