Stanford

# Zhi-Xun Shen

Paul Pigott Professor of Physical Sciences, Professor of Applied Physics, of Physics and Senior Fellow at the Precourt Institute for Energy


### CONTACT INFORMATION

- **Alternate Contact**

  Marta Mary Vitale - Administrative Associate

  **Email** msoto2@slac.stanford.edu

  **Tel** (650) 725-0440


## Bio

### BIO

Dr. Shen is the Paul Pigott Professor in Physical Sciences, a professor of Physics and Applied Physics Departments, a senior fellow of the Precourt Institute for Energy, and a member of the faculty advisory board for the Knight-Hennessy Scholars Program and a member of the steering committee of the Stanford Science Fellow Program at Stanford University. He is a Member of the National Academy of Sciences and a fellow of American Academy of Arts and Sciences. He is an expert on quantum phenomena in materials, and a recipient of E.O. Lawrence Award of the Department of Energy, the Oliver E. Buckley Prize of the American Physical Society, and the Kamerlingh Onnes International Prize on Superconductivity. He served as the Chief Scientist of SLAC National Accelerator Laboratory, the Director of the Geballe Laboratory for Advanced Materials, and the Director of the Stanford Institute for Materials and Energy Sciences.

### ACADEMIC APPOINTMENTS

- Professor, Applied Physics
- Professor, Physics
- Senior Fellow, Precourt Institute for Energy
- Principal Investigator, Stanford Institute for Materials and Energy Sciences

### ADMINISTRATIVE APPOINTMENTS

- Science and Technology Advisor, SLAC, (2013-2019)
- Chief Scientist, SLAC, (2010-2013)
- Director, Stanford Institute for Materials and Energy Sciences, (2006-2011)
- Director, Geballe Laboratory For Advanced Materials, (2005-2008)

### HONORS AND AWARDS

- Tage Erlander Guest Professorship award, Swedish Research Council and KTH Royal Institute of Technology, Sweden (2020)
- Bershadsky Distinguished Visiting Scholar and Loeb Lecturer, Physics Department, Harvard University (2019)
- William and Flora Hewlett Foundation Fellow, Radcliffe Institute for Advanced Study, Harvard University (2019)

- Fellow, American Academy of Arts and Sciences (2017)
- Member, National Academy of Sciences (2015)
- Investigator, Emerging Phenomena in Quantum System Initiative, Gordon and Betty Moore Foundation (2014)
- Oliver Buckley Condensed Matter Physics Prize, American Physical Society (2011)
- Ernest Olando Lawrence Award, US Department of Energy (2010)
- Paul Pigott Professor in Physical Science, Stanford University (2006)
- Fellow, American Physical Society (2002)
- H. Kamerlingh Onnes Prize, International Conference on Materials and Mechanism of superconductivity (2000)
- Centennial Cerebration Lecture, American Physical Society (1999)
- Outstanding Scientific Accomplishment Award, Office of Basic Energy Sciences, Department of Energy (1994)
- Fellow, Alfred P. Sloan Foundation (1993)

## BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member and Team Lead, DOE BESAC subcommittee on International Bench Marking Study (2020 - 2021)
- Member, International Review committee, Physics Department, the University of Tokyo (2020 - 2020)
- Member, NSF SUPER Review Panel (2017 - 2017)
- Member of Faculty Advisory Board, Knight-Hennessy Scholars Program, Stanford University (2016 - present)
- Member and Chair (since 2020), Science Advisory Board, Max Planck Institute for Matter and Dynamics, Germany (2015 - 2024)
- Member of Advisory Board for Major Scientific Facilities, Chinese Academy of Sciences (2015 - 2017)
- Member, External Review Committee, School of Physical Science and Technology, Shanghai Tech (2015 - 2015)
- Member of Coucil, Materials Science Division, Office of Basic Energy Sciences, Department of Energy (2014 - 2017)
- Chair of Oliver Buckley Prize Committee, American Physical Society (2013 - 2013)
- Member of the Board, PrimeNano Inc. (2011 - present)
- Member, Scientific Advisory Committee,, National Synchrotron Radiation Research Center, Taiwan. (2008 - 2011)
- Member of the Board, Astronergy Corp (2007 - 2015)
- Member of Visiting Committee,, Physics Department, Fudan University, China (2007 - 2007)
- Member of Executive Committee,, Division of Condensed Matter Physics, American Physical Society (2002 - 2004)
- Member of Visiting Committee,, Physics Department, Tsinghua University, China (2001 - 2010)
- Chair, Scientific Advisory Committee, Advanced Light Source, Lawrence Berkeley National Laboratory (1998 - 2000)
- Member of Basic Energy Science Advisory Committee, Department of Energy (1997 - 2002)
- Member of Executive Committee,, Forum on International Physics, American Physical Society (1996 - 1999)
- Scientific Spokesperson, NEDO International Cooperative Research Program on Metal Oxides; MITI, Japan (1994 - 1997)

## PROFESSIONAL EDUCATION

- Ph.D., Stanford University , Applied Physics (1989)
- MS, Rutgers University , Physics (1985)
- BS, Fudan Unversity , Physics (1983)

## PATENTS

- Michael Kelly, K.J. Lai and Zhi-Xun Shen. "United States Patent US Patent # 8,266,718 Modulated Microwave Microscopy and Probes Used There with", Stanford

- Jared William Schwede, Nickolas A. Melosh and Zhi-Xun Shen. "United States Patent 8853531 Photoemission Enhanced Thermionic Emission for Solar Energy Harvesting", Stanford University, Oct 7, 2014
- Wanli Yang, Jason D. Fabbri, Zahid Hussain, Nicholas A. Melosh and Zhi-Xun Shen. "United States Patent US Patent #8,154,185 Diamondoid Monolayers as Electron Emitters", Stanford University and LBNL, Apr 20, 2012
- Michael Kelly, Zhengyu Wang, and Zhi-Xun Shen. "United States Patent US Patent #7,190,175 Orthogonal Microwave Imaging Probe", Stanford University, Mar 13, 2007
- Michael Kelly, Zhengyu Wang, and Zhi-Xun Shen. "United States Patent US Patent #6,825,645 Non-resonant Microwave Imaging Probe", Stanford University, Nov 30, 2004

### LINKS

- My Lab Site: http://arpes.stanford.edu

## Research & Scholarship

### CURRENT RESEARCH AND SCHOLARLY INTERESTS

Dr. Shen's main research interest lies in the area of condensed matter and materials physics, as well as the applications of materials and devices. He develops photon based innovative instrumentation and advanced experimental techniques, ranging from angle-resolved photoemission to microwave imaging, soft x-ray scattering and time domain spectroscopy and scattering. He has created a body of literature that advanced our understanding of quantum materials, including superconductors, semiconductors, novel magnets, topological insulators, novel carbon and electron emitters. He is best known for his discoveries of the momentum structure of anisotropic d-wave pairing gap and anomalous normal state pseudogap in high temperature superconductors. He has further leveraged the advanced characterization tool to make better materials through thin film and interface engineering.

## Teaching

### COURSES

**2025-26**

- Electrons and Photons: APPPHYS 201, PHOTON 201 (Spr)
- Electrons in Low Dimensional and Narrow Band Systems: PHYSICS 276 (Win)

**2023-24**

- Electrons and Photons: APPPHYS 201, PHOTON 201 (Spr)
- Electrons in Low Dimensional and Narrow Band Systems: PHYSICS 276 (Win)

**2022-23**

- Condensed Matter Seminar: APPPHYS 470 (Aut)
- Electrons and Photons: APPPHYS 201, PHOTON 201 (Spr)

### STANFORD ADVISEES

**Doctoral Dissertation Reader (AC)**

Yifan Li

**Postdoctoral Faculty Sponsor**

Qinda Guo, Paulina Majchrzak, Heonjoon Park, Bai Yang Wang, Xirui Wang

**Doctoral Dissertation Advisor (AC)**

Sebastien Abadi, Kutay Akin, Elena Corbae, Erin Fleck, Matthew Hurley, Karen Lei, Bo Liu, Dongyu Liu, Noah Meyer, Siyuan Qiu, Jay Qu, Ruohan Wang, Jin Gene Wong

**Doctoral Dissertation Co-Advisor (AC)**

Nicole Ticea

**Doctoral (Program)**

Riley Carpenter, Chaitrali Duse, Cesar Lema, Emma Lickey, Parry Luo, Kiran Mak, Anne Ruperto, Erik Szakiel

**Postdoctoral Research Mentor**

Yu He

## Publications

### PUBLICATIONS

- **Thermal Hall conductivity of electron-doped cuprates: Electrons and phonons** *PHYSICAL REVIEW B*
  Boulanger, M., Chen, L., Oliviero, V., Vignolles, D., Grissonnanche, G., Xu, K., Shen, Z., Proust, C., Baglo, J., Taillefer, L.
  2026; 113 (9)
- **Fermi-liquid transport beyond the upper critical field in superconducting La2PrNi2O7 thin films.** *Nature communications*
  Hsu, Y. T., Liu, Y., Kohama, Y., Kotte, T., Sharma, V., Tarn, Y., Wang, B. Y., Shen, Z. X., Yu, Y., Hwang, H. Y.
  2026
- **Plasmonic polaron in self-intercalated 1T-TiS<sub>2</sub>** *COMMUNICATIONS MATERIALS*
  Choi, B., Choi, W., Tao, Z., Lee, J., Ryu, S., Mun, S., Lee, H., Park, K., Lee, S., Im, H., Zhong, Y., Ryu, H., Kim, et al
  2026; 7 (1)
- **Reducing the Strain Required for Ambient-Pressure Superconductivity in Ruddlesden-Popper Bilayer Nickelates.** *Advanced materials (Deerfield Beach, Fla.)*
  Tarn, Y., Liu, Y., Theuss, F., Li, J., Wang, B. Y., Bhatt, L., Wang, J., Song, J., Thampy, V., Goodge, B. H., Muller, D. A., Shen, Z. X., Yu, et al
  2026: e20724
- **Nonmonotonic Band Flattening near the Magic Angle of Twisted Bilayer MoTe2** *PHYSICAL REVIEW X*
  Deng, Y., Holtzmann, W., Zhu, Z., Zaklama, T., Majchrzak, P., Taniguchi, T., Watanabe, K., Hashimoto, M., Lu, D., Jozwiak, C., Bostwick, A., Rotenberg, E., Fu, et al
  2025; 15 (4)
- **Macroscopic Uniform 2D Moiré Superlattices with Controllable Angles.** *Journal of the American Chemical Society*
  Zaborski, G., Majchrzak, P. E., Lai, S., Johnson, A. C., Li, Q., Saunders, A. P., Zhu, Z., Deng, Y., Lu, D., Hashimoto, M., Shen, Z. X., Liu, F.
  2025
- **Terahertz-Induced Tunnel Ionization Drives Coherent Raman-Active Phonon in Bismuth.** *Physical review letters*
  Cheng, B., Kramer, P. L., Trigo, M., Liu, M., Uher, C., Reis, D. A., Shen, Z. X., Sobota, J. A., Hoffmann, M. C.
  2025; 135 (14): 146901
- **Terahertz-Induced Tunnel Ionization Drives Coherent Raman-Active Phonon in Bismuth** *PHYSICAL REVIEW LETTERS*
  Cheng, B., Kramer, P. L., Trigo, M., Liu, M., Uher, C., Reis, D. A., Shen, Z., Sobota, J. A., Hoffmann, M. C.
  2025; 135 (14)
- **Unusual Ferromagnetic Band Evolution and High Curie Temperature in Monolayer 1T-CrTe2 on Bilayer Graphene.** *Small (Weinheim an der Bergstrasse, Germany)*
  Park, K., Lee, J. E., Kim, D., Zhong, Y., Farhang, C., Lee, H., Im, H., Choi, W., Lee, S., Mun, S., Kim, K., Choi, J. W., Ryu, et al
  2025: e06671
- **Surface preparation method for investigating the three-dimensional electronic structure of perovskite nickelates** *PHYSICAL REVIEW B*
  Zhong, Y., Lee, K., Bhatta, R., Zhang, Y., Lee, Y., Gonzalez, M., Li, J., Wang, R., Hashimoto, M., Lu, D., Mo, S., Jia, C., Hwang, et al
  2025; 112 (3)
- **Observation of two cascading screening processes in an iron-based superconductor** *COMMUNICATIONS MATERIALS*
  Chang, M., Backes, S., Lu, D., Gauthier, N., Hashimoto, M., Chen, G., Wen, H., Mo, S., Shen, Z., Valenti, R., Pfau, H.
  2025; 6 (1)

