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| **List Of 2017 Reports**   |  |  |  | | --- | --- | --- | | **ID#** | **Title, First Author, and Category** | **Status** | | [**3**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=3) | **Title:** Quantum Hall Effect on Packaged 2DEG Hall Sensors  **First Author:** Lai, BK, Lake Shore Cryotronics, bokuai.lai@lakeshore.com  **PI:** Lai, BK, Lake Shore Cryotronics, bokuai.lai@lakeshore.com  **Category:** 2D Materials  **Facility:** UF Physics  **UCGP:** No    **VSP:** No   **Publication Status:** Not at this time  **Sign. Achievement:** No  **Director's Recommendation: No**  **Director's Comments:** None | Editing | | [**41**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=41) | **Title:** SdH Oscillations and Quantum Hall Effect in 2D Te Nanofilms  **First Author:** Qiu, G, Purdue University, ECE, gqiu@purdue.edu  **PI:** Ye, P, Purdue University, ECE, yep@purdue.edu  **Category:** 2D Materials  **Facility:** DC Field Facility  **Highest Measured Field:** 18 T  **UCGP:** No    **VSP:** No   **Publication Status:** Manuscript in preparation  **Sign. Achievement:** No  **Director's Recommendation: No**  **Director's Comments:** None | Approved | | [**78**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=78) | **Title:** Zeeman Splitting and Valley Populations of High Mobility Holes in WSe2  **First Author:** Movva, HCP, The University of Texas at Austin, Electrical and Computer Engineering, hemacp@gmail.com  **PI:** Tutuc, Emanuel, The University of Texas at Austin, Electrical and Computer Engineering, etutuc@mer.utexas.edu  **Category:** 2D Materials  **Facility:** DC Field Facility  **Highest Measured Field:** 35 T  **UCGP:** No    **VSP:** No   **Published in** Phys. Rev. Lett. 118, 247701 (2017)  **Sign. Achievement:** **Yes**  **Director's Recommendation: Yes**  **Director's Comments:** None | Approved | | [**83**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=83) | **Title:** Broken-Symmetry Landau Levels in Bilayer Graphene and Their Impact on the Quantum Valley Hall Kink States  **First Author:** Li, J., Penn State University, jil5369@psu.edu  **PI:** Zhu, J., Penn State University, jxz26@psu.edu  **Category:** 2D Materials  **Facility:** DC Field Facility  **Highest Measured Field:** 31 T  **UCGP:** No    **VSP:** No   **Submitted to** Science   **Sign. Achievement:** No  **Director's Recommendation: Yes**  **Director's Comments:** None | Approved | | [**86**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=86) | **Title:** Magneto-luminescence emission from excited Rydberg states of 1L-WSe2  **First Author:** Chen, S.-Y., University of Massachusetts Amherst, Physics, shaoyuchen@umass.edu  **PI:** Yan, J., University of Massachusetts Amherst, Physics, yan@physics.umass.edu  **Category:** 2D Materials  **Facility:** DC Field Facility  **Highest Measured Field:** 31 T  **UCGP:** No    **VSP:** No   **Publication Status:** Manuscript in preparation  **Sign. Achievement:** No  **Director's Recommendation: Yes**  **Director's Comments:** None | Approved | | [**103**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=103) | **Title:** Stannous Selenide Magnetotransport and Valence Band Structure  **First Author:** Petrescu, M, McGill University, Physics, matei.petrescu@mail.mcgill.ca  **PI:** Gervais, G, McGill University, gervais@physics.mcgill.ca  **Category:** 2D Materials  **Facility:** DC Field Facility  **Highest Measured Field:** 35 T  **UCGP:** No    **VSP:** No   **Submitted to** Phys. Rev. B   **Sign. Achievement:** **Yes**  **Director's Recommendation: Yes**  **Director's Comments:** This report is a good example of the innovation in materials that users are engaged in. | Approved | | [**127**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=127) | **Title:** Acoustically Detected Magneto-Intersubband Oscillations in Wide n-GaAs/AlGaAs Quantum Well  **First Author:** Drichko, I.L., A.F. Ioffe Physical-Technical