**Deep M. Jariwala, Ph.D.**

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**Education**

Northwestern University Materials Science and Engineering **Ph.D., 2015**

Indian Institute of Technology Metallurgical Engineering **B.Tech., 2010**

**Appointments**

* Assistant Professor  **2018**

Electrical and Systems Engineering

*University of Pennsylvania*, Philadelphia, PA, USA

**Professional Preparation**

* Resnick Prize Postdoctoral Fellow in Applied Physics and Materials Science  **2015-2017**

*Caltech*, Pasadena, CA, USA with H. A. Atwater

* Graduate Research Assistant in Materials Science and Engineering **2010-2015**

*Northwestern University*, Evanston, IL, USA with M. C. Hersam and T. J. Marks

* Visiting Summer Student in Materials Science and Nanoengineering **2008 & 2009**

*Rice University*, Houston, TX, USA with P. M. Ajayan

**Awards/Honors/Fellowships**

* ACS *Nano Letters* Early Career Editorial Advisory Board **2018-21**
* Forbes, 30 Under 30 in Science **2018**
* Elected to Sigma Xi, The Scientific Research Honor Society as Full Member **2017**
* American Vacuum Society (AVS) Nanometer Scale Science and Technology Division Postdoctoral Award **2017**
* Richard L. Greene Dissertation Award in Experimental Materials Physics, American Physical Society **2017**
* Young Scientist Award, 43rd Conference on Physics and Chemistry of Surfaces and Interfaces **2016**
* AVS Named Hilliard Speaker, John E. Hilliard Symposium **2015**
* Finalist, Nottingham Prize, 75th Physical Electronics Conference **2015**
* Resnick Prize Postdoctoral Fellowship, California Institute of Technology **2015-17**
* Materials Research Society (MRS) Graduate Student Silver Award  **2015**
* IEEE Dielectric & Electrical Insulation Society Graduate Fellowship **2015**
* Russell and Sigurd Varian Award, American Vacuum Society **2014**
* Johannes E. and Julia R. Weertman Doctoral Fellowship, Northwestern University  **2014**
* AVS Nanometer Scale Science and Technology Division Student Award **2014**
* ASM Chicago Regional Chapter Graduate Award **2014**
* Outstanding Researcher Award, International Institute of Nanotechnology **2014**
* SPIE Optics & Photonics Education Scholarship **2014-15**
* Finalist, Northwestern University Presidential Fellowship **2014-15**
* Hierarchical Materials Cluster Fellow, Northwestern University **2011-12**
* Extraordinary Student Achievement (Research) Award, IIT-BHU **2009‐10**

**Peer-Reviewed Journal Publications**

**[h-index: 30, Total citations > 6000.** [**Google Scholar**](http://scholar.google.com/citations?user=u1CHA2sAAAAJ&hl=en) **. \*equal contribution.]**