- **Reconstructing the Wave Function of Magnetic Topological Insulators MnBi2Te4 and MnBi4Te7 Using Spin-Resolved Photoemission** *PHYSICAL REVIEW X*
  Han, X., Qu, J., Tan, H., Tao, Z., Meyer, N. M., Kirchmann, P. S., Guo, Y., Yan, B., Shen, Z., Sobota, J. A.
  2025; 15 (3)
- **Reexamining circular dichroism in photoemission from a topological insulator** *PHYSICAL REVIEW RESEARCH*
  Sidilkover, I., Yen, Y., D'Souza, S., Schusser, J., Pulkkinen, A., Rotundu, C. R., Hashimoto, M., Liu, D., Shen, Z., Minar, J., Schuler, M., Soifer, H., Sobota, et al
  2025; 7 (3)
- **Orbital inversion and emergent lattice dynamics in infinite layer CaCoO<sub><bold>2</bold></sub>** *NPJ QUANTUM MATERIALS*
  Jost, D., Lomeli, E. G., Kim, W., Been, E. M., Rossi, M., Agrestini, S., Zhou, K., Jia, C., Moritz, B., Shen, Z., Hwang, H. Y., Devereaux, T. P., Lee, et al
  2025; 10 (1)
- **Dichotomous Temperature Response in the Electronic Structure of Epitaxially Grown Altermagnet MnTe.** *Nano letters*
  Lee, J. E., Zhong, Y., Li, Q., Edmonds, M. T., Shen, Z. X., Hwang, C., Mo, S. K.
  2025
- **Doping Dependence of 2-Spinon Excitations in the Doped 1D Cuprate Ba_{2}CuO_{3+δ}.** *Physical review letters*
  Li, J., Jost, D., Tang, T., Wang, R., Zhong, Y., Chen, Z., Garcia-Fernandez, M., Pelliciari, J., Bisogni, V., Moritz, B., Zhou, K., Wang, Y., Devereaux, et al
  2025; 134 (14): 146501
- **Electronic Structure of the Alternating Monolayer-Trilayer Phase of La_{3}Ni_{2}O_{7}.** *Physical review letters*
  Abadi, S., Xu, K. J., Lomeli, E. G., Puphal, P., Isobe, M., Zhong, Y., Fedorov, A. V., Mo, S. K., Hashimoto, M., Lu, D. H., Moritz, B., Keimer, B., Devereaux, et al
  2025; 134 (12): 126001
- **Electronic Structure of the Alternating Monolayer-Trilayer Phase of La3Ni2O7** *PHYSICAL REVIEW LETTERS*
  Abadi, S., Xu, K., Lomeli, E. G., Puphal, P., Isobe, M., Zhong, Y., Fedorov, A., Mo, S., Hashimoto, M., Lu, D., Moritz, B., Keimer, B., Devereaux, et al
  2025; 134 (12)
- **Analysis methodology of coherent oscillations in time- and angle-resolved photoemission spectroscopy.** *The Review of scientific instruments*
  Gauthier, N., Soifer, H., Sobota, J. A., Pfau, H., Sie, E. J., Lindenberg, A. M., Shen, Z. X., Kirchmann, P. S.
  2025; 96 (2)
- **Observation of cupratelike nonlinear terahertz responses in superconducting infinite-layer nickelates via two-dimensional coherent spectroscopy** *PHYSICAL REVIEW B*
  Cheng, B., Cheng, D., Lee, K., Mootz, M., Huang, C., Luo, L., Chen, Z., Lee, Y., Wang, B., Perakis, I. E., Shen, Z., Hwang, H. Y., Wang, et al
  2025; 111 (1)
- **Floquet-Bloch manipulation of the Dirac gap in a topological antiferromagnet** *NATURE PHYSICS*
  Bielinski, N., Chari, R., May-Mann, J., Kim, S., Zwettler, J., Deng, Y., Aishwarya, A., Roychowdhury, S., Shekhar, C., Hashimoto, M., Lu, D., Yan, J., Felser, et al
  2025
- **Pseudogap in electron-doped cuprates: Strong correlation leading to band splitting.** *Proceedings of the National Academy of Sciences of the United States of America*
  Horio, M., Sakai, S., Suzuki, H., Nonaka, Y., Hashimoto, M., Lu, D., Shen, Z., Ohgi, T., Konno, T., Adachi, T., Koike, Y., Imada, M., Fujimori, et al
  2025; 122 (1): e2406624122
- **Colossal magnetoresistance from spin-polarized polarons in an Ising system.** *Proceedings of the National Academy of Sciences of the United States of America*
  Li, Y. F., Been, E. M., Balguri, S., Jia, C. J., Mahendru, M. B., Wang, Z. C., Cui, Y., Chen, S. D., Hashimoto, M., Lu, D. H., Moritz, B., Zaanen, J., Tafti, et al
  2024; 121 (50): e2409846121
- **Local probe of bulk and edge states in a fractional Chern insulator.** *Nature*
  Ji, Z., Park, H., Barber, M. E., Hu, C., Watanabe, K., Taniguchi, T., Chu, J. H., Xu, X., Shen, Z. X.
  2024; 635 (8039): 578-583

- **Planar Thermal Hall Effect from Phonons in Cuprates** *PHYSICAL REVIEW X*
  Chen, L., Le Roux, L., Grissonnanche, G., Boulanger, M., Theriault, S., Liang, R., Bonn, D. A., Hardy, W. N., Pyon, S., Takayama, T., Takagi, H., Xu, K., Shen, et al
  2024; 14 (4)

- **Anomalous normal-state gap in an electron-doped cuprate.** *Science (New York, N.Y.)*
  Xu, K. J., He, J., Chen, S. D., He, Y., Abadi, S. N., Rotundu, C. R., Lee, Y. S., Lu, D. H., Guo, Q., Tjernberg, O., Devereaux, T. P., Lee, D. H., Hashimoto, et al
  2024; 385 (6710): 796-800

- **Band structure of Bi surfaces formed on Bi2Se3 upon exposure to air** *PHYSICAL REVIEW MATERIALS*
  Gauthier, A., Sobota, J. A., Gauthier, N., Rotundu, C. R., Shen, Z., Kirchmann, P. S.
  2024; 8 (5)

- **Controlling structure and interfacial interaction of monolayer TaSe2 on bilayer graphene.** *Nano convergence*
  Lee, H., Im, H., Choi, B. K., Park, K., Chen, Y., Ruan, W., Zhong, Y., Lee, J. E., Ryu, H., Crommie, M. F., Shen, Z. X., Hwang, C., Mo, et al
  2024; 11 (1): 14

- **Beyond Conventional Charge Density Wave for Strongly Enhanced Two-dimensional Superconductivity in 1H-TaS2Superlattices.** *Advanced materials (Deerfield Beach, Fla.)*
  Li, Z., Lyu, P., Chen, Z., Guan, D., Yu, S., Zhao, J., Huang, P., Zhou, X., Qiu, Z., Fang, H., Hashimoto, M., Lu, D., Song, et al
  2024: e2312341

- **Unraveling sources of emission heterogeneity in Silicon Vacancy color centers with cryo-cathodoluminescence microscopy.** *Proceedings of the National Academy of Sciences of the United States of America*
  Angell, D. K., Li, S., Utzat, H., Thurston, M. L., Liu, Y., Dahl, J., Carlson, R., Shen, Z. X., Melosh, N., Sinclair, R., Dionne, J. A.
  2024; 121 (14): e2308247121

- **Characterization of Two Fast-Turnaround Dry Dilution Refrigerators for Scanning Probe Microscopy** *JOURNAL OF LOW TEMPERATURE PHYSICS*
  Barber, M. E., Li, Y., Gibson, J., Yu, J., Jiang, Z., Hu, Y., Ji, Z., Nandi, N., Hoke, J. C., Bishop-Van Horn, L., Arias, G. R., Van Harlingen, D. J., Moler, et al
  2024

- **Charge density waves in two-dimensional transition metal dichalcogenides.** *Reports on progress in physics. Physical Society (Great Britain)*
  Hwang, J., Ruan, W., Chen, Y., Tang, S., Crommie, M. F., Shen, Z., Mo, S.
  2024

- **Evidence for d-wave superconductivity of infinite-layer nickelates from low-energy electrodynamics.** *Nature materials*
  Cheng, B., Cheng, D., Lee, K., Luo, L., Chen, Z., Lee, Y., Wang, B. Y., Mootz, M., Perakis, I. E., Shen, Z. X., Hwang, H. Y., Wang, J.
  2024

- **Probing the edge states of Chern insulators using microwave impedance microscopy** *PHYSICAL REVIEW B*
  Wang, T., Wu, C., Mogi, M., Kawamura, M., Tokura, Y., Shen, Z., You, Y., Allen, M. T.
  2023; 108 (23)

- **Efficient Photonic Integration of Diamond Color Centers and Thin-Film Lithium Niobate** *ACS PHOTONICS*
  Riedel, D., Lee, H., Herrmann, J. F., Grzesik, J., Ansari, V., Borit, J., Stokowski, H. S., Aghaeimeibodi, S., Lu, H., McQuade, P. J., Melosh, N. A., Shen, Z., Safavi-Naeini, et al
  2023; 10 (12): 4236-4243

- **Bogoliubov quasiparticle on the gossamer Fermi surface in electron-doped cuprates** *NATURE PHYSICS*
  Xu, K., Guo, Q., Hashimoto, M., Li, Z., Chen, S., He, J., He, Y., Li, C., Berntsen, M. H., Rotundu, C. R., Lee, Y. S., Devereaux, T. P., Rydh, et al
  2023; 19 (12): 1834-+

- **Coherent light control of a metastable hidden state.** *Science advances*
  Maklar, J., Sarkar, J., Dong, S., Gerasimenko, Y. A., Pincelli, T., Beaulieu, S., Kirchmann, P. S., Sobota, J. A., Yang, S., Leuenberger, D., Moore, R. G., Shen, Z. X., Wolf, et al
  2023; 9 (47): eadi4661

- **Spin skyrmion gaps as signatures of strong-coupling insulators in magic-angle twisted bilayer graphene.** *Nature communications*

