**Address: Purdue University, 525 Northwestern Ave, West Lafayette, Indiana 47907**
**Email: yongchen@purdue.edu Phone: (765) 494-0947**
**Web: http://www.physics.purdue.edu/quantum**

**a. Professional Preparation:**

| | | |
|---|---|---|
| Xi'an Jiaotong University, Applied Mathematics | **B.Sc** | 1996 |
| M.I.T, Mathematics (MSc Thesis Advisor: Jacob White) | **M.Sc** | 1999 |
| Princeton University, Electrical Engineering (Solid State Physics) PhD Thesis Advisor: Daniel C. Tsui | **Ph.D** | 2005 |
| Rice University, Dept. of Physics & Smalley Institute (AMO physics) Postdoc Advisor: Randall G. Hulet | **Postdoc** | 2005-2007 |

**b. Appointments:**

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|---|---|
| Purdue University, Associate Professor (with tenure) of Physics and Astronomy and Electrical and Computer Engineering | 08/2012-present |
| Purdue University, Miller Family Assistant Professor of Nanoscience and Physics and Assistant Professor Courtesy of Electrical and Computer Engineering | 08/2007-08/2012 |
| Rice University, J. Evans Attwell and Welch Postdoctoral Fellow | 05/2005-08/2007 |
| Princeton University, Gordon Y. S. Wu Ph.D Fellow and Graduate Research Assistant | 09/1999-04/2005 |
| MIT, Applied Mathematics Fellow and Y. T. Li Fellow and Graduate Teaching Assistant | 09/1997-07/1999 |

**c. Research areas:**

Experimental condensed matter physics & nanoscience (graphene/2D materials, topological insulators, 2D electrons/quantum Hall physics) and cold atom/quantum physics/quantum photonics (Bose-Einstein condensation, cold molecules, hybrid quantum systems)

**d. Selected Honors/Awards:**

Masao Horiba Award for Nanoparticle Measurement (2015); Purdue University Faculty Scholar (2013-2018); Purdue University Excellence in Research Award (2012, 2013); NSF CAREER Award (2009-2014); IBM Faculty Award (2009); Defense Threat Reduction Agency (DTRA) Young Investigator Award (2009-2011); Miller Family Professorship, Purdue University (2007-2012); J. Evans Attwell-Welch Postdoctoral Fellowship in Nanoscience, Rice University (2005-2007); International Union of Pure and Applied Physics (IUPAP) Young Author Best Paper Award in Semiconductor Physics (2004)

**e. Selected Publications:** (full list @ http://www.physics.purdue.edu/quantum/publications)
[Citations: >5,200 (Google Scholar), >3,400 (ISI); H-index: 33 (Google Scholar), 27 (ISI) as of 09/2015]

1) Y.Xu, I.Miotkowski, C.Liu, J.Tian, H.Nam, N.Alidoust, J.Hu, C-K.Shih, M. Z. Hasan, Y.P.Chen, "*Observation of topological surface state quantum Hall effect in an intrinsic three-dimensional topological insulator*", **Nature Physics** 10, 956 (2014)
2) Oleg Yazyev and Yong P. Chen, "*Polycrystalline graphene and other two-dimensional materials*" (invited review), **Nature Nanotechnology** 9, 755 (2014)
3) P.Yasaei, …, Y.P. Chen, P.Král, and Amin Salehi-Khojin, "*Chemical Sensing with Switchable Transport Channels in Graphene Grain Boundaries*", **Nature Communications** 5, 4911 (2014)
4) M. Hajlaoui, …, Y.P. Chen, …, M. Marsi, "*Tuning a Schottky barrier in a photoexcited topological insulator with transient Dirac cone electron-hole asymmetry*", **Nature Communications** 5, 3003 (2014)
5) J.Tian, C.Chang, H.Cao, K.He, X.Ma, Q-K.Xue, Y.P. Chen, "*Quantum and Classical Magnetoresistance in Ambipolar Topological Insulator Transistors with Gate-tunable Bulk and Surface Conduction*", **Scientific Reports** 4, 4859 (2014)
6) A.J. Olson, S-J. Wang, R.J. Niffenegger, C-H. Li, C.H. Greene, Y.P. Chen, "*Tunable Landau-Zener transitions in a spin-orbit coupled Bose-Einstein condensate*", **Phys. Rev. A** 90, 013616 (2014)