1. Brar, V. W.; Sherrott, M. C.; **Jariwala, D.**, Emerging Photonic Architectures in Two-Dimensional Optoelectronics *Chemical Society Reviews (in press)*
2. Stanford, M. G.; Rack, P. D.; **Jariwala, D.**, Emerging Nanofabrication and Quantum Confinement Techniques for 2D Materials beyond Graphene *npj 2D Materials and Applications* **2018** DOI: 10.1038/s41699-018-0065-3
3. **Jariwala, D.**; Davoyan, A. R.; Tagliabue, G.; Sherrott, M. C.; Wong, J.; Atwater, H. A., Near-Unity Absorption in van der Waals Semiconductors for Ultrathin Optoelectronics. *Nano Letters* **2016**, **16, 5482-5487**
4. Wong, J.W.;\* **Jariwala, D.**;\* Davoyan, A.; Tagliabue, G.; Tat, K.; Sherrott, M.C.; Atwater, H. A., High Photovoltaic Quantum Efficiency in Ultrathin van der Waals Heterostructures. *ACS Nano* **2017,** 11, 7230-7240
5. **Jariwala, D.**; Davoyan, A. R.; Wong, J.; Atwater, H. A., Van der Waals Materials for Atomically Thin Photovoltaics: Promise and Outlook. *ACS Photonics* **2017,** 4,2962-2970 **(Listed among most read articles in 2017-18 in the journal)**
6. **Jariwala, D.** Tunable Confinement of Charges and Excitations. *Nature Nanotechnology* **2018,** 13,99-100
7. Atwater, H. A.; Davoyan, A. R.; Ilic, O.; **Jariwala, D.**; Sherrott, M. C.; Went, C. M.; Whitney, W. S.; Wong, J., Materials Challenges for StarShot Lightsail. *Nature Materials* **2018,****DOI:10.1038/s41563-018-0075-8**
8. **Jariwala, D.**; Krayev, A.; Robinson, A. E.; Sherrott, M. C.; Wang, S.; Liu, G-Y.; Terrones, M.; Atwater, H. A., Correlated Scanning Probe and TERS Imaging of Nanoscale Heterogeneity in Two-Dimensional Semiconductors. *2D Materials* **2018, 5, 035003**
9. Lin, W. H.; Brar, V. W.; **Jariwala, D.**; Sherrott, M. C.; Tseng, W-S.; Yeh, N-C.; Atwater, H. A., Atomically Precise Synthesis and Characterization of cm-Scale Hexagonal Boron Nitride. *Chemistry of Materials* **2017**, 29, 4700-4707
10. Whitney, W. S.;\* Sherrott, M. C.;\* **Jariwala, D.**; Lin, W. H.; Bechtel, H. A.; Rossman, G. R.; Atwater, H. A., Field-Effect Optoelectronic Modulation of Quantum-Confined Carriers in Black Phosphorus. *Nano Letters* **2017**, 17, 78-84
11. Sherrott, M. C.;\* Whitney, W. S.;\* **Jariwala, D.**; Went, C. M.; Wong, J.; Rossman, G. R.; Atwater, H. A., Electrical Control of Linear Dichroism in Black Phosphorus from the Visible to Mid-Infrared. *(submitted)*
12. **Jariwala, D.**; Marks, T. J.; Hersam, M. C., Mixed-Dimensional van der Waals Heterostructures. *Nature Materials* **2017**, 16, 170-181 **(Featured on issue cover, FOCUS, Currently listed among most read articles in the journal)**
13. **Jariwala, D.**; Sangwan, V.; Wu, C.-C.; Prabhumirashi, P. L.; Geier, M. L.; Marks, T. J.; Lauhon, L. J.; Hersam, M. C., Gate-Tunable Carbon Nanotube-MoS2 Heterojunction p-n Diode. *Proceedings of the National Academy of Sciences of U.S.A.* **2013,** *110,*18076–18080 **(Featured in *This Week in PNAS, IEEE Spectrum, Science Daily*)**
14. **Jariwala, D.**;\* Howell, S. L.,\* Chen, K. S.; Kang, J.; Sangwan, V. K.; Filippone, S. A.; Turrisi, R.; Marks, T. J.; Lauhon, L. J.; Hersam, M. C., Hybrid, Gate-Tunable, van der Waals p-n Heterojunctions from Pentacene and MoS2. *Nano Letters* **2016**, *16*, 497-503 **(Featured in *ACS Editor’s Choice* and *Nature Nanotechnology Research Highlights; among* most read articles in 2016 in the journal)**
15. **Jariwala, D.**; Sangwan, V. K.; Late, D. J.; Johns, J. E.; Dravid, V. P.; Marks, T. J.; Lauhon, L. J.; Hersam, M. C., Band-like Transport in High Mobility Unencapsulated Single-Layer MoS2 Transistors. *Applied Physics Letters* **2013,** *102*, 173107 **(Listed among most read articles in 2014 in the journal)**
16. **Jariwala, D.**; Sangwan, V. K.; Lauhon, L. J.; Marks, T. J.; Hersam, M. C., Emerging Device Applications for Semiconducting Two-Dimensional Transition Metal Dichalcogenides. *ACS Nano* **2014,** *8,* **1102-1120 (Listed among most read articles in 2014 in the journal)**
17. **Jariwala, D.**;\* Sangwan, V. K.;\* Lauhon, L. J.; Marks, T. J.; Hersam, M. C., Carbon Nanomaterials for Electronics, Optoelectronics, Photovoltaics, and Sensing. *Chemical Society Reviews* **2013,** *42*, 2824-2860 **(Listed among most read articles in 2014 and among most cited articles 2013-2015 in the journal)**