Yu, J., Foutty, B. A., Kwan, Y. H., Barber, M. E., Watanabe, K., Taniguchi, T., Shen, Z. X., Parameswaran, S. A., Feldman, B. E.
2023; 14 (1): 6679

- **Angle-resolved pair photoemission theory for correlated electrons** *PHYSICAL REVIEW B*
  Devereaux, T. P., Claassen, M., Huang, X., Zaletel, M., Moore, J. E., Morr, D., Mahmood, F., Abbamonte, P., Shen, Z.
  2023; 108 (6)
- **Development of deflector mode for spin-resolved time-of-flight photoemission spectroscopy.** *The Review of scientific instruments*
  Han, X., Qu, J., Sakamoto, S., Liu, D., Guan, D., Liu, J., Li, H., Rotundu, C. R., Andresen, N., Jozwiak, C., Hussain, Z., Shen, Z. X., Sobota, et al
  2023; 94 (10)
- **Bogoliubov quasiparticle on the gossamer Fermi surface in electron-doped cuprates** *NATURE PHYSICS*
  Xu, K., Guo, Q., Hashimoto, M., Li, Z., Chen, S., He, J., He, Y., Li, C., Berntsen, M. H., Rotundu, C. R., Lee, Y. S., Devereaux, T. P., Rydh, et al
  2023
- **Ingredients of strong interactions in cuprates** *PHYSICA C-SUPERCONDUCTIVITY AND ITS APPLICATIONS*
  Shen, Z., Devereaux, T.
  2023; 613
- **From Stoner to local moment magnetism in atomically thin Cr2Te3.** *Nature communications*
  Zhong, Y., Peng, C., Huang, H., Guan, D., Hwang, J., Hsu, K. H., Hu, Y., Jia, C., Moritz, B., Lu, D., Lee, J. S., Jia, J. F., Devereaux, et al
  2023; 14 (1): 5340
- **Traces of electron-phonon coupling in one-dimensional cuprates.** *Nature communications*
  Tang, T., Moritz, B., Peng, C., Shen, Z. X., Devereaux, T. P.
  2023; 14 (1): 3129
- **Terahertz-Driven Local Dipolar Correlation in a Quantum Paraelectric.** *Physical review letters*
  Cheng, B., Kramer, P. L., Shen, Z. X., Hoffmann, M. C.
  2023; 130 (12): 126902
- **Signatures of the exciton gas phase and its condensation in monolayer 1T-ZrTe2.** *Nature communications*
  Song, Y., Jia, C., Xiong, H., Wang, B., Jiang, Z., Huang, K., Hwang, J., Li, Z., Hwang, C., Liu, Z., Shen, D., Sobota, J. A., Kirchmann, et al
  2023; 14 (1): 1116
- **Influence of local symmetry on lattice dynamics coupled to topological surface states** *PHYSICAL REVIEW B*
  Sobota, J. A., Teitelbaum, S. W., Huang, Y., Querales-Flores, J. D., Power, R., Allen, M., Rotundu, C. R., Bailey, T. P., Uher, C., Henighan, T., Jiang, M., Zhu, D., Chollet, et al
  2023; 107 (1)
- **Identification of a characteristic doping for charge order phenomena in Bi-2212 cuprates via RIXS** *PHYSICAL REVIEW B*
  Lu, H., Hashimoto, M., Chen, S., Ishida, S., Song, D., Eisaki, H., Nag, A., Garcia-Fernandez, M., Arpaia, R., Ghiringhelli, G., Braicovich, L., Zaanen, J., Moritz, et al
  2022; 106 (15)
- **Evidence for a spinon Kondo effect in cobalt atoms on single-layer 1T-TaSe2** *NATURE PHYSICS*
  Chen, Y., He, W., Ruan, W., Hwang, J., Tang, S., Lee, R. L., Wu, M., Zhu, T., Zhang, C., Ryu, H., Wang, F., Louie, S. G., Shen, et al
  2022
- **Differentiated roles of Lifshitz transition on thermodynamics and superconductivity in La2-xSrxCuO4.** *Proceedings of the National Academy of Sciences of the United States of America*
  Zhong, Y., Chen, Z., Chen, S., Xu, K., Hashimoto, M., He, Y., Uchida, S., Lu, D., Mo, S., Shen, Z.
  2022; 119 (32): e2204630119
- **A Novel 19*19 Superstructure in Epitaxially Grown 1T-TaTe2.** *Advanced materials (Deerfield Beach, Fla.)*
  Hwang, J., Jin, Y., Zhang, C., Zhu, T., Kim, K., Zhong, Y., Lee, J., Shen, Z., Chen, Y., Ruan, W., Ryu, H., Hwang, C., Lee, et al
  2022: e2204579
- **A broken translational symmetry state in an infinite-layer nickelate** *NATURE PHYSICS*
  Rossi, M., Osada, M., Choi, J., Agrestini, S., Jost, D., Lee, Y., Lu, H., Wang, B., Lee, K., Nag, A., Chuang, Y., Kuo, C., Lee, et al
  2022

- **Electronic nature of the pseudogap in electron-doped Sr2IrO4** *NPJ QUANTUM MATERIALS*
  Peng, S., Lane, C., Hu, Y., Guo, M., Chen, X., Sun, Z., Hashimoto, M., Lu, D., Shen, Z., Wu, T., Chen, X., Markiewicz, R. S., Wang, et al
  2022; 7 (1)
- **Electronic structure of superconducting nickelates probed by resonant photoemission spectroscopy** *MATTER*
  Chen, Z., Osada, M., Li, D., Been, E. M., Chen, S., Hashimoto, M., Lu, D., Mo, S., Lee, K., Wang, B., Rodolakis, F., McChesney, J. L., Jia, et al
  2022; 5 (6)
- **Momentum-resolved resonant inelastic soft X-ray scattering (qRIXS) endstation at the ALS** *JOURNAL OF ELECTRON SPECTROSCOPY AND RELATED PHENOMENA*
  Chuang, Y., Feng, X., Cruz, A., Hanzel, K., Brown, A., Spucces, A., Frano, A., Lee, W., Kim, J., Chen, Y., Smith, B., Pepper, J. S., Shao, et al
  2022; 257
- **Correlated Hofstadter spectrum and flavour phase diagram in magic-angle twisted bilayer graphene** *NATURE PHYSICS*
  Yu, J., Foutty, B. A., Han, Z., Barber, M. E., Schattner, Y., Watanabe, K., Taniguchi, T., Phillips, P., Shen, Z., Kivelson, S. A., Feldman, B. E.
  2022
- **Laser-induced patterning for a diffraction grating using the phase change material of Ge2Sb2Te5 (GST) as a spatial light modulator in X-ray optics: a proof of concept** *OPTICAL MATERIALS EXPRESS*
  Park, J., Zalden, P., Ng, E., Johnston, S., Fong, S. W., Chang, C., Tassone, C. J., Van Campen, D., Mok, W., Mabuchi, H., Wong, H., Shen, Z., Lindenberg, et al
  2022; 12 (4): 1408-1416
- **Thermal Hall conductivity of electron-doped cuprates** *PHYSICAL REVIEW B*
  Boulanger, M., Grissonnanche, G., Lefrancois, E., Gourgout, A., Xu, K., Shen, Z., Greene, R. L., Taillefer, L.
  2022; 105 (11)
- **Large-gap insulating dimer ground state in monolayer IrTe2.** *Nature communications*
  Hwang, J., Kim, K., Zhang, C., Zhu, T., Herbig, C., Kim, S., Kim, B., Zhong, Y., Salah, M., El-Desoky, M. M., Hwang, C., Shen, Z., Crommie, et al
  2022; 13 (1): 906
- **Unconventional Hysteretic Transition in a Charge Density Wave.** *Physical review letters*
  Lv, B. Q., Zong, A., Wu, D., Rozhkov, A. V., Fine, B. V., Chen, S. D., Hashimoto, M., Lu, D. H., Li, M., Huang, Y. B., Ruff, J. P., Walko, D. A., Chen, et al
  2022; 128 (3): 036401
- **Unconventional spectral signature of Tc in a pure d-wave superconductor.** *Nature*
  Chen, S., Hashimoto, M., He, Y., Song, D., He, J., Li, Y., Ishida, S., Eisaki, H., Zaanen, J., Devereaux, T. P., Lee, D., Lu, D., Shen, et al
  1800; 601 (7894): 562-567
- **Expanding the momentum field of view in angle-resolved photoemission systems with hemispherical analyzers.** *The Review of scientific instruments*
  Gauthier, N., Sobota, J. A., Pfau, H., Gauthier, A., Soifer, H., Bachmann, M. D., Fisher, I. R., Shen, Z. X., Kirchmann, P. S.
  2021; 92 (12): 123907
- **Expanding the momentum field of view in angle-resolved photoemission systems with hemispherical analyzers** *REVIEW OF SCIENTIFIC INSTRUMENTS*
  Gauthier, N., Sobota, J. A., Pfau, H., Gauthier, A., Soifer, H., Bachmann, M. D., Fisher, I. R., Shen, Z., Kirchmann, P. S.
  2021; 92 (12)
- **Microwave impedance microscopy and its application to quantum materials** *NATURE REVIEWS PHYSICS*
  Barber, M. E., Ma, E., Shen, Z.
  2021
- **Phonon-Mediated Long-Range Attractive Interaction in One-Dimensional Cuprates** *PHYSICAL REVIEW LETTERS*
  Wang, Y., Chen, Z., Shi, T., Moritz, B., Shen, Z., Devereaux, T. P.
  2021; 127 (19): 197003
- **Distinct Oxygen Redox Activities in Li2MO3 (M = Mn, Ru, Ir)** *ACS ENERGY LETTERS*
  Zhuo, Z., Dai, K., Wu, J., Zhang, L., Tamura, N., Chuang, Y., Feng, J., Guo, J., Shen, Z., Liu, G., Pan, F., Yang, W.

