List Of 2015 Reports

| ID# | Title, First Author, and Category | Status |
|------------|---|----------|
| <u>299</u> | Title: Quantum Oscillations in an Interfacial 2D Electron Gas First Author: Zhang, B., Zhejiang University, 11006080@zju.edu.cn PI: Pan, W., Sandia National Labs, wpan@sandia.gov Category: Semiconductors Facility: Pulsed Field Facility at LANL Highest Measured Field: 60 T UCGP: No VSP: No Published in Nano Letters Sign. Achievement: Yes Director's Recommendation: Yes, definitely Director's Comments: None | Approved |
| <u>385</u> | Title: Probing the Rashba Spin-Splitting in BiTeCl from Angle Dependent SdH Oscillations First Author: Martin, C., Ramapo College of New Jersey, cmartin@phys.ufl.edu PI: Tanner, D. B., University of Florida, Physics, tanner@phys.ufl.edu Category: Semiconductors Facility: Pulsed Field Facility at LANL Highest Measured Field: 65 T UCGP: No VSP: No Publication Status: Manuscript in preparation Sign. Achievement: Yes Director's Recommendation: Yes Director's Comments: None | Approved |
| <u>12</u> | Title: Shubnikov-de Haas Oscillations in a 2D Electron Gas Under Subterahertz Radiation First Author: Shi, Q., University of Minnesota, Physics, cglyqws@gmail.com PI: Zudov, M.A., University of Minnesota, Physics, zudov@physics.umn.edu Category: Semiconductors Facility: DC Field Facility Highest Measured Field: 2 T UCGP: No VSP: No Published in Phys. Rev. B Rapid Commun. 91, 241303(R) (2015) Sign. Achievement: No Director's Recommendation: Yes Director's Comments: None | Approved |
| <u>96</u> | Title: Unusual Landau Level Pinning and Correlated Quantum Hall States in 2D Hole Systems First Author: Liu, Y., Princeton University, Electrical Engineering, liuyang02@gmail.com PI: Shayegan, M., Princeton University, Electrical Engineering, shayegan@princeton.edu Category: Semiconductors Facility: DC Field Facility Highest Measured Field: 18 T UCGP: No VSP: No Published in Phys. Rev. B Phys. Rev. B 92, 195156 (2015) Sign. Achievement: Yes Director's Recommendation: Yes Director's Comments: None | Approved |
| 214 | Title: Probing the Pressure-Induced Topological Transition in Pb1-xSnxSe First Author: VanGennep, D., University of Florida, Physics, dav08d@ufl.edu Pl: Hamlin, J., University of Florida, Physics, jhamlin@ufl.edu Category: Semiconductors Facility: DC Field Facility Highest Measured Field: 35 T UCGP: Yes VSP: No Publication Status: Manuscript in preparation Sign. Achievement: No Director's Recommendation: Yes Director's Comments: None | Approved |
| 217 | Title: Photocurrent Generation in Atomically Thin Transition Metal Dichalcogenides First Author: Zhang, X.X., Columbia University, Physics, xz2306@columbia.edu PI: Heinz, T.F., Stanford University, Applied Physics, theinz@stanford.edu Category: Semiconductors 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: No Director's Comments: None | Approved |
| | Title: Observation of =2/3 Fractional Quantum Hall Effect in Silicon 111 Surface Electrons First Author: Hu, B., University of Maryland, hubh@mail.umd.edu PI: Kane, B.E., University of Maryland, Laboratory for Physical Sciences, kane@lps.umd.edu Category: Semiconductors | |

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|------------|---|--------------|
| | Facility: DC Field Facility | |
| | Highest Measured Field: 35 T UCGP: No VSP: No Submitted to Physical Review Applied | |
| 222 | Sign. Achievement: No | Approved |
| | Director's Recommendation: No | |
| | Director's Comments: None | |
| | Title: Wigner Solid of Quasiholes of the = 1/2 Fractional Quantum Hall Effect State | |
| | First Author: Hatke, A.T., NHMFL/FSU, hatk0002@gmail.com | |
| | PI: Engel, L.W., NHMFL/FSU, engel@magnet.fsu.edu | |
| | Category: Semiconductors | |
| 237 | Facility: DC Field Facility Highest Measured Field: 18 T | Approved |
| | UCGP: No VSP: No Submitted to Phys Rev X | |
| | Sign. Achievement: No | |
| | Director's Recommendation: No | |
| | Director's Comments: None | |
| | Title: Melting Temperatures of Different Solid Phases Near v=1 | |
| | First Author: Hatke, A.T., NHMFL/FSU, NHMFL/FSU, hatk0002@gmail.com | |