18. **Jariwala, D.**; Sangwan, V. K.; Seo, J. W. T.; Xu, W.; Smith, J.; Kim, C. H.; Lauhon, L. J.; Marks, T. J.; Hersam, M. C. Large-area, Low-operating Voltage, Anti-ambipolar Heterojunctions from Solution-processed Semiconductors. *Nano Letters* **2015,** *15,*416–421
19. Wu, C.-C.;\* **Jariwala, D.**;\* Sangwan, V. K.; Marks, T. J.; Hersam, M. C.; Lauhon, L. J., Elucidating the Photoresponse of Ultrathin MoS2 Field-Effect Transistors by Scanning Photocurrent Microscopy. *The Journal of Physical Chemistry Letters* **2013,** *4*, 2508–2513
20. Howell, S. L.;\* **Jariwala, D.**;\* Wu C.-C.; Sangwan V. K.; Marks, T.J.; Hersam M. C.; Lauhon L. J., Investigation of Band-Offsets at Monolayer-Multilayer MoS2 Junctions by Scanning Photocurrent Microscopy. *Nano Letters* **2015,** *15,* 2278-2284
21. Kang, J.;\* **Jariwala, D.**;\* Ryder, C.; Wells, S.A.; Choi, Y.; Hwang, E.; Cho, J.H.; Marks, T.J.; Hersam, M.C., Probing Out-of-Plane Charge Transport in Black Phosphorus with Graphene-Contacted Vertical Field-Effect Transistors. *Nano Letters* **2016**, *16*, 2580-2585
22. Sangwan, V. K.; **Jariwala, D.**; Kim, I. S.; Chen, K-S.; Marks, T. J.; Lauhon, L. J.; Hersam, M. C., Gate-Tunable Memristive Phenomena Mediated by Grain Boundaries in Single-Layer MoS2. *Nature Nanotechnology* **2015,** *10,* 403-406 **(Featured in *News and Views*, *IEEE Spectrum, Science Daily*)**
23. Sangwan, V. K.; **Jariwala, D.**; Filippone, S. A.; Karmel, H. J.; Johns, J. E.; Alaboson, J. M.; Marks, T. J.; Lauhon, L. J.; Hersam, M. C., Quantitatively Enhanced Reliability and Uniformity of High-κ Dielectrics on Graphene Enabled by Self-Assembled Seeding Layers. *Nano Letters* **2013,** *13*, 1162-1167
24. Sangwan, V. K.; **Jariwala, D.**; Everaerts, K.; McMorrow, J. J. E.; He, J.; Grayson, M.; Lauhon, L. J.; Marks, T. J.; Hersam, M. C., Wafer-scale Solution-derived Molecular Gate Dielectrics for Low-voltage Graphene Electronics. *Applied Physics Letters* **2014,** *104,* 083503
25. Wood, J. D.;\* Wells, S.;\* **Jariwala, D.**; Chen, K-S.; Cho, E-K.; Sangwan, V. K.; Liu, X.; Lauhon, L. J.; Marks, T. J.; Hersam, M. C. [Effective Passivation of Exfoliated Black Phosphorus Transistors Against Ambient Degradation](http://pubs.acs.org/doi/abs/10.1021/nl5032293). *Nano Letters* **2014,** *14,* 6964–6970 **(Featured in *Nature Materials Research Highlights*)**
26. Sangwan, V. K.\*; Arnold, H. N.\*; **Jariwala, D.**; Marks, T. J.; Lauhon, L. J.; Hersam, M. C., Low Frequency Electronic Noise in Single-Layer MoS2 Transistors. *Nano Letters* **2013,** *13*, 4351–4355
27. Prado, M. C.; **Jariwala, D.**; Marks, T. J.; Hersam, M. C., Optimization of Graphene Dry Etching Conditions via Combined Microscopic and Spectroscopic Analysis. *Applied Physics Letters* **2013,** *102*, 193111
28. Kim, I. S.; Sangwan, V. K.; **Jariwala, D.**; Wood, J. D.; Park, S.; Chen, K-S.; Shi, F.; Ruiz-Zepeda, F.; Arturo, P.; Jose-Yacaman, M.; Dravid, V. P.; Marks, T. J.; Hersam, M. C.; Lauhon, L. J. Influence of Stoichiometry on the Optical and Electrical Properties of Chemical Vapor Deposition Derived MoS2. *ACS Nano* **2014,** *8*, 10551–10558
29. Everaerts, K.; Emery, J. D.; **Jariwala, D.**; Karmel, H. J.; Sangwan, V. K.; Prabhumirashi, P. L.; Geier, M. L.; McMorrow, J. J. E.; Bedzyk, M. J.; Facchetti, A.; Hersam M. C.; Marks, T. J., Ambient-Processable High-Capacitance Hafnia-Organic Self-Assembled Nanodielectrics. *Journal of the American Chemical Society* **2013,** *135*, 8926–8939
30. Tselev, A.; Sangwan, V. K.; **Jariwala, D.**; Marks, T. J.; Lauhon, L. J.; Hersam, M. C.; Kalinin, S. V. Near-Field Microwave Microscopy of High-Κ Oxides Grown on Graphene with an Organic Seeding Layer. *Applied Physics Letters* **2013,** *103,* 243105.
31. Zhu, J.; Kang, J.; Kang, J.; **Jariwala, D.**; Wood, J. D.; Seo, J. W. T.; Chen, K. S.; Marks, T. J.; Hersam, M. C. Thickness-Sorted Hexagonal Boron Nitride Nanosheets Patchworked by Assembly for High Performance Dielectrics *Nano Letters* **2015,** *15*, 7029–7036