2021; 6 (10): 3417-3424

- **Superconducting Fluctuations in Overdoped Bi2Sr2CaCu2O8+delta** *PHYSICAL REVIEW X*
  He, Y., Chen, S., Li, Z., Zhao, D., Song, D., Yoshida, Y., Eisaki, H., Wu, T., Chen, X., Lu, D., Meingast, C., Devereaux, T. P., Birgeneau, et al
  2021; 11 (3)
- **Evidence for quantum spin liquid behaviour in single-layer 1T-TaSe2 from scanning tunnelling microscopy** *NATURE PHYSICS*
  Ruan, W., Chen, Y., Tang, S., Hwang, J., Tsai, H., Lee, R. L., Wu, M., Ryu, H., Kahn, S., Liou, F., Jia, C., Aikawa, A., Hwang, et al
  2021
- **Quantum Photonic Interface for Tin-Vacancy Centers in Diamond** *PHYSICAL REVIEW X*
  Rugar, A. E., Aghaeimeibodi, S., Riedel, D., Dory, C., Lu, H., McQuade, P. J., Shen, Z., Melosh, N. A., Vuckovic, J.
  2021; 11 (3)
- **Evolution of the electronic structure in Ta2NiSe5 across the structural transition revealed by resonant inelastic x-ray scattering** *PHYSICAL REVIEW B*
  Lu, H., Rossi, M., Kim, J., Yavas, H., Said, A., Nag, A., Garcia-Fernandez, M., Agrestini, S., Zhou, K., Jia, C., Moritz, B., Devereaux, T. P., Shen, et al
  2021; 103 (23)
- **Angle-resolved photoemission studies of quantum materials** *REVIEWS OF MODERN PHYSICS*
  Sobota, J. A., He, Y., Shen, Z.
  2021; 93 (2)
- **Imaging Dual-Moire Lattices in Twisted Bilayer Graphene Aligned on Hexagonal Boron Nitride Using Microwave Impedance Microscopy.** *Nano letters*
  Huang, X., Chen, L., Tang, S., Jiang, C., Chen, C., Wang, H., Shen, Z., Wang, H., Cui, Y.
  2021
- **Magic Doping and Robust Superconductivity in Monolayer FeSe on Titanates.** *Advanced science (Weinheim, Baden-Wurttemberg, Germany)*
  Jia, T., Chen, Z., Rebec, S. N., Hashimoto, M., Lu, D., Devereaux, T. P., Lee, D. H., Moore, R. G., Shen, Z. X.
  2021; 8 (9): 2003454
- **Cycling mechanism of Li2MnO3: Li-CO2 batteries and commonality on oxygen redox in cathode materials** *JOULE*
  Zhuo, Z., Dai, K., Qiao, R., Wang, R., Wu, J., Liu, Y., Peng, J., Chen, L., Chuang, Y., Pan, F., Shen, Z., Liu, G., Li, et al
  2021; 5 (4): 975-997
- **Magic Doping and Robust Superconductivity in Monolayer FeSe on Titanates** *ADVANCED SCIENCE*
  Jia, T., Chen, Z., Rebec, S. N., Hashimoto, M., Lu, D., Devereaux, T. P., Lee, D., Moore, R. G., Shen, Z.
  2021
- **Ultrafast formation of domain walls of a charge density wave in SmTe 3** *Physical Review B*
  Trigo, M., Giraldo-Gallo, P., Clark, J., Kozina, M., Henighan, T., Jiang, M., Chollet, M., Fisher, I., Glownia, J., Katayama, T., Kirchmann, P., Leuenberger, D., Liu, et al
  2021; 103 (5): 054109
- **Anomalously strong near-neighbor attraction in doped 1D cuprate chains.** *Science (New York, N.Y.)*
  Chen, Z., Wang, Y., Rebec, S. N., Jia, T., Hashimoto, M., Lu, D., Moritz, B., Moore, R. G., Devereaux, T. P., Shen, Z.
  2021; 373 (6560): 1235-1239
- **Narrow-linewidth tin-vacancy centers in diamond waveguides**
  Rugar, A. E., Aghaeimeibodi, S., Dory, C., Lu, H., McQuade, P. J., Mishra, S., Sun, S., Shen, Z., Melosh, N. A., Vuckovic, J., IEEE
  IEEE.2021
- **Spectroscopic fingerprint of charge order melting driven by quantum fluctuations in a cuprate** *Nature Physics*
  Lee, W., Zhou, K., Hepting, M., Li, J., Nag, A., Walters, A., Garcia-Fernandez, M., Robarts, H., Hashimoto, M., Lu, H., Nosarzewski, B., Song, D., Eisaki, et al
  2021; 17 (1): 53-57
- **Emergence of quasiparticles in a doped Mott insulator** *COMMUNICATIONS PHYSICS*
  Wang, Y., He, Y., Wohlfeld, K., Hashimoto, M., Huang, E. W., Lu, D., Mo, S., Komiya, S., Jia, C., Moritz, B., Shen, Z., Devereaux, T. P.
  2020; 3 (1)

- **Spectroscopic fingerprint of charge order melting driven by quantum fluctuations in a cuprate (Aug, 10.1038/s41567-020-0993-7, 2020)** *NATURE PHYSICS*
  Lee, W. S., Zhou, K., Hepting, M., Li, J., Nag, A., Walters, A. C., Garcia-Fernandez, M., Robarts, H. C., Hashimoto, M., Lu, H., Nosarzewski, B., Song, D., Eisaki, et al
  2020
- **Spectral weight reduction of two-dimensional electron gases at oxide surfaces across the ferroelectric transition** *SCIENTIFIC REPORTS*
  Jaiban, P., Lu, M., Eknapakul, T., Chaiyachad, S., Yao, S. H., Pisitpipathsin, N., Unruan, M., Siriroj, S., He, R., Mo, S., Watcharapasorn, A., Yimnirun, R., Tokura, et al
  2020; 10 (1): 16834
- **Narrow-Linewidth Tin-Vacancy Centers in a Diamond Waveguide** *ACS PHOTONICS*
  Rugar, A. E., Dory, C., Aghaeimeibodi, S., Lu, H., Sun, S., Mishra, S., Shen, Z., Melosh, N. A., Vuckovic, J.
  2020; 7 (9): 2356–61
- **Redox Mechanism in Na-Ion Battery Cathodes Probed by Advanced Soft X-Ray Spectroscopy** *FRONTIERS IN CHEMISTRY*
  Wu, J., Shen, Z., Yang, W.
  2020; 8
- **Quantum-well states in fractured crystals of the heavy-fermion material CeCoIn5** *PHYSICAL REVIEW B*
  Gauthier, N., Sobota, J. A., Hashimoto, M., Pfau, H., Lu, D., Bauer, E. D., Ronning, F., Kirchmann, P. S., Shen, Z.
  2020; 102 (12)
- **Tuning time and energy resolution in time-resolved photoemission spectroscopy with nonlinear crystals** *JOURNAL OF APPLIED PHYSICS*
  Gauthier, A., Sobota, J. A., Gauthier, N., Xu, K., Pfau, H., Rotundu, C. R., Shen, Z., Kirchmann, P. S.
  2020; 128 (9)
- **Publisher Correction: Electronic structure of the parent compound of superconducting infinite-layer nickelates.** *Nature materials*
  Hepting, M., Li, D., Jia, C. J., Lu, H., Paris, E., Tseng, Y., Feng, X., Osada, M., Been, E., Hikita, Y., Chuang, Y., Hussain, Z., Zhou, et al
  2020
- **Metallic surface states in a correlated d-electron topological Kondo insulator candidate FeSb2.** *Proceedings of the National Academy of Sciences of the United States of America*
  Xu, K., Chen, S., He, Y., He, J., Tang, S., Jia, C., Ma, E. Y., Mo, S., Lu, D., Hashimoto, M., Devereaux, T. P., Shen, Z.
  2020
- **Visualization of Multifractal Superconductivity in a Two-Dimensional Transition Metal Dichalcogenide in the Weak-Disorder Regime.** *Nano letters*
  Rubio-Verdu, C., Garci A-Garci A, A. M., Ryu, H., Choi, D., Zaldi Var, J., Tang, S., Fan, B., Shen, Z., Mo, S., Pascual, J. I., Ugeda, M. M.
  2020
- **Low work function in the 122-family of iron-based superconductors** *PHYSICAL REVIEW MATERIALS*
  Pfau, H., Soifer, H., Sobota, J. A., Gauthier, A., Rotundu, C. R., Palmstrom, J. C., Fisher, I. R., Chen, G., Wen, H., Shen, Z., Kirchmann, P. S.
  2020; 4 (3)
- **Super resolution convolutional neural network for feature extraction in spectroscopic data** *REVIEW OF SCIENTIFIC INSTRUMENTS*
  Peng, H., Gao, X., He, Y., Li, Y., Ji, Y., Liu, C., Ekahana, S. A., Pei, D., Liu, Z., Shen, Z., Chen, Y.
  2020; 91 (3): 033905
- **Generation of Tin-Vacancy Centers in Diamond via Shallow Ion Implantation and Subsequent Diamond Overgrowth.** *Nano letters*
  Rugar, A. E., Lu, H., Dory, C., Sun, S., McQuade, P. J., Shen, Z., Melosh, N. A., Vuckovic, J.
  2020
- **Dissociate lattice oxygen redox reactions from capacity and voltage drops of battery electrodes.** *Science advances*
  Wu, J., Zhuo, Z., Rong, X., Dai, K., Lebens-Higgins, Z., Sallis, S., Pan, F., Piper, L. F., Liu, G., Chuang, Y., Hussain, Z., Li, Q., Zeng, et al
  2020; 6 (6): eaaw3871
- **Electronic structure of the parent compound of superconducting infinite-layer nickelates.** *Nature materials*
  Hepting, M., Li, D., Jia, C. J., Lu, H., Paris, E., Tseng, Y., Feng, X., Osada, M., Been, E., Hikita, Y., Chuang, Y., Hussain, Z., Zhou, et al
  2020

- **Strong correlations and orbital texture in single-layer 1T-TaSe2** *NATURE PHYSICS*
  Chen, Y., Ruan, W., Wu, M., Tang, S., Ryu, H., Tsai, H., Lee, R., Kahn, S., Liou, F., Jia, C., Albertini, O. R., Xiong, H., Jia, et al
  2020
- **Synergistic enhancement of electrocatalytic CO2 reduction to C2 oxygenates at nitrogen-doped nanodiamonds/Cu interface.** *Nature nanotechnology*
  Wang, H., Tzeng, Y., Ji, Y., Li, Y., Li, J., Zheng, X., Yang, A., Liu, Y., Gong, Y., Cai, L., Li, Y., Zhang, X., Chen, et al
  2020
- **Site-controlled generation of tin-vacancy centers in diamond via shallow ion implantation and diamond overgrowth**
  Rugar, A. E., Lu, H., Dory, C., Sun, S., McQuade, P. J., Shen, Z., Melosh, N. A., Vuckovic, J., IEEE
  IEEE.2020
- **Nematic Energy Scale and the Missing Electron Pocket in FeSe** *PHYSICAL REVIEW X*
  Yi, M., Pfau, H., Zhang, Y., He, Y., Wu, H., Chen, T., Ye, Z. R., Hashimoto, M., Yu, R., Si, Q., Lee, D., Dai, P., Shen, et al
  2019; 9 (4)
- **Spectroscopic Evidence for Electron-Boson Coupling in Electron-Doped Sr2IrO4** *PHYSICAL REVIEW LETTERS*
  Hu, Y., Chen, X., Peng, S., Lane, C., Matzelle, M., Sun, Z., Hashimoto, M., Lu, D., Schwier, E. F., Arita, M., Wu, T., Markiewicz, R. S., Shimada, et al
  2019; 123 (21): 216402
- **Band-dependent superconducting gap in SrFe2(As0.65P0.35)(2) studied by angle-resolved photoemission spectroscopy** *SCIENTIFIC REPORTS*
  Suzuki, H., Kobayashi, T., Miyasaka, S., Okazaki, K., Yoshida, T., Horio, M., Ambolode, L. C., Ota, Y., Yamamoto, H., Shin, S., Hashimoto, M., Lu, D. H., Shen, et al
  2019; 9: 16418
- **Surface Photovoltage-Induced Ultralow Work Function Material for Thermionic Energy Converters** *ACS ENERGY LETTERS*
  Schindler, P., Riley, D. C., Bargatin, I., Sahasrahuddhe, K., Schwede, J. W., Sun, S., Pianetta, P., Shen, Z., Howe, R. T., Melosh, N. A.
  2019; 4 (10): 2436–43
- **Momentum Dependence of the Nematic Order Parameter in Iron-Based Superconductors** *PHYSICAL REVIEW LETTERS*
  Pfau, H., Chen, D., Yi, M., Hashimoto, M., Rotundu, C. R., Palmstrom, J. C., Chen, T., Dai, P., Straquadme, J., Hristov, A., Birgeneau, R. J., Fisher, I. R., Lu, et al
  2019; 123 (6)
- **Manipulating Topological Domain Boundaries in the Single-Layer Quantum Spin Hall Insulator 1T'-WSe2.** *Nano letters*
  Pedramrazi, Z., Herbig, C., Pulkin, A., Tang, S., Phillips, M., Wong, D., Ryu, H., Pizzochero, M., Chen, Y., Wang, F., Mele, E. J., Shen, Z., Mo, et al
  2019
- **Nanodiamond Integration with Photonic Devices** *LASER & PHOTONICS REVIEWS*
  Rodulaski, M., Zhang, J., Tzeng, Y., Lagoudakis, K. G., Ishiwata, H., Dory, C., Fischer, K. A., Kelaita, Y. A., Sun, S., Maurer, P. C., Alassaad, K., Ferro, G., Shen, et al
  2019
- **Visualization of an axion insulating state at the transition between 2 chiral quantum anomalous Hall states.** *Proceedings of the National Academy of Sciences of the United States of America*
  Allen, M., Cui, Y., Yue Ma, E., Mogi, M., Kawamura, M., Fulga, I. C., Goldhaber-Gordon, D., Tokura, Y., Shen, Z.
  2019
- **Mode-Selective Coupling of Coherent Phonons to the Bi2212 Electronic Band Structure** *PHYSICAL REVIEW LETTERS*
  Yang, S., Sobota, J. A., He, Y., Leuenberger, D., Soifer, H., Eisaki, H., Kirchmann, P. S., Shen, Z.
  2019; 122 (17): 176403
- **Band-Resolved Imaging of Photocurrent in a Topological Insulator** *PHYSICAL REVIEW LETTERS*
  Soifer, H., Gauthier, A., Kemper, A. F., Rotundu, C. R., Yang, S., Xiong, H., Lu, D., Hashimoto, M., Kirchmann, P. S., Sobota, J. A., Shen, Z.
  2019; 122 (16): 167401
- **Coherent order parameter dynamics in SmTe3** *PHYSICAL REVIEW B*
  Trigo, M., Giraldo-Gallo, P., Kozina, M. E., Henighan, T., Jiang, M. P., Liu, H., Clark, J. N., Chollet, M., Glownia, J. M., Zhu, D., Katayama, T., Leuenberger, D., Kirchmann, et al