| | PI: Engel, L.W., NHMFL/FSU, NHMFL/FSU, engel@magnet.fsu.edu | |
| | Category: Semiconductors Facility: DC Field Facility | |
| <u>238</u> | Highest Measured Field: 18 T | Approved |
| | UCGP: No VSP: No Publication Status: Manuscript in preparation | |
| | Sign. Achievement: No | |
| | Director's Recommendation: No | |
| | Director's Comments: None | |
| | Title: Magneto-Optical Spectroscopy of Silver-Doped Colloidal Nanocrystals | |
| | First Author: Pinchetti, V., University of Milan-Bicocca, crooker@lanl.gov | |
| | PI: Crooker, S.A., NHMFL-LANL, crooker@lanl.gov Category: Semiconductors | |
| | Facility: Pulsed Field Facility at LANL | l |
| <u>245</u> | Highest Measured Field: 8 T | Approved |
| | UCGP: No VSP: No Publication Status: Manuscript in preparation | |
| | Sign. Achievement: No | |
| | Director's Recommendation: No | |
| <u> </u> | Director's Comments: None Title: Magnetic Field Stabilized Fleeten Hele Liquid in Indirect Bondon AlvCo1 vAc | |
| | Title: Magnetic Field-Stabilized Electron Hole Liquid in Indirect Bandgap AlxGa1-xAs First Author: Alberi, K., NREL, crooker@lanl.gov | |
| | PI: Crooker, S.A., NHMFL-LANL, crooker@lanl.gov | |
| | Category: Semiconductors | |
| 246 | Facility: Pulsed Field Facility at LANL | Approved |
| <u>246</u> | Highest Measured Field: 90 T | Approved |
| | UCGP: No VSP: No Submitted to Phys. Rev. B | |
| | Sign. Achievement: No | |
| | Director's Recommendation: No Director's Comments: None | |
| | Title: Quantum Hall Effect in a High Mobility InAs Heterostructure with a Superconducting Contact | |
| | First Author: Shojaei, B., University of California at Santa Barbara, Materials Department, | 1 |
| | borzoyeh@umail.ucsb.edu | 1 |
| | PI: Palmstrom, C.J., University of California at Santa Barbara, Materials Department and Department of | |
| | Electrical and Computer Engineering, cpalmstrom@ece.ucsb.edu | |
| 267 | Category: Semiconductors | Approved |
| ==== | Facility: DC Field Facility | 1.456.0100 |
| | Highest Measured Field: 18 T UCGP: No VSP: No Publication Status: Manuscript in preparation | |
| | Sign. Achievement: No | 1 |
| | Director's Recommendation: No | 1 |
| | Director's Comments: None | |
| | Title: Search for Shubnikov-de Haas Oscillations in Pb1-XSnXSe Single Crystals | |
| | First Author: Martin, C., Ramapo College of NJ, Engineering Physics, cmartin7@ramapo.edu | |
| | PI: Tanner, D.B., University of Florida, Physics, tanner@phys.ufl.edu | |
| | Category: Semiconductors Facility: DC Field Facility | |
| <u>268</u> | Facility: DC Field Facility Highest Measured Field: 18 T | Approved |
| | UCGP: No VSP: No Publication Status: Manuscript in preparation | 1 |
| | Sign. Achievement: No | |
| | Director's Recommendation: No | 1 |
| | Director's Comments: None | |
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| 119 | Title: Fermi Surface of Pb1-xNaxTe Determined through Shubnikov-de Haas Measurements First Author: Giraldo-Gallo, P., Stanford University, Physics and GLAM, pgiraldog@gmail.com Pl: Fisher, I.R., Stanford University, Applied Physics and GLAM, irfisher@stanford.edu Category: Semiconductors 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 Title: Magneto-Optical Studies of Er Optical Centers in GaN at High Magnetic Fields | Approved |
|------------|--|----------|
| <u>147</u> | First Author: Vinh, N.Q., Virginia Tech, Physics, Vinh@vt.edu PI: Vinh, N.Q., Virginia Tech, Physics, Vinh@vt.edu Category: Semiconductors Facility: DC Field Facility Highest Measured Field: 17.5 T UCGP: No VSP: No Publication Status: Manuscript in preparation Sign. Achievement: No Director's Recommendation: No Director's Comments: None | Approved |
| <u>173</u> | Title: Electronic Properties of Bulk Unrelaxed Narrow Gap InAsxSb1-x Alloys First Author: Ludwig, J., NHMFL, jludwig@magnet.fsu.edu PI: Suchalkin, S., State University of New York at Stony Brook, suchalkin@gmail.com Category: Semiconductors Facility: EMR Facility Highest Measured Field: 17 T UCGP: No VSP: No Submitted to Journal of Physics D: Applied Physics Sign. Achievement: No Director's Recommendation: No Director's Comments: None | Approved |