32. Zhu, J.; Liu, X.; Geier, M. L.; McMorrow, J. J. E.; **Jariwala, D.**; Beck, M. E.; Huang, W.; Marks, T. J.; Hersam, M. C. Layer-by-Layer Assembled Two-Dimensional Montmorillonite Dielectrics for Solution-Processed Electronics *Advanced Materials* **2016,** *28,* 63-68 **(cover article)**
33. Everaerts, K.; Zeng, L.; Hennek, J. W.; Camacho, D. I.; **Jariwala, D.**; Bedzyk, M. J.; Hersam, M. C.; Marks, T. J. Printed Indium Gallium Zinc Oxide Transistors. Self-Assembled Nanodielectric Effects on Low-Temperature Combustion Growth and Carrier Mobility. *ACS Applied Materials & Interfaces* **2013**, *5,* 11884-11893
34. Behnam, A.; Sangwan, V. K.; Zhong, X.; Lian, F.; Estrada, D.; **Jariwala, D.**; Hoag, A. J.; Lauhon, L. J.; Marks, T. J.; Hersam, M. C., Pop, E. High-Field Transport and Thermal Reliability of Sorted Carbon Nanotube Network Devices. *ACS Nano* **2012**, 7, 482-490
35. McMorrow, J. J. E.; Walker, A. R.; Sangwan. V. K.; **Jariwala, D.**; Hoffman, E.; Everaerts, K.; Facchetti, A.; Hersam, M. C.; Marks, T. J., Solution-Processed Nanodielectrics on Template-Stripped Metal Substrates *ACS Applied Materials & Interfaces* **2015**,*7,* 26360–26366
36. Ryder, C.; Wood, J.D.; Wells, S. A.; Yang, Y.; **Jariwala, D.**; Marks, T. J.; Schatz, G.; Hersam, M. C., Covalent Functionalization and Passivation of Exfoliated Black Phosphorus via Aryl Diazonium Chemistry. *Nature Chemistry* **2016**, *8,* 597-602
37. Choi, Y.; Kang, J.; **Jariwala, D.**; Kang, M. S.; Marks, T.J.; Hersam, M. C.; Cho, J. H., Low-Voltage, Complementary Electronics from Ion-gel Gated van der Waals Heterostructures *Advanced Materials* **2016**, *28*, 3742-3748
38. McMorrow, J. J. E.; Cress, C. D.; Arnold, H. N.; Sangwan. V. K.; **Jariwala, D.**; Schmucker, S. W.; Marks, T. J., Hersam, M. C. Vacuum Ultraviolet Radiation Effects on Two-Dimensional MoS2 Field-Effect Transistors. *Applied Physics Letters* **2017**,*110,* 073102
39. Choi, Y.; Kang, J.; **Jariwala, D.**; Wells, S. A.; Kang, M. S.; Marks, T.J.; Hersam, M. C.; Cho, J. H., Low-Voltage 2D-Material Field Effect Transistors Enabled by Ion-Gel Capacitive Coupling *Chemistry of Materials* **2017**, *29*, 4008-4013
40. Ci, L.; Song, L.; Jin, C.; **Jariwala, D.**; Wu, D.; Li, Y.; Srivastava, A.; Wang, Z.; Storr, K.; Balicas, L., Atomic Layers of Hybridized Boron Nitride and Graphene Domains. *Nature Materials* **2010**, *9*, 430-435 **(Featured on cover, in *News and Views* and *Science Daily*)**
41. Ci, L.; Song, L.; **Jariwala, D.**; Elías, A. L.; Gao, W.; Terrones, M.; Ajayan, P. M., Graphene Shape Control by Multistage Cutting and Transfer. *Advanced Materials* **2009,** *21*, 4487-4491
42. **Jariwala, D.**; Srivastava, A.; Ajayan, P. M., Graphene Synthesis and Band-Gap Opening. *Journal of Nanoscience and Nanotechnology* **2011,** *11*, 6621-6641
43. **Jariwala, D.**; Chandra, K.; Cao, A.; Talapatra, S.; Shima, M.; Anuhya, D.; Prasad, V.; Ribeiro, R.; Canfield, P.; Wu, D.; Srivastava, A.; Mandal, R. K.; Pramanick, A. K.; Vajtai, R.; Ajayan, P. M.; Sastry G. V. S., Growth of Carbon Nanotubes on Quasicrystalline Alloys. *The Banaras Metallurgist* 2012, *17,* 57-67
44. **Jariwala, D.**; Wahi, R; Sarma, B. N.; Sastry G. V. S.; Balaban, T. S.; Hennrich, F., Polymeric water chains entrapped in carbon nanotubes, *The Banaras Metallurgist* 2012, *17,* 39-46
45. Srivastava, A.; Galande, C.; Ci, L.; Song, L.; Rai, C.; **Jariwala, D.**; Kelly, K. F.; Ajayan, P. M., Novel Liquid Precursor-based Facile Synthesis of Large-area Continuous, Single, and Few-Layer Graphene Films. *Chemistry of Materials* **2010,** *22*, 3457-3461
46. Song, L.; Balicas, L.; Mowbray, D. J.; Capaz, R. B.; Storr, K.; Ci, L.; **Jariwala, D.**; Kurth, S.; Louie, S. G.; Rubio, A.; Ajayan, P. M., Anomalous Insulator Metal Transition in Boron Nitride-Graphene Hybrid Atomic Layers. *Physical Review B* **2012**, 86, 075429
47. Parashar, U. K.; Bhandari, S.; Srivastava, R. K.; **Jariwala, D.**; Srivastava, A., Single Step Synthesis of Graphene Nanoribbons by Catalyst Particle Size Dependent Cutting of Multiwalled Carbon Nanotubes. *Nanoscale* **2011**, 3, 3876-3882