2019; 99 (10)

- **Scanning microwave imaging of optically patterned Ge2Sb2Te5** *APPLIED PHYSICS LETTERS*
  Johnston, S. R., Ng, E., Fong, S. W., Mok, W. Y., Park, J., Zalden, P., Sakdinawat, A., Wong, H., Mabuchi, H., Shen, Z.
  2019; 114 (9)
- **Electronic structure of the quadrupolar ordered heavy-fermion compound YbRu2Ge2 measured by angle-resolved photoemission** *PHYSICAL REVIEW B*
  Pfau, H., Rosenberg, E. W., Massat, P., Moritz, B., Hashimoto, M., Lu, D., Fisher, I. R., Shen, Z.
  2019; 99 (7)
- **Fermi surface reconstruction in electron-doped cuprates without antiferromagnetic long-range order.** *Proceedings of the National Academy of Sciences of the United States of America*
  He, J., Rotundu, C. R., Scheurer, M. S., He, Y., Hashimoto, M., Xu, K., Wang, Y., Huang, E. W., Jia, T., Chen, S., Moritz, B., Lu, D., Lee, et al
  2019; 116 (9): 3449–53
- **High Reversibility of Lattice Oxygen Redox Quantified by Direct Bulk Probes of Both Anionic and Cationic Redox Reactions** *JOULE*
  Dai, K., Wu, J., Zhuo, Z., Li, Q., Sallis, S., Mao, J., Ai, G., Sun, C., Li, Z., Gent, W. E., Chueh, W. C., Chuang, Y., Zeng, et al
  2019; 3 (2): 518–41
- **Recording interfacial currents on the subnanometer length and femtosecond time scale by terahertz emission.** *Science advances*
  Ma, E. Y., Guzelturk, B., Li, G., Cao, L., Shen, Z., Lindenberg, A. M., Heinz, T. F.
  2019; 5 (2): eaau0073
- **Imaging quantum spin Hall edges in monolayer WTe2.** *Science advances*
  Shi, Y., Kahn, J., Niu, B., Fei, Z., Sun, B., Cai, X., Francisco, B. A., Wu, D., Shen, Z., Xu, X., Cobden, D. H., Cui, Y.
  2019; 5 (2): eaat8799
- **Detailed band structure of twinned and detwinned BaFe2As2 studied with angle-resolved photoemission spectroscopy** *PHYSICAL REVIEW B*
  Pfau, H., Rotundu, C. R., Palmstrom, J. C., Chen, S. D., Hashimoto, M., Lu, D., Kemper, A. F., Fisher, I. R., Shen, Z.
  2019; 99 (3)
- **Incoherent strange metal sharply bounded by a critical doping in Bi2212.** *Science (New York, N.Y.)*
  Chen, S. D., Hashimoto, M. n., He, Y. n., Song, D. n., Xu, K. J., He, J. F., Devereaux, T. P., Eisaki, H. n., Lu, D. H., Zaanen, J. n., Shen, Z. X.
  2019; 366 (6469): 1099–1102
- **Monitoring Charge Separation Dynamics Using THz Emission Spectroscopy**
  Guzelturk, B., Ma, E., Li, G., Cao, L., Shen, Z., Heinz, T., Lindenberg, A., IEEE
  IEEE.2019
- **Frequency Tunable Single-Photon Emission From a Single Atomic Defect in a Solid**
  Sun, S., Zhang, J., Fischer, K. A., Burek, M. J., Dory, C., Lagoudakis, K. G., Tzeng, Y., Radulaski, M., Kelaita, Y., Safavi-Naeini, A., Shen, Z., Melosh, N. A., Chu, et al
  IEEE.2019
- **Momentum-resolved resonant inelastic soft X-ray scattering (qRIXS) endstation at the ALS** *Journal of Electron Spectroscopy and Related Phenomena*
  Chuang, Y., Feng, X., Cruz, A., Hanzel, K., Brown, A., Spucces, A., Frano, A., Lee, W., Kim, J., Chen, Y., Smith, B., Pepper, J. S., Shao, et al
  2019: 146897
- **Dichotomy of the photo-induced 2-dimensional electron gas on SrTiO3 surface terminations.** *Proceedings of the National Academy of Sciences of the United States of America*
  Rebec, S. N., Jia, T. n., Sohail, H. M., Hashimoto, M. n., Lu, D. n., Shen, Z. X., Moore, R. G.
  2019
- **Epitaxial growth of TiSe2/TiO2 heterostructure** *2D MATERIALS*
  Jia, T., Rebec, S. N., Tang, S., Xu, K., Sohail, H. M., Hashimoto, M., Lu, D., Moore, R. G., Shen, Z.
  2019; 6 (1)
- **Three-dimensional collective charge excitations in electron-doped copper oxide superconductors** *NATURE*

Hepting, M., Chaix, L., Huang, E. W., Fumagalli, R., Peng, Y. Y., Moritz, B., Kummer, K., Brookes, N. B., Lee, W. C., Hashimoto, M., Sarkar, T., He, J., Rotundu, et al
2018; 563 (7731): 374-+

- **Rapid change of superconductivity and electron-phonon coupling through critical doping in Bi-2212** *SCIENCE*
  He, Y., Hashimoto, M., Song, D., Chen, S., He, J., Vishik, I. M., Moritz, B., Lee, D., Nagaosa, N., Zaanen, J., Devereaux, T. P., Yoshida, Y., Eisaki, et al
  2018; 362 (6410): 62-+
- **Spectral Evidence for Emergent Order in Ba1-xNaxFe2As2** *PHYSICAL REVIEW LETTERS*
  Yi, M., Frano, A., Lu, D. H., He, Y., Wang, M., Frandsen, B. A., Kemper, A. F., Yu, R., Si, Q., Wang, L., He, M., Hardy, F., Schweiss, et al
  2018; 121 (12)
- **Orbital-dependent spin textures in Bi2Se3 quantum well states** *PHYSICAL REVIEW B*
  Lin, C., Gotlieb, K., Jozwiak, C., Hussain, Z., Lanzara, A.
  2018; 98 (7)
- **Cavity-Enhanced Raman Emission from a Single Color Center in a Solid.** *Physical review letters*
  Sun, S., Zhang, J. L., Fischer, K. A., Burek, M. J., Dory, C., Lagoudakis, K. G., Tzeng, Y., Radulaski, M., Kelaita, Y., Safavi-Naeini, A., Shen, Z., Melosh, N. A., Chu, et al
  2018; 121 (8): 083601
- **Observation of topologically protected states at crystalline phase boundaries in single-layer WSe2** *NATURE COMMUNICATIONS*
  Ugeda, M. M., Pulkin, A., Tang, S., Ryu, H., Wu, Q., Zhang, Y., Wong, D., Pedramrazi, Z., Martin-Recio, A., Chen, Y., Wang, F., Shen, Z., Mo, et al
  2018; 9: 3401
- **'Molecular anvlils' for stercially controlled mechanochemistry under hydrostatic pressure**
  Yan, H., Schreiner, P., Mao, W., Shen, Z., Melosh, N.
  AMER CHEMICAL SOC.2018
- **An Ultrastrong Double-Layer Nanodiamond Interface for Stable Lithium Metal Anodes** *JOULE*
  Liu, Y., Tzeng, Y., Lin, D., Pei, A., Lu, H., Melosh, N. A., Shen, Z., Chu, S., Cui, Y.
  2018; 2 (8): 1595–1609
- **Experimental measurement of the diamond nucleation landscape reveals classical and nonclassical features.** *Proceedings of the National Academy of Sciences of the United States of America*
  Gebbie, M. A., Ishiwata, H., McQuade, P. J., Petrak, V., Taylor, A., Freiwald, C., Dahl, J. E., Carlson, R. M., Fokin, A. A., Schreiner, P. R., Shen, Z., Nesladek, M., Melosh, et al
  2018
- **Persistent low-energy phonon broadening near the charge-order q vector in the bilayer cuprate Bi2Sr2CaCu2O8+delta** *PHYSICAL REVIEW B*
  He, Y., Wu, S., Song, Y., Lee, W., Said, A. H., Alatas, A., Bosak, A., Girard, A., Souliou, S. M., Ruiz, A., Hepting, M., Bluschke, M., Schierle, et al
  2018; 98 (3)
- **Coincident onset of charge-density-wave order at a quantum critical point in underdoped YBa2Cu3Ox** *PHYSICAL REVIEW B*
  Jang, H., Lee, W., Song, S., Nojiri, H., Matsuzawa, S., Yasumura, H., Huang, H., Liu, Y., Porras, J., Minola, M., Keimer, B., Hastings, J., Zhu, et al
  2018; 97 (22)
- **Anomalous Hall effect in ZrTe5** *NATURE PHYSICS*
  Liang, T., Lin, J., Gibson, Q., Kushwaha, S., Liu, M., Wang, W., Xiong, H., Sobota, J. A., Hashimoto, M., Kirchmann, P. S., Shen, Z., Cava, R. J., Ong, et al
  2018; 14 (5): 451-+
- **Resonant inelastic x-ray scattering studies of magnons and bimagnons in the lightly doped cuprate La2-xSrxCuO4** *PHYSICAL REVIEW B*
  Chaix, L., Huang, E. W., Gerber, S., Lu, X., Jia, C., Huang, Y., McNally, D. E., Wang, Y., Vernay, F. H., Keren, A., Shi, M., Moritz, B., Shen, et al
  2018; 97 (15)
- **Dehybridization of f and d states in the heavy-fermion system YbRh2Si2** *PHYSICAL REVIEW B*
  Leuenberger, D., Sobota, J. A., Yang, S., Pfau, H., Kim, D., Mo, S., Fisk, Z., Kirchmann, P. S., Shen, Z.
  2018; 97 (16)