Institute, irina.l.drichko@mail.ioffe.ru  **PI:** Drichko, I.L., A.F. Ioffe Physical-Technical Institute, irina.l.drichko@mail.ioffe.ru  **Category:** 2D Materials  **Facility:** DC Field Facility  **Highest Measured Field:** 18 T  **UCGP:** No    **VSP:** No   **Publication Status:** Manuscript in preparation  **Sign. Achievement:** **Yes**  **Director's Recommendation: Yes**  **Director's Comments:** None | Approved | | [**131**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=131) | **Title:** Atomic Resolution Imaging of Heterostructure Interfaces of 2D Transition Metal Dichalcogenide Monolayer   **First Author:** Xin, Y, MST/NHMFL, xin@magnet.fsu.edu  **PI:** Gutiérrez, HR, University of South Florida, humberto3@usf.edu  **Category:** 2D Materials  **Facility:** MS & T  **UCGP:** No    **VSP:** No   **Accepted by** Nature   **Sign. Achievement:** **Yes**  **Director's Recommendation: No**  **Director's Comments:** None | Approved | | [**149**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=149) | **Title:** Observation of Fractional Quantum Hall Effect in an InAs Quantum Well  **First Author:** Ma, M., Princeton University, Electrical Engineering, mengm@princeton.edu  **PI:** Shayegan, M., Princeton University, Electrical Engineering, shayegan@princeton.edu  **Category:** 2D Materials  **Facility:** DC Field Facility  **Highest Measured Field:** 45 T  **UCGP:** No    **VSP:** No   **Published in** Phys. Rev. B Rapid Commun. 96, 241301  **Sign. Achievement:** No  **Director's Recommendation: Yes**  **Director's Comments:** None | Approved | | [**172**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=172) | **Title:** Bright-Dark Exciton Splitting in Monolayer MoSe2  **First Author:** Lu, Z., NHMFL, FSU Physics Department, zlu@magnet.fsu.edu  **PI:** Smirnov, D., NHMFL, smirnov@magnet.fsu.edu  **Category:** 2D Materials  **Facility:** DC Field Facility  **Highest Measured Field:** 17.5 T  **UCGP:** **Yes**    **VSP:** No   **Publication Status:** Not at this time  **Sign. Achievement:** No  **Director's Recommendation: Yes, definitely**  **Director's Comments:** None | Approved | | [**178**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=178) | **Title:** Quantum Transport in Black Phosphorus Two-dimensional Electron Systems  **First Author:** Yang, F., Fudan University, Dept. of Physics, fangyuanyang17@gmail.com  **PI:** Zhang, Y., Fudan University, Dept. of Physics, zhyb@fudan.edu.cn  **Category:** 2D Materials  **Facility:** DC Field Facility  **Highest Measured Field:** 45 T  **UCGP:** No    **VSP:** No   **Publication Status:** Manuscript in preparation  **Sign. Achievement:** No  **Director's Recommendation: Yes**  **Director's Comments:** None | Approved | | [**186**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=186) | **Title:** Exploring Two-dimensional Electron systems at Extreme Magnetic Fields with Optical and Terahertz 2DFT Spectroscopy   **First Author:** Karaiskaj, D., University of South Florida, karaiskaj@usf.edu  **PI:** Karaiskaj, D., University of South Florida, karaiskaj@usf.edu  **Category:** 2D Materials  **Facility:** DC Field Facility  **Highest Measured Field:** 25 T  **UCGP:** No    **VSP:** No   **Published in** Phys. Rev. B 95/245314/2017  **Sign. Achievement:** No  **Director's Recommendation: Yes**  **Director's Comments:** None | Approved | | [**196**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=196) | **Title:** New Fractional Quantum Hall States in Ultra-Clean Graphene Heterostructures  **First Author:** Spanton, E. M., University of California - Santa Barbara, CNSI, spanton@cnsi.ucsb.edu  **PI:** Young, A. F., University of California - Santa Barbara, Physics, andrea@physics.ucsb.edu  **Category:** 2D Materials  **Facility:** DC Field Facility  **Highest Measured Field:** 45 T  **UCGP:** No    **VSP:** No   **Published in** Nature 549, 360-364  **Sign. Achievement:** **Yes**  **Director's Recommendation: Yes**  **Director's