**Patents**

1. **Jariwala, D.**; Hersam, M. C.; Sangwan V. K., Gate-Tunable P-N Heterojunction Diode and Fabrication Method and Application of the same. **U.S. Patent number: US 9472686**
2. Sangwan, V. K.; **Jariwala, D.**; Kim, I. S.; Hersam, M. C.; Marks, T. J.; Lauhon, L. J., Gate-Tunable Atomically-Thin Memristors and Methods for Preparing Same and Applications of Same U.S. Patent application number 62118687 **U.S. Patent number: US 9515257**
3. **Jariwala, D.**; Hersam, M. C.; Marks, T. J.; Sangwan, V. K.; Xu, W.; Kim, H., System and Method for Anti-ambipolar Heterojunctions from Solution-Processed Semiconductors. **U.S. Patent number: US 62101676**

**Invited Talks, Colloquia & Presentations (\* Award presentations)**

1. Center for Functional Nanomaterials, Brookhaven National Laboratory, June 2018
2. Sharp Meets Bright Workshop, North Carolina Central University, April 2018
3. Rutgers University, New Brunswick, NJ, U.S.A., February 2018
4. Indian Institute of Technology, Varanasi, India, December 2017
5. Indian Institute of Science Education and Research, Trivandrum, India, December 2017
6. Tata Institute of Fundamental Research, Mumbai, India, December 2017
7. Materials Science and Engineering, U. Pennsylvania, PA, U.S.A., November 2017
8. Workshop on Innovative Nanoscale Devices and Systems (WINDS), Kohala Coast, HI, U.S.A, November 2017
9. Department of Electrical Engineering, University of Southern California, October 2017
10. SPIE Nanoscience + Engineering, San Diego, CA, U.S.A, August 2017
11. European Materials Research Society (E-MRS), Spring Meeting, Strasbourg, France, May 2017
12. Materials Science and Engineering, U. Michigan-Ann Arbor, MI, U.S.A, April 2017
13. American Physical Society (APS) Annual Meeting, New Orleans, LA, U.S.A., March 2017\*
14. Electrical and Systems Engineering, U. Pennsylvania, PA, U.S.A., March 2017
15. Materials Science and Engineering, U. Illinois Urbana-Champaign, IL, U.S.A., January 2017
16. Northrop Grumman Aerospace Systems, Redondo Beach, CA, U.S.A., September 2016
17. International Helmholtz Research School for Nanoelectronics, Prague, Czech Republic, September 2016
18. Helmholtz Zentrum Dresden-Rossendorf (HZDR), Dresden, Germany, September 2016
19. John E. Hilliard Symposium, Northwestern University, IL, U.S.A., May 2015. \*
20. Indian Institute of Technology, Varanasi, India, December 2014
21. Los Alamos National Laboratory, NM, U.S.A., October 2014

**Contributed Conference Presentations (peer-reviewed)**

1. Gordon Research Conference on 2D Electronics Beyond Graphene, StoneHill College, MA, June 2018(poster)
2. MRS Spring Meeting, Phoenix, AZ, U.S.A., March 2018
3. AVS Annual Meeting and Symposium, Tampa, FL, U.S.A., November 2017
4. MRS Spring Meeting, Phoenix, AZ, U.S.A., March 2017
5. Gordon Research Conference on Plasmonics and Nanophotonics, Sunday River, ME, U.S.A., July 2016 (poster)
6. MRS Spring Meeting, Phoenix, AZ, U.S.A., March 2016
7. 43rd Conf. on Physics and Chemistry of Surfaces and Interfaces (PCSI), Rancho Mirage, CA, U.S.A, January 2016
8. 75th Physical Electronics Conference (PEC), Rutgers University, Piscataway, NJ, U.S.A., June 2015
9. MRS Spring Meeting, San-Francisco, CA, U.S.A., April 2015
10. AVS Annual Meeting and Symposium, Baltimore, MD, U.S.A., Novermber 2014 (x2)
11. MRS Fall Meeting, Boston, MA, U.S.A., December 2013 (x2)
12. APS Annual Meeting, Baltimore, MD, U.S.A., March 2012

**Teaching and Mentoring**

* **Graduate Courses**: Nanoelectronics (ESE 621) **Winter 2018**
* **Teaching assistant**, Northwestern University

-**Physics of Solids**, graduate level course **Spring 2013 & 2014**

-**Nanomaterials**, undergraduate level course **Winter 2015**

* Mentored 5 graduate and 7 undergraduate researchers during graduate school at Northwestern **2012-2017** and postdoctoral research at Caltech.
* **Currently mentoring (8): Postdoctoral Scholars:** *Jinshui Miao***, Masters Students:** *Ravindra Saxena, Vishal Venkatesh* **Undergraduates:** *Stefano Roccasecca, Suyash Tripathi, Natalia Acero, Chavez Lawrence, Saif Khawaja*

**Outreach and Professional Service**

* Guest Editor: Special issue on 2D Materials in RSC *Molecular Systems Design and Engineering*
* Guest Editor: Special issue on Atomic Scale Materials for Devices in MDPI *Micromachines*
* Serving on Editorial Board of MDPI *Electronics*
* Serving on Materials Research Society (MRS) Meetings Assessment Sub-Committee (2018-)
* Symposium Organizer, MRS Fall 2018 “Beyond Graphene 2D Materials”
* Outreach Associate, Materials Research Center (MRC), Northwestern University (2013-15)
* Member of AVS, APS, MRS, ACS, SPIE, ASM International and IEEE.
* Active Peer reviewer for:

**Nature Group and Partner Journals:** *Nature Materials, Nature Nanotechnology, Nature Communications, Scientific Reports, 2D materials and Applications, Communications Physics, Journal of Materials Science*

**American Chemical Society (ACS) Journals:** *ACS Nano, ACS Photonics, ACS Applied Materials and Interfaces, Chemistry of Materials, Journal of the American Chemical Society*, *Nano Letters*

**American Physical Society (APS) Journals:** *Physical Review Letters, Physical Review B.*

**Wiley Group Journals:** *Advanced Materials, Advanced Functional Materials, Advanced Electronic Materials, Advanced Energy Materials, Annalen der Physik, Small, Small Methods*

**Royal Society of Chemistry (RSC) Journals:** *Chemical Society Reviews, Nanoscale, RSC Advances, Physical Chemistry Chemical Physics.*

**Institute of Physics (IOP) Publishing:** *2D Materials, Nanotechnology, Applied Physics Express, Journal of Physics: Condensed Matter, Materials Research Express*

**American Institute of Physics (AIP) Journals:** *Journal of Applied Physics*, *Applied Physics Letters*

**IEEE Journals:** *Journal of Quantum Electronics, Electron Device Letters, Transactions on Nanotechnology, Transactions on Electron Devices*

**Other publishers:** *Applied Sciences, Electronics, Organic Electronics, Catalyst, Nanomaterials*

**References:** Available upon request