- **Optically coupled methods for microwave impedance microscopy** *REVIEW OF SCIENTIFIC INSTRUMENTS*
  Johnston, S. R., Ma, E., Shen, Z.
  2018; 89 (4): 043703

- **Sterically controlled mechanochemistry under hydrostatic pressure** *NATURE*
  Yan, H., Yang, F., Pan, D., Lin, Y., Hohman, J., Solis-Ibarra, D., Li, F., Dahl, J. E. P., Carlson, R. M. K., Tkachenko, B. A., Fokin, A. A., Schreiner, P. R., Galli, et al
  2018; 554 (7693): 505-+

- **Monochromatic Photocathodes from Graphene-Stabilized Diamondoids** *NANO LETTERS*
  Yan, H., Narasimha, K. T., Denlinger, J., Li, F., Mo, S., Hohman, J., Dahl, J. E. P., Carlson, R. M. K., Tkachenko, B. A., Fokin, A. A., Schreiner, P. R., Hussain, Z., Shen, et al
  2018; 18 (2): 1099–1103

- **Strongly Cavity-Enhanced Spontaneous Emission from Silicon-Vacancy Centers in Diamond** *NANO LETTERS*
  Zhang, J., Sun, S., Burek, M. J., Dory, C., Tzeng, Y., Fischer, K. A., Kelaita, Y., Lardakis, K. G., Radulaski, M., Shen, Z., Melosh, N. A., Chu, S., Loncar, et al
  2018; 18 (2): 1360–65

- **Electronic structure of monolayer 1T'-MoTe2 grown by molecular beam epitaxy** *APL MATERIALS*
  Tang, S., Zhang, C., Jia, C., Ryu, H., Hwang, C., Hashimoto, M., Lu, D., Liu, Z., Devereaux, T. P., Shen, Z., Mo, S.
  2018; 6 (2)

- **Persistent Charge-Density-Wave Order in Single-Layer TaSe2** *NANO LETTERS*
  Ryu, H., Chen, Y., Kim, H., Tsai, H., Tang, S., Jiang, J., Liou, F., Kahn, S., Jia, C., Omrani, A. A., Shim, J., Hussain, Z., Shen, et al
  2018; 18 (2): 689–94

- **Charge density wave order in 2D transition metal dichalcogenides** *The 54th Winter Annual Conference of the Korean Vacuum Society*
  Ryu, H., Chen, Y., Ugeda, M. M., Kim, H., Zhang, Y., Tsai, H., Tang, S., Jiang, J., Liou, F., Kahn, S., Jia, C., Omrani, A. A., Shim, et al
  2018: 85

- **Electronic characterization of the coexisting charge density wave and superconductivity in single-layer NbSe2 at T = 1 K** *Verhandlungen der Deutschen Physikalischen Gesellschaft*
  Carmen, R., Choi, D., Ryu, H., Mo, S., Shen, Z., Pascual, J. I., Ugeda, M. M.
  2018; 50 (14)

- **Modification of Transition-Metal Redox by Interstitial Water in Hexacyanometalate Electrodes for Sodium-Ion Batteries** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
  Wu, J., Song, J., Dai, K., Zhuo, Z., Wray, L., Liu, G., Shen, Z., Zeng, R., Lu, Y., Yang, W.
  2017; 139 (50): 18358–64

- **Revealing the Coulomb interaction strength in a cuprate superconductor** *PHYSICAL REVIEW B*
  Yang, S., Sobota, J. A., He, Y., Wang, Y., Leuenberger, D., Soifer, H., Hashimoto, M., Lu, D. H., Eisaki, H., Moritz, B., Devereaux, T. P., Kirchmann, P. S., Shen, et al
  2017; 96 (24)

- **Role of the orbital degree of freedom in iron-based superconductors** *NPJ QUANTUM MATERIALS*
  Yi, M., Zhang, Y., Shen, Z., Lu, D.
  2017; 2

- **Dispersive charge density wave excitations in Bi2Sr2CaCu2O8+delta** *NATURE PHYSICS*
  Chaix, L., Ghiringhelli, G., Peng, Y. Y., Hashimoto, M., Moritz, B., Kummer, K., Brookes, N. B., He, Y., Chen, S., Ishida, S., Yoshida, Y., Eisaki, H., Salluzzo, et al
  2017; 13 (10): 952-+

- **Stripes developed at the strong limit of nematicity in FeSe film** *NATURE PHYSICS*
  Li, W., Zhang, Y., Deng, P., Xu, Z., Mo, S., Yi, M., Ding, H., Hashimoto, M., Moore, R. G., Lu, D., Chen, X., Shen, Z., Xue, et al
  2017; 13 (10): 957-+

- **Taking control of spin currents** *NATURE*
  Shen, Z., Sobota, J.

2017; 549 (7673): 464–65

- **Measurement of surface acoustic wave resonances in ferroelectric domains by microwave microscopy** *JOURNAL OF APPLIED PHYSICS*
  Johnston, S. R., Yang, Y., Cui, Y., Ma, E., Kampfe, T., Eng, L. M., Zhou, J., Chen, Y., Lu, M., Shen, Z.
  2017; 122 (7)
- **Large thermopower from dressed quasiparticles in the layered cobaltates and rhodates** *PHYSICAL REVIEW B*
  Chen, S., He, Y., Zong, A., Zhang, Y., Hashimoto, M., Zhang, B., Yao, S., Chen, Y., Zhou, J., Chen, Y., Mo, S., Hussain, Z., Lu, et al
  2017; 96 (8)
- **ARPES study of the epitaxially grown topological crystalline insulator SnTe(111)** *JOURNAL OF ELECTRON SPECTROSCOPY AND RELATED PHENOMENA*
  Zhang, Y., Liu, Z., Zhou, B., Kim, Y., Yang, L., Ryu, H., Hwang, C., Chen, Y., Hussain, Z., Shen, Z., Mo, S.
  2017; 219: 35–40
- **HfSe2 and ZrSe2: Two-dimensional semiconductors with native high-κ oxides.** *Science advances*
  Mleczko, M. J., Zhang, C., Lee, H. R., Kuo, H. H., Magyari-Köpe, B., Moore, R. G., Shen, Z. X., Fisher, I. R., Nishi, Y., Pop, E.
  2017; 3 (8): e1700481
- **Femtosecond electron-phonon lock-in by photoemission and x-ray free-electron laser** *SCIENCE*
  Gerber, S., Yang, S., Zhu, D., Soifer, H., Sobota, J. A., Rebec, S., Lee, J. J., Jia, T., Moritz, B., Jia, C., Gauthier, A., Li, Y., Leuenberger, et al
  2017; 357 (6346): 71–74
- **Visualizing dispersive features in 2D image via minimum gradient method** *REVIEW OF SCIENTIFIC INSTRUMENTS*
  He, Y., Wang, Y., Shen, Z.
  2017; 88 (7): 073903
- **Quantum spin Hall state in monolayer 1T '-WTe2** *NATURE PHYSICS*
  Tang, S., Zhang, C., Wong, D., Pedramrazi, Z., Tsai, H., Jia, C., Moritz, B., Claassen, M., Ryu, H., Kahn, S., Jiang, J., Yan, H., Hashimoto, et al
  2017; 13 (7): 683-+
- **Strongly three-dimensional electronic structure and Fermi surfaces of SrFe2(As0.65P0.35)(2): Comparison with BaFe2(As1-xPx)(2) (vol 89, 184513, 2014)** *PHYSICAL REVIEW B*
  Suzuki, H., Kobayashi, T., Miyasaka, S., Yoshida, T., Okazaki, K., Ambolode, L. C., Ideta, S., Yi, M., Hashimoto, M., Lu, D. H., Shen, Z., Ono, K., Kumigashira, et al
  2017; 95 (17)
- **Three-dimensional nature of the band structure of ZrTe5 measured by high-momentum-resolution photoemission spectroscopy** *PHYSICAL REVIEW B*
  Xiong, H., Sobota, J. A., Yang, S., Soifer, H., Gauthier, A., Lu, M., Lv, Y., Yao, S., Lu, D., Hashimoto, M., Kirchmann, P. S., Chen, Y., Shen, et al
  2017; 95 (19)
- **Nonequilibrium lattice-driven dynamics of stripes in nickelates using time-resolved x-ray scattering** *PHYSICAL REVIEW B*
  Lee, W. S., Kung, Y. F., Moritz, B., Coslovich, G., Kaindl, R. A., Chuang, Y. D., Moore, R. G., Lu, D. H., Kirchmann, P. S., ROBINSON, J. S., Minitti, M. P., Dakovski, G., Schlotter, et al
  2017; 95 (12)
- **Unusual nodal behaviors of the superconducting gap in the iron-based superconductor Ba(Fe0.65Ru0.35)(2)As-2: Effects of spin-orbit coupling** *PHYSICAL REVIEW B*
  Liu, L., Okazaki, K., Yoshida, T., Suzuki, H., Horio, M., Ambolode, L. C., Xu, J., Ideta, S., Hashimoto, M., Lu, D. H., Shen, Z., Ota, Y., Shin, et al
  2017; 95 (10)
- **Hybrid metal-organic chalcogenide nanowires with electrically conductive inorganic core through diamondoid-directed assembly.** *Nature materials*
  Yan, H., Hohman, J. N., Li, F. H., Jia, C., Solis-Ibarra, D., Wu, B., Dahl, J. E., Carlson, R. M., Tkachenko, B. A., Fokin, A. A., Schreiner, P. R., Vailionis, A., Kim, et al
  2017; 16 (3): 349-355
- **Vertical-Substrate MPCVD Epitaxial Nanodiamond Growth.** *Nano letters*
  Tzeng, Y., Zhang, J. L., Lu, H., Ishiwata, H., Dahl, J., Carlson, R. M., Yan, H., Schreiner, P. R., Vuckovic, J., Shen, Z., Melosh, N., Chu, S.
  2017