| 203 | Title: Infrared Magneto-Spectroscopy Study of Phase Transition in InAs/GaSb Quantum Well Bilayers First Author: Jiang, Y.J., Georgia Institute of Technology, School of physics, yjiang46@gatech.edu PI: Jiang, Z.J., Georgia Institute of Technology, School of Physics, zhigang.jiang@physics.gatech.edu Category: Semiconductors Facility: DC Field Facility Highest Measured Field: 17.5 T UCGP: No VSP: Yes Publication Status: Not at this time Sign. Achievement: No Director's Recommendation: No Director's Comments: None | Approved |
| 204 | Title: Optical Pump THz Probe Spectroscopy of GaAs/AlGaAs Two Dimensional Systems First Author: Linn, A.G., University of Alabama at Birmingham, Physics, aglinn@uab.edu PI: Hilton, D.J., University of Alabama at Birmingham, Physics, davidhilton1@gmail.com Category: Semiconductors Facility: DC Field Facility Highest Measured Field: 10 T UCGP: No VSP: No Publication Status: Not at this time Sign. Achievement: No Director's Recommendation: No Director's Comments: None | Approved |
| <u>13</u> | Title: Spinless Composite Fermions in an Ultrahigh-Quality Strained Ge Quantum Well First Author: Shi, Q., University of Minnesota, Physics, cglyqws@gmail.com Pl: Zudov, M.A., University of Minnesota, Physics, zudov@physics.umn.edu Category: Semiconductors Facility: DC Field Facility Highest Measured Field: 18 T UCGP: No VSP: No Published in Phys. Rev. B Rapid Commun. 91, 241303(R) (2015). Sign. Achievement: No Director's Recommendation: No Director's Comments: None | Approved |
| 14 | Title: Strong Transport Anisotropy in Ge/SiGe Quantum Wells in Tilted Magnetic Fields First Author: Shi, Q., University of Minnesota, Physics, cglyqws@gmail.com PI: Zudov, M.A., University of Minnesota, Physics, zudov@physics.umn.edu Category: Semiconductors Facility: DC Field Facility Highest Measured Field: 18 T UCGP: No VSP: No Published in Phys. Rev. B Rapid Commun. 91, 201301(R) (2015) & 92, 161405(R) (2015). Sign. Achievement: No | Approved |

| | Director's Comments: None | |
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| <u>43</u> | Title: g(2) Measurement of Superfluorescence from a Two-Dimensional Electron-Hole System First Author: Cong, K.C., Rice University, kankan.cong@rice.edu PI: Kono, J.K., Rice University, kono@rice.edu Category: Semiconductors Facility: DC Field Facility Highest Measured Field: 17.5 T UCGP: No VSP: No Publication Status: Manuscript in preparation Sign. Achievement: No Director's Recommendation: No Director's Comments: None | Approved |
| 57 | Title: Temperature and Excitation Dependent Studies of Circular Polarized Emission from Type-II Quantum Dots at High Magnetic Field First Author: Kuskovsky, I.L., Queens College of The City University of New York, Physics, Igor.Kuskovsky@qc.cuny.edu PI: Kuskovsky, I.L., Queens College of The City University of New York, Physics, Igor.Kuskovsky@qc.cuny.edu Category: Semiconductors Facility: DC Field 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 |
| | Title: Surface Acoustic Waves Probe of Crossover between Localized States and Wigner Crystal near Filling Factor nu=1 in n-GaAs/AlGaAs Structure First Author: Drichko, I.L., A. F. Ioffe Physico-Technical Institute of Russian Academy of Sciences, irina.l.drichko@mail.ioffe.ru PI: Drichko, I.L., A. F. Ioffe Physico-Technical Institute of Russian Academy of Sciences, irina.l.drichko@mail.ioffe.ru Category: Semiconductors Facility: DC Field Facility Highest Measured Field: 18 T UCGP: No VSP: No Published in Phys. Rev. B 92/20/205313 Sign. Achievement: Yes Director's Recommendation: No Director's Comments: None | Approved |
| <u>428</u> | Title: Magneto-Optical Spectroscopy of Doped Nanocrystals First Author: Rice, W.D., NHMFL-LANL, crooker@lanl.gov PI: Crooker, S.A., NHMFL-LANL, crooker@lanl.gov Category: Semiconductors Facility: Pulsed Field Facility at LANL Highest Measured Field: 8 T UCGP: No VSP: No Publication Status: Manuscript in preparation Sign. Achievement: No Director's Recommendation: No Director's Comments: None | Approved |