7) S.Dutta, J.Lorenz, A.Altaf, D. S. Elliott, Y.P. Chen, "*Photoassociation of ultracold LiRb* molecules: observation of high efficiency and unitarity-limited rate saturation*", **Phys. Rev. A** 89, 020702(R) (2014)
8) Chris Mann, Damien West, Ireneusz Miotkowski, Yong P. Chen, Shengbai Zhang, Chih-Kang Shih, "*Mapping the 3D surface potential in $Bi_2Se_3$*", **Nature Communications** 4, 2277 (2013)
9) R. He*, T. F. Chung*, … , Y. P. Chen, "*Observation of Low Energy Raman Modes in Twisted Bilayer Graphene*" , **Nano Lett.** 13, 3594 (2013)
10) N.K. Emani, T-F. Chung, X.Ni, A.V. Kildishev,Y.P. Chen, A. Boltasseva, "*Electrically Tunable Damping of Plasmonic Resonances with Graphene*", **Nano Lett**. 12, 5202 (2012)
11) H.Cao, …, Yong P. Chen, "*Quantized Hall effect and Shubnikov--de Haas oscillations in highly doped $Bi_2Se_3$: Evidence for layered transport of bulk carriers*", **Phys. Rev. Lett.** 108, 216803 (2012)
12) J.Tian, H.Cao, W.Wu, Q.Yu, Y.P. Chen, "*Direct Imaging of Graphene Edges: Atomic Structure and Electronic Scattering*", **Nano Lett**. 11, 3663 (2011)
13) Q.Yu*, L.A. Jauregui*, … , Yong P. Chen , "*Control and characterization of individual grains and grain boundaries in graphene grown by chemical vapour deposition*", **Nature Materials 10**, 415 (2011)
14) H.Cao, Q.Yu, …, Y. P. Chen, "*Electronic Transport in Chemical Vapor Deposited Graphene Synthesized on Cu: Quantum Hall Effect and Weak Localization*", **Appl. Phys. Lett.** 96, 122106 (2010)
15) Jiuning Hu, Xiulin Ruan, Yong P. Chen, "*Thermal conductivity and thermal rectification in graphene nanoribbons:a molecular dynamics study*", **Nano Lett.** 9, 2730 (2009)
16) S. E. Pollack, D. Dries, M. Junker, Y.P. Chen, T. Corcovilos and R.G. Hulet, "*Extreme tunability of interactions in a $^7$Li Bose-Einstein condensate*", **Phys. Rev. Lett.** 102, 090402 (2009)
17) Qingkai Yu, Jie Lian, Sujitra Siripongert, Hao Li, Yong P. Chen, and Shin-Shem Pei, "*Graphene segregated on Ni surfaces and transferred to insulators*", **Applied Physics Letters 93**, 113103 (2008)
18) Y.P. Chen, J.Hitchcock, D.Dries, M.Junker, C.Welford, R.G.Hulet, "*Phase coherence and superfluid-insulator transition in a disordered Bose-Einstein condensate*", **Phys. Rev. A** 77, 033632 (2008)
19) Y.P. Chen, .., L. W. Engel, D. C. Tsui, P. D. Ye, L. N. Pfeiffer, and K. W. West, "*Melting of a 2D Quantum Electron Solid in High Magnetic Field*", **Nature Physics 2**, 452 (2006)
20) Y.P. Chen, R. M. Lewis, L. W. Engel, D. C. Tsui et al., "*Evidence for Two Different Solid Phases of Two Dimensional Electrons in High Magnetic Fields*",**Phys. Rev. Lett.** 93, 206805 (2004)
21) Yong Chen, R. M. Lewis, L. W. Engel, D. C. Tsui et al., "*Microwave Resonance of the 2D Wigner Crystal Around Integer Landau Fillings*", **Phys. Rev. Lett.** 91, 016801 (2003)

**f. Service/Leadership/Synergistic/Mentoring Activities:**

- Frequent reviewer for leading journals including *Science, Nature Physics/Materials/Nanotechnology/Communications, Physical Review Letters, Nano Letters* etc.
- Grant reviewer for NSF, DOE, ARO, DTRA, DHS, Research Corporation, ACS, NASA etc.
- Editorial board member for Nature's *Scientific Reports* (www.nature.com/srep)
- Research highlighted in Physics Today, Nature Materials, Nature Nanotechnology, BBC News, Graphene Nobel Lecture, Bell-labs condensed matter journal club etc.
- Received 27 grants (20 as PI) totalling ~$13M (>$6.8M Chen's support) since 2008
- Delivered >70 invited conference/workshop talks (including annual meetings of major societies eg. APS, MRS, ECS, AVS, DRC etc.) and >60 invited seminars/colloquia
- Tutorial instructor on graphene, APS March Meeting (2014); panelist for the rump session "transistors: the next 50 years" at Device Research Conference (DRC) 2013
- Program Committee, Device Research Conference (DRC), 2013-2015
- Program Committee, APS DAMOP and APS March Meeting (DAMOP subcommittee), 2015-
- Organizer & Chair, 2013 Midwest Cold Atom Workshop (MCAW); Co-organizer: APS march meeting focus sessions (2014 & 2015) and DRC short course (2013) on "beyond graphene" 2D materials
- Mentoring (past+current): postdocs (6+3), grad students (6+8, student awards: NSF/NDSEG/INTEL Fellowships & twice highest graduate student award in Purdue Physics, etc.), undergrads (29+2, many entered grad schools eg. Harvard, MIT, Princeton, Stanford, Cornell, Austin, etc.)