- **Ubiquitous strong electron-phonon coupling at the interface of FeSe/SrTiO3** *NATURE COMMUNICATIONS*
  Zhang, C., Liu, Z., Chen, Z., Xie, Y., He, R., Tang, S., He, J., Li, W., Jia, T., Rebec, S. N., Ma, E. Y., Yan, H., Hashimoto, et al
  2017; 8
- **Coexistence of Replica Bands and Superconductivity in FeSe Monolayer Films.** *Physical review letters*
  Rebec, S. N., Jia, T., Zhang, C., Hashimoto, M., Lu, D., Moore, R. G., Shen, Z.
  2017; 118 (6): 067002-?
- **Back-gated graphene anode for more efficient thermionic energy converters** *NANO ENERGY*
  Yuan, H., Riley, D. C., Shen, Z., Pianetta, P. A., Melosh, N. A., Howe, R. T.
  2017; 32: 67-72
- **Modular soft x-ray spectrometer for applications in energy sciences and quantum materials.** *The Review of scientific instruments*
  Chuang, Y., Shao, Y., Cruz, A., Hanzel, K., Brown, A., Frano, A., Qiao, R., Smith, B., Domning, E., Huang, S., Wray, L. A., Lee, W., Shen, et al
  2017; 88 (1): 013110-?
- **Dispersive charge density wave excitations in Bi2Sr2CaCu2O8+δ** *Dispersive charge density wave excitations in Bi2Sr2CaCu2O8+δ*
  He, Y., Ishida, S., Yoshida, Y., Eisaki, H., Salluzzo, M., Braicovich, L., Shen, Z., Devereaux, T., Lee, W.
  2017; 2 (3): 1
- **Basic Energy Sciences Roundtable: Opportunities for Basic Research at the Frontiers of XFEL Ultrafast Science**
  Heinz, T., Shpyrko, O., Basov, D., Berrah, N., Bucksbaum, P., Devereaux, T., Fritz, D., Gaffney, K., Gessner, O., Gopalan, V., Hasan, Z., Lanzara, A., Martinez, et al
  U.S. Department of Energy, Office of Scientific and Technical Information. United States.
  2017
- **Complete Coherent Control of Silicon-Vacancies in Diamond Nanopillars Containing Single Defect Centers**
  Zhang, J., Lagoudakis, K. G., Tzeng, Y., Dory, C., Radulaski, M., Kelaita, Y., Fischer, K. A., Shen, Z., Melosh, N. A., Chu, S., Vuckovic, J., IEEE
  IEEE.2017
- **Distinct Electronic Structure for the Extreme Magnetoresistance in YSb** *PHYSICAL REVIEW LETTERS*
  He, J., Zhang, C., Ghimire, N. J., Liang, T., Jia, C., Jiang, J., Tang, S., Chen, S., He, Y., Mo, S., Hwang, C. C., Hashimoto, M., Lu, et al
  2016; 117 (26)
- **Ideal charge-density-wave order in the high-field state of superconducting YBCO** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Jang, H., Lee, W., Nojiri, H., Matsuzawa, S., Yasumura, H., Nie, L., Maharaj, A. V., Gerber, S., Liu, Y., Mehta, A., Bonn, D. A., Liang, R., Hardy, et al
  2016; 113 (51): 14645-14650
- **Selenium capped monolayer NbSe2 for two-dimensional superconductivity studies** *PHYSICA STATUS SOLIDI B-BASIC SOLID STATE PHYSICS*
  Onishi, S., Ugeda, M. M., Zhang, Y., Chen, Y., Ojeda-Aristizabal, C., Ryu, H., Mo, S., Hussain, Z., Shen, Z., Crommie, M. F., Zettl, A.
  2016; 253 (12): 2396-2399
- **Spin-resolved photoemission study of epitaxially grown MoSe2 and WSe2 thin films** *JOURNAL OF PHYSICS-CONDENSED MATTER*
  Mo, S., Hwang, C., Zhang, Y., Fanciulli, M., Muff, S., Dil, J. H., Shen, Z., Hussain, Z.
  2016; 28 (45)
- **Unconventional Correlation between Quantum Hall Transport Quantization and Bulk State Filling in Gated Graphene Devices** *PHYSICAL REVIEW LETTERS*
  Cui, Y., Wen, B., Ma, E. Y., Diankov, G., Han, Z., Amet, F., Taniguchi, T., Watanabe, K., Goldhaber-Gordon, D., Dean, C. R., Shen, Z.
  2016; 117 (18)
- **Directly Characterizing the Relative Strength and Momentum Dependence of Electron-Phonon Coupling Using Resonant Inelastic X-Ray Scattering** *PHYSICAL REVIEW X*
  Devereaux, T. P., Shvaika, A. M., Wu, K., Wohlfeld, K., Jia, C. J., Wang, Y., Moritz, B., Chaix, L., Lee, W., Shen, Z., Ghiringhelli, G., Braicovich, L.
  2016; 6 (4)
- **Spin-polarized surface resonances accompanying topological surface state formation** *NATURE COMMUNICATIONS*
  Jozwiak, C., Sobota, J. A., Gotlieb, K., Kemper, A. F., Rotundu, C. R., Birgeneau, R. J., Hussain, Z., Lee, D., Shen, Z., Lanzara, A.

2016; 7

- **Distinctive orbital anisotropy observed in the nematic state of a FeSe thin film** *PHYSICAL REVIEW B*
  Zhang, Y., Yi, M., Liu, Z., Li, W., Lee, J. J., Moore, R. G., Hashimoto, M., Nakajima, M., Eisaki, H., Mo, S., Hussain, Z., Devereaux, T. P., Shen, et al
  2016; 94 (11)
- **Superconducting Gap Anisotropy in Monolayer FeSe Thin Film** *PHYSICAL REVIEW LETTERS*
  Zhang, Y., Lee, J. J., Moore, R. G., Li, W., Yi, M., Hashimoto, M., Lu, D. H., Devereaux, T. P., Lee, D., Shen, Z.
  2016; 117 (11)
- **Quantitative analysis of effective height of probes in microwave impedance microscopy** *REVIEW OF SCIENTIFIC INSTRUMENTS*
  Wei, Z., Ma, E. Y., Cui, Y., Johnston, S., Yang, Y., Agarwal, K., Kelly, M. A., Shen, Z., Chen, X.
  2016; 87 (9)
- **Evolution of the Valley Position in Bulk Transition-Metal Chalcogenides and Their Monolayer Limit.** *Nano letters*
  Yuan, H., Liu, Z., Xu, G., Zhou, B., Wu, S., Dumcenco, D., Yan, K., Zhang, Y., Mo, S., Dudin, P., Kandyba, V., Yablonskikh, M., Barinov, et al
  2016; 16 (8): 4738-4745
- **Picosecond Electric-Field-Induced Threshold Switching in Phase-Change Materials.** *Physical review letters*
  Zalden, P., Shu, M. J., Chen, F., Wu, X., Zhu, Y., Wen, H., Johnston, S., Shen, Z., Landreman, P., Brongersma, M., Fong, S. W., Wong, H. P., Sher, et al
  2016; 117 (6): 067601-?
- **Charge density wave order in 1D mirror twin boundaries of single-layer MoSe2** *NATURE PHYSICS*
  Barja, S., Wickenburg, S., Liu, Z., Zhang, Y., Ryu, H., Ugeda, M. M., Hussain, Z., Shen, Z., Mo, S., Wong, E., Salmeron, M. B., Wang, F., Crommie, et al
  2016; 12 (8): 751–56
- **Quartz tuning fork based microwave impedance microscopy** *REVIEW OF SCIENTIFIC INSTRUMENTS*
  Cui, Y., Ma, E. Y., Shen, Z.
  2016; 87 (6)
- **Quantitative Theory for Probe-Sample Interaction With Inhomogeneous Perturbation in Near-Field Scanning Microwave Microscopy** *IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES*
  Wei, Z., Cui, Y., Ma, E. Y., Johnston, S., Yang, Y., Chen, R., Kelly, M., Shen, Z., Chen, X.
  2016; 64 (5): 1402-1408
- **Electronic Structure, Surface Doping, and Optical Response in Epitaxial WSe2 Thin Films.** *Nano letters*
  Zhang, Y., Ugeda, M. M., Jin, C., Shi, S., Bradley, A. J., Martín-Recio, A., Ryu, H., Kim, J., Tang, S., Kim, Y., Zhou, B., Hwang, C., Chen, et al
  2016; 16 (4): 2485-2491
- **Ultralow effective work function surfaces using diamondoid monolayers.** *Nature nanotechnology*
  Narasimha, K. T., Ge, C., Fabbri, J. D., Clay, W., Tkachenko, B. A., Fokin, A. A., Schreiner, P. R., Dahl, J. E., Carlson, R. M., Shen, Z. X., Melosh, N. A.
  2016; 11 (3): 267-272
- **Ultrafast resonant soft x-ray diffraction dynamics of the charge density wave in TbTe3** *PHYSICAL REVIEW B*
  Moore, R. G., Lee, W. S., Kirchman, P. S., Chuang, Y. D., Kemper, A. F., Trigo, M., Patthey, L., Lu, D. H., Krupin, O., Yi, M., Reis, D. A., Doering, D., Denes, et al
  2016; 93 (2)
- **Raman and fluorescence characteristics of resonant inelastic X-ray scattering from doped superconducting cuprates** *SCIENTIFIC REPORTS*
  Huang, H. Y., Jia, C. J., Chen, Z. Y., Wohlfeld, K., Moritz, B., Devereaux, T. P., Wu, W. B., Okamoto, J., Lee, W. S., Hashimoto, M., He, Y., Shen, Z. X., Yoshida, et al
  2016; 6
- **Coexistence of a pseudogap and a superconducting gap for the high-T-c superconductor La2-xSrxCuO4 studied by angle-resolved photoemission spectroscopy** *PHYSICAL REVIEW B*
  Yoshida, T., Malaeb, W., Ideta, S., Lu, D. H., Moor, R. G., Shen, Z., Okawa, M., Kiss, T., Ishizaka, K., Shin, S., Komiya, S., Ando, Y., Eisaki, et al
  2016; 93 (1)

- **Hybrid Group IV Nanophotonic Structures Incorporating Diamond Silicon-Vacancy Color Centers.** *Nano letters*
  Zhang, J. L., Ishiwata, H., Babinec, T. M., Radulaski, M., Müller, K., Lagoudakis, K. G., Dory, C., Dahl, J., Edgington, R., Soulière, V., Ferro, G., Fokin, A. A., Schreiner, et al
  2016; 16 (1): 212-7

- **Hybrid Group IV Nanophotonic Structures Incorporating Diamond Silicon-Vacancy Color Centers** *NANO LETTERS*
  Zhang, J. L., Ishiwata, H., Babinec, T. M., Radulaski, M., Mueller, K., Lagoudakis, K. G., Dory, C., Dahl, J., Edgington, R., Souliere, V., Ferro, G., Fokin, A. A., Schreiner, et al
  2016; 16 (1): 212-217

- **Atomically-Thin HfSe2 Transistors with Native Metal Oxides**
  Mleczko, M. J., Zhang, C., Lee, H., Kuo, H., Magyari-Kope, B., Shen, Z., Moore, R. G., Fisher, I. R., Nishi, Y., Pop, E., IEEE
  IEEE.2016

- **Emitter-Cavity Coupling in Hybrid Silicon Carbide-Nanodiamond Microdisk Resonators**
  Radulaski, M., Tzeng, Y., Zhang, J., Ishiwata, H., Lagoudakis, K. G., Souliere, V., Ferro, G., Shen, Z., Melosh, N. A., Chu, S., Vuckovic, J., IEEE
  IEEE.2016

- **Low Strain Silicon-Vacancy Color Centers in Diamond Nanopillar Arrays**
  Zhang, J., Ishiwata, H., Babinec, T. M., Radulaski, M., Muller, K., Lagoudakis, K. G., Dory, C., Shen, Z., Melosh, N. A., Vuckovic, J., IEEE
  IEEE.2016

- **Invited Article: High resolution angle resolved photoemission with tabletop 11 eV laser.** *Review of scientific instruments*
  He, Y., Vishik, I. M., Yi, M., Yang, S., Liu, Z., Lee, J. J., Chen, S., Rebec, S. N., Leuenberger, D., Zong, A., Jefferson, C. M., Moore, R. G., Kirchmann, et al
  2016; 87 (1): 011301-?

- **Origin of the low critical observing temperature of the quantum anomalous Hall effect in V-doped (Bi, Sb)2Te3 film.** *Scientific reports*
  Li, W., Claassen, M., Chang, C., Moritz, B., Jia, T., Zhang, C., Rebec, S., Lee, J. J., Hashimoto, M., Lu, D., Moore, R. G., Moodera, J. S., Devereaux, et al
  2016; 6: 32732-?

- **Persistent order due to transiently enhanced nesting in an electronically excited charge density wave.** *Nature communications*
  Rettig, L., Cortés, R., Chu, J., Fisher, I. R., Schmitt, F., Moore, R. G., Shen, Z., Kirchmann, P. S., Wolf, M., Bovensiepen, U.
  2016; 7: 10459-?

- **Characterization of collective ground states in single-layer NbSe2** *NATURE PHYSICS*
  Ugeda, M. M., Bradley, A. J., Zhang, Y., Onishi, S., Chen, Y., Ruan, W., Ojeda-Aristizabal, C., Ryu, H., Edmonds, M. T., Tsai, H., Riss, A., Mo, S., Lee, et al
  2016; 12 (1): 92-U126

- **Direct Imaging of Dynamic Glassy Behavior in a Strained Manganite Film.** *Physical review letters*
  Kundhikanjana, W., Sheng, Z., Yang, Y., Lai, K., Ma, E. Y., Cui, Y. T., Kelly, M. A., Nakamura, M., Kawasaki, M., Tokura, Y., Tang, Q., Zhang, K., Li, et al
  2015; 115 (26): 265701

- **Direct Imaging of Dynamic Glassy Behavior in a Strained Manganite Film** *PHYSICAL REVIEW LETTERS*
  Kundhikanjana, W., Sheng, Z., Yang, Y., Lai, K., Ma, E. Y., Cui, Y., Kelly, M. A., Nakamura, M., Kawasaki, M., Tokura, Y., Tang, Q., Zhang, K., Li, et al
  2015; 115 (26)

- **Experimental observation of incoherent-coherent crossover and orbital-dependent band renormalization in iron chalcogenide superconductors** *PHYSICAL REVIEW B*
  Liu, Z. K., Yi, M., Zhang, Y., Hu, J., Yu, R., Zhu, J., He, R., Chen, Y. L., Hashimoto, M., Moore, R. G., Mo, S., Hussain, Z., Si, et al
  2015; 92 (23)

- **Bandwidth and Electron Correlation-Tuned Superconductivity in Rb0.8Fe2(Se1-zSz)(2)** *PHYSICAL REVIEW LETTERS*
  Yi, M., Wang, M., Kemper, A. F., Mo, S., Hussain, Z., Bourret-Courchesne, E., Lanzara, A., Hashimoto, M., Lu, D. H., Shen, Z., Birgeneau, R. J.
  2015; 115 (25)

- **Three-dimensional charge density wave order in YBa2Cu3O6.67 at high magnetic fields** *SCIENCE*

Gerber, S., Jang, H., Nojiri, H., Matsuzawa, S., Yasumura, H., Bonn, D. A., Liang, R., Hardy, W. N., Islam, Z., Mehta, A., Song, S., Sikorski, M., Stefanescu, et al
2015; 350 (6263): 949-952

- **Mobile metallic domain walls in an all-in-all-out magnetic insulator** *SCIENCE*
  Ma, E. Y., Cui, Y., Ueda, K., Tang, S., Chen, K., Tamura, N., Wu, P. M., Fujioka, J., Tokura, Y., Shen, Z.
  2015; 350 (6260): 538-541

- **Engineering Ultra-Low Work Function of Graphene** *NANO LETTERS*
  Yuan, H., Chang, S., Bargatin, I., Wang, N. C., Riley, D. C., Wang, H., Schwede, J. W., Provine, J., Pop, E., Shen, Z., Pianetta, P. A., Melosh, N. A., Howe, et al
  2015; 15 (10): 6475-6480

- **Mott localization in a pure stripe antiferromagnet Rb1-delta Fe1.5-sigma S2** *PHYSICAL REVIEW B*
  Wang, M., Yi, M., Cao, H., De La Cruz, C., Mo, S. K., Huang, Q. Z., Bourret-Courchesne, E., Dai, P., Lee, D. H., Shen, Z. X., Birgeneau, R. J.
  2015; 92 (12)

- **Magnetic excitations and phonons simultaneously studied by resonant inelastic x-ray scattering in optimally doped Bi1.5Pb0.55Sr1.6La0.4CuO6+delta** *PHYSICAL REVIEW B*
  Peng, Y. Y., Hashimoto, M., Sala, M. M., AMORESE, A., Brookes, N. B., Dellea, G., Lee, W., Minola, M., Schmitt, T., Yoshida, Y., Zhou, K., Eisaki, H., Devereaux, et al
  2015; 92 (6)

- **Electron-phonon coupling in a system with broken symmetry: Surface of Be(0001)** *PHYSICAL REVIEW B*
  Chien, T., He, X., Mo, S., Hashimoto, M., Hussain, Z., Shen, Z., Plummer, E. W.
  2015; 92 (7)

- **Thermionic and photon-enhanced emission energy conversion**
  Melosh, N., Riley, D., Sahasrabuddhe, K., Shen, Z. X., Schwede, J., Howe, R.
  AMER CHEMICAL SOC.2015

- **Polarization-sensitive broadband photodetector using a black phosphorus vertical p-n junction** *NATURE NANOTECHNOLOGY*
  Yuan, H., Liu, X., Afshinmanesh, F., Li, W., Xu, G., Sun, J., Lian, B., Curto, A. G., Ye, G., Hikita, Y., Shen, Z., Zhang, S., Chen, et al
  2015; 10 (8): 707-713

- **Dependence of electron correlation strength in Fe1+yTe1-xSex on Se content** *PHYSICAL REVIEW B*
  Ambolode, L. C., Okazaki, K., Horio, M., Suzuki, H., Liu, L., Ideta, S., Yoshida, T., Mikami, T., Kakeshita, T., Uchida, S., Ono, K., Kumigashira, H., Hashimoto, et al
  2015; 92 (3)

- **Charge-order domain walls with enhanced conductivity in a layered manganite** *NATURE COMMUNICATIONS*
  Ma, E. Y., Bryant, B., Tokunaga, Y., Aeppli, G., Tokura, Y., Shen, Z.
  2015; 6

- **Inequivalence of Single-Particle and Population Lifetimes in a Cuprate Superconductor** *PHYSICAL REVIEW LETTERS*
  Yang, S., Sobota, J. A., Leuenberger, D., He, Y., Hashimoto, M., Lu, D. H., Eisaki, H., Kirchmann, P. S., Shen, Z.
  2015; 114 (24)

- **Thickness-Dependent Coherent Phonon Frequency in Ultrathin FeSe/SrTiO3 Films** *NANO LETTERS*
  Yang, S., Sobota, J. A., Leuenberger, D., Kemper, A. F., Lee, J. J., Schmitt, F. T., Li, W., Moore, R. G., Kirchmann, P. S., Shen, Z.
  2015; 15 (6): 4150-4154

- **Direct characterization of photoinduced lattice dynamics in BaFe2As2** *NATURE COMMUNICATIONS*
  Gerber, S., Kim, K. W., Zhang, Y., Zhu, D., Plonka, N., Yi, M., Dakovski, G. L., Leuenberger, D., Kirchmann, P. S., Moore, R. G., Chollet, M., Glownia, J. M., Feng, et al
  2015; 6

- **Classification of collective modes in a charge density wave by momentum-dependent modulation of the electronic band structure** *PHYSICAL REVIEW B*
  Leuenberger, D., Sobota, J. A., Yang, S., Kemper, A. F., Giraldo-Gallo, P., Moore, R. G., Fisher, I. R., Kirchmann, P. S., Devereaux, T. P., Shen, Z.
  2015; 91 (20)

- **Unexpected edge conduction in mercury telluride quantum wells under broken time-reversal symmetry** *NATURE COMMUNICATIONS*
  Ma, E. Y., Calvo, M. R., Wang, J., Lian, B., Muehlbauer, M., Bruene, C., Cui, Y., Lai, K., Kundhikanjana, W., Yang, Y., Baenninger, M., Koenig, M., Ames, et al
  2015; 6

- **Probing the Role of Interlayer Coupling and Coulomb Interactions on Electronic Structure in Few-Layer MoSe2 Nanostructures** *NANO LETTERS*
  Bradley, A. J., Ugeda, M. M., da Jornada, F. H., Qiu, D. Y., Ruan, W., Zhang, Y., Wickenburg, S., Riss, A., Lu, J., Mo, S., Hussain, Z., Shen, Z., Louie, et al
  2015; 15 (4): 2594-2599

- **Interface ferroelectric transition near the gap-opening temperature in a single-unit-cell FeSe film grown on Nb-Doped SrTiO3 substrate.** *Physical review letters*
  Cui, Y., Moore, R. G., Zhang, A., Tian, Y., Lee, J. J., Schmitt, F. T., Zhang, W., Li, W., Yi, M., Liu, Z., Hashimoto, M., Zhang, Y., Lu, et al
  2015; 114 (3): 037002-?

- **Direct spectroscopic evidence for phase competition between the pseudogap and superconductivity in Bi2Sr2CaCu2O8+delta** *NATURE MATERIALS*
  Hashimoto, M., Nowadnick, E. A., He, R., Vishik, I. M., Moritz, B., He, Y., Tanaka, K., Moore, R. G., Lu, D., Yoshida, Y., Ishikado, M., Sasagawa, T., Fujita, et al
  2015; 14 (1): 37-42

- **A tunable, linac based, intense, broad-band THz source forpump-probe experiments**
  Schmerge, J., Adolphsen, C., Corbett, J., Dolgashev, V., Durr, H., Durr, M., Fazio, M., Fisher, A., Frisch, J., Gaffney, K., Guehr, M., Hastings, J., Hettel, et al
  U.S. Department of Energy, Office of Scientific and Technical Information. United States.
  2015

- **Fluorescent nanodiamonds from molecular diamond seed**
  Hitoshi, H., Zhang, J., Edgington, R., Babinec, T., Muller, K., Lagoudakis, K., Melosh, N., Shen, Z., Vuckovic, J.
  CLEO: 2015, OSA Technical Digest (online) (Optical Society of America, 2015), paper FM2E.2.. San Jose, California.
  2015

- **Hybrid Diamond-Silicon Carbide Structures Incorporating Silicon-Vacancies in Diamond as Quantum Emitters**
  Zhang, J., Ishiwata, H., Radulaski, M., Babinec, T. M., Mueller, K., Lagoudakis, K. G., Edgington, R., Alassaad, K., Ferro, G., Melosh, N. A., Shen, Z., Vuckovic, J., IEEE
  IEEE.2015

- **Charge-order domain walls with enhanced conductivity in a layered manganite.** *Nature communications*
  Ma, E. Y., Bryant, B., Tokunaga, Y., Aeppli, G., Tokura, Y., Shen, Z.
  2015; 6: 7595-?

- **Physical properties of materials derived from diamondoid molecules** *REPORTS ON PROGRESS IN PHYSICS*
  Clay, W. A., Dahl, J. E., Carlson, R. M., Melosh, N. A., Shen, Z.
  2015; 78 (1)

- **Observation of universal strong orbital-dependent correlation