Comments:** None | Approved | | [**228**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=228) | **Title:** Microwave measurements of bilayer graphene in BN  **First Author:** Dietrich, S, Columbia U, Physics Dept, scottadietrich@gmail.com  **PI:** Engel, LW, NHMFL/FSU , engel@magnet.fsu.edu  **Category:** 2D Materials  **Facility:** DC Field Facility  **Highest Measured Field:** 18 T  **UCGP:** No    **VSP:** **Yes**   **Publication Status:** Not at this time  **Sign. Achievement:** No  **Director's Recommendation: No**  **Director's Comments:** None | Approved | | [**232**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=232) | **Title:** Phase transitions of 2D Fermionic condensate in strong and weak coupling regime  **First Author:** Liu, X., Harvard University, Department of Physics, liuxm.phy@gmail.com  **PI:** Kim, P., Harvard University, Department of Physics, philipkim@g.harvard.edu  **Category:** 2D Materials  **Facility:** DC Field Facility  **Highest Measured Field:** 36 T  **UCGP:** No    **VSP:** No   **Publication Status:** Manuscript in preparation  **Sign. Achievement:** No  **Director's Recommendation: Yes**  **Director's Comments:** None | Approved | | [**233**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=233) | **Title:** Interlayer Excitons in Van der Waals Heterostructures  **First Author:** Jauregui, L. A., Harvard University, Physics, luis.angel.jauregui@gmail.com  **PI:** Kim, P., Harvard University, Physics, philipkim@g.harvard.edu  **Category:** 2D Materials  **Facility:** DC Field Facility  **Highest Measured Field:** 17 T  **UCGP:** No    **VSP:** No   **Publication Status:** Manuscript in preparation  **Sign. Achievement:** No  **Director's Recommendation: No**  **Director's Comments:** None | Approved | | [**235**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=235) | **Title:** Quantum Hall and Magneto-Photoluminescence Measurements in WSe2  **First Author:** Jauregui, L. A., Harvard University, Physics, luis.angel.jauregui@gmail.com  **PI:** Kim, P., Harvard University, Physics, philipkim@g.harvard.edu  **Category:** 2D Materials  **Facility:** EMR Facility  **Highest Measured Field:** 31 T  **UCGP:** No    **VSP:** No   **Publication Status:** Manuscript in preparation  **Sign. Achievement:** No  **Director's Recommendation: No**  **Director's Comments:** None | Approved | | [**242**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=242) | **Title:** Shubnikov de Haas oscillation in electron gases based on KTaO3 (001) interface  **First Author:** Miao, L, Pennsylvania State University, Physics, lxm66@psu.edu  **PI:** Li, Qi, Pennsylvania State University, Physics, qil1@psu.edu  **Category:** 2D Materials  **Facility:** DC Field Facility  **Highest Measured Field:** 35 T  **UCGP:** No    **VSP:** No   **Publication Status:** Manuscript in preparation  **Sign. Achievement:** No  **Director's Recommendation: No**  **Director's Comments:** None | Approved | | [**247**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=247) | **Title:** Conductance at half-filled Landau levels in hybrid graphene  **First Author:** Cadden-Zimansky, P, Bard College, paulcz@bard.edu  **PI:** Cadden-Zimansky, P, Bard College, paulcz@bard.edu  **Category:** 2D Materials  **Facility:** DC Field Facility  **Highest Measured Field:** 17 T  **UCGP:** No    **VSP:** No   **Submitted to** Journal of Physics Communications   **Sign. Achievement:** No  **Director's Recommendation: No**  **Director's Comments:** None | Approved | | [**251**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=251) | **Title:** Magneto-Photoluminescence Spectroscopy of Interlayer Exciton in Van der Waals heterostructures  **First Author:** Wang, T., Rensselaer Polytechnic Institute, Chemical and Biological Engineering, wangtianmeng@gmail.com  **PI:** Shi, S., Rensselaer Polytechnic Institute, Chemical and Biological Engineering, shis2@rpi.edu  **Category:** 2D Materials  **Facility:** EMR Facility  **Highest Measured Field:** 17 T  **UCGP:** No    **VSP:** No   **Publication Status:** Manuscript in preparation  **Sign. Achievement:** No  **Director's Recommendation: No**  **Director's Comments:** None | Approved | | [**258**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=258) | **Title:** Multiband charge conduction in the metallic valance bond state of IrTe2  **First Author:** Jo, YJ, Kyungpook U, joyj121@gmail.com  **PI:** Jo, YJ, Kyungpook U, joyj121@gmail.com  **Category:** 2D Materials  **Facility:** DC Field Facility  **Highest Measured Field:** 18 T  **UCGP:** No    **VSP:** No   **Publication Status:** Manuscript in preparation  **Sign. Achievement:** No  **Director's Recommendation: No**  **Director's Comments:** None | Approved | | [**266**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=266) | **Title:** Very High Frequency EPR Measurements on MoS2 Bulk Crystals  **First Author:** Martinez, LMM, The University of Texas at El Paso, PHYSICS, luis.martinez30@upr.edu  **PI:** Singamaneni, SRS, The University of Texas at El Paso, PHYSICS, srao@utep.edu  **Category:** 2D Materials  **Facility:** EMR Facility  **Highest Measured Field:** 9.5 T  **UCGP:** No    **VSP:** No   **Publication Status:** Manuscript in preparation  **Sign. Achievement:** No  **Director's Recommendation: No**  **Director's Comments:** None | Approved | | [**267**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=267) | **Title:** Probing Signatures of Low-dimensional Magnetism in Layered Honeycomb Compound BaCo2(PO4)2 Using High Frequency Electron Paramagnetic Resonance Spectroscopy   **First Author:** Nair, HSN, The University of Texas at El Paso, Physics, srao@utep.edu  **PI:** Singamaneni, SRS, The University of Texas at El Paso, PHYSICS, srao@utep.edu  **Category:** 2D Materials  **Facility:** EMR Facility  **Highest Measured Field:** 6 T  **UCGP:** No    **VSP:** No   **Publication Status:** Manuscript in preparation  **Sign. Achievement:** No  **Director's Recommendation: No**  **Director's Comments:** None | Approved | | [**299**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=299) | **Title:** Photocurrent Spectroscopy Study of Bilayer Graphene  **First Author:** Ju, L.J., Cornell University, Physics, lj249@cornell.edu  **PI:** McEuen, P.L.M, Cornell University, Cornell University, plm23@cornell.edu  **Category:** 2D Materials  **Facility:** DC Field Facility  **Highest Measured Field:** 17.5 T  **UCGP:** No    **VSP:** No   **Publication Status:** Manuscript in preparation  **Sign. Achievement:** **Yes**  **Director's Recommendation: Yes, definitely**  **Director's Comments:** None | Approved | | [**334**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=334) | **Title:** Surface Transport and Quantum Hall Effect in Ambipolar Black Phosphorus Double Quantum Wells  **First Author:** Tran, S, The Ohio State University, tran.618@buckeyemail.osu.edu  **PI:** Lau, C.N., The Ohio State University, lau.232@osu.edu  **Category:** 2D Materials  **Facility:** DC Field Facility  **Highest Measured Field:** 31 T  **UCGP:** No    **VSP:** No   **Published in** Science Advances 3, e1603179 (2017)  **Sign. Achievement:** No  **Director's Recommendation: No**  **Director's Comments:** None | Approved | | [**335**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=335) | **Title:** Integer and Fractional Quantum Hall effect in Ultra-high Quality Few-layer Black Phosphorus Transistors  **First Author:** Yang, J, The Ohio State University, yang.2633@buckeyemail.osu.edu  **PI:** Lau, C.N., The Ohio State University, lau.232@osu.edu  **Category:** 2D Materials  **Facility:** DC Field Facility  **Highest Measured Field:** 45 T  **UCGP:** No    **VSP:** No   **Accepted by** Nano Letters   **Sign. Achievement:** No  **Director's Recommendation: Yes**  **Director's Comments:** None | Approved | | [**338**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=338) | **Title:** Tuning Ising Superconductivity with Layer and Spin-Orbit Coupling in Two-Dimensional Transition Metal Dichalcogenides   **First Author:** de la Barrera, SCB, Carnegie Mellon University, Department of Physics, sergio@phys.cmu.edu  **PI:** Hunt, BMH, Carnegie Mellon University, Department of Physics, bmhunt@andrew.cmu.edu  **Category:** 2D Materials  **Facility:** DC Field Facility  **Highest Measured Field:** 34.5 T  **UCGP:** No    **VSP:** No   **Submitted to** Nature Comm.   **Sign. Achievement:** No  **Director's Recommendation: Yes**  **Director's Comments:** None | Approved | | [**349**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=349) | **Title:** Gate-Controlled Spin-Valley Locking of Resident Carriers in WSe2 Monolayers  **First Author:** Dey, P, NHMFL-LANL, crooker@lanl.gov  **PI:** Crooker, SA, NHMFL-LANL, crooker@lanl.gov  **Category:** 2D Materials  **Facility:** Pulsed Field Facility at LANL  **Highest Measured Field:** 1 T  **UCGP:** No    **VSP:** No   **Published in** Phys. Rev. Lett. 119, 137401  **Sign. Achievement:** No  **Director's Recommendation: No**  **Director's Comments:** None | Approved | | [**350**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=350) | **Title:** Magneto-Optics of Exciton Rydberg States in a Monolayer Semiconductor  **First Author:** Stier, A, NHMFL-LANL, crooker@lanl.gov  **PI:** Crooker, SA, NHMFL-LANL, crooker@lanl.gov  **Category:** 2D Materials  **Facility:** Pulsed Field Facility at LANL  **Highest Measured Field:** 65 T  **UCGP:** No    **VSP:** No   **Accepted by** Phys. Rev. Lett.   **Sign. Achievement:** No  **Director's Recommendation: No**  **Director's Comments:** None | Approved | | [**351**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=351) | **Title:** Strongly bound excitons in Ruddlesden-Popper 2D perovskites  **First Author:** Blancon, JC, MST-11, Los Alamos, crooker@lanl.gov  **PI:** Blancon, JC, MST-11, Los Alamos, crooker@lanl.gov  **Category:** 2D Materials  **Facility:** Pulsed Field Facility at LANL  **Highest Measured Field:** 65 T  **UCGP:** No    **VSP:** No   **Submitted to** Nature Comm.   **Sign. Achievement:** No  **Director's Recommendation: No**  **Director's Comments:** None | Approved | | [**357**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=357) | **Title:** Probing mixed spin singlet-triplet Cooper pairs in 2D NbSe2 under high magnetic fields  **First Author:** Sohn, E, Cornell University, es799@cornell.edu  **PI:** Mak, K.F., Cornell University, km627@cornell.edu  **Category:** 2D Materials  **Facility:** DC Field Facility  **Highest Measured Field:** 45 T  **UCGP:** No    **VSP:** No   **Submitted to** Nature Mater.   **Sign. Achievement:** **Yes**  **Director's Recommendation: Yes**  **Director's Comments:** None | Approved | | [**371**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=371) | **Title:** Comparing the spin/valley dynamics of resident carriers in gated WSe2 and MoSe2 monolayers  **First Author:** Dey, P, NHMFL-LANL, crooker@lanl.gov  **PI:** Crooker, SA, NHMFL-LANL, crooker@lanl.gov  **Category:** 2D Materials  **Facility:** Pulsed Field Facility at LANL  **Highest Measured Field:** 1 T  **UCGP:** No    **VSP:** No   **Publication Status:** Not at this time  **Sign. Achievement:** No  **Director's Recommendation: No**  **Director's Comments:** None | Approved | | [**450**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=450) | **Title:** Valley-polarized photocurrent in monolayer MoS2 induced by a magnetic field   **First Author:** Zhang, X-X., Stanford University, Applied Physics, xz2306@columbia.edu  **PI:** Heinz, T.F., Stanford University, Applied Physics and Photon Science, theinz@stanford.edu  **Category:** 2D Materials  **Facility:** DC Field Facility  **Highest Measured Field:** 31 T  **UCGP:** No    **VSP:** No   **Publication Status:** Manuscript in preparation  **Sign. Achievement:** No  **Director's Recommendation: Yes**  **Director's Comments:** None | Approved | | **Total Reports: 33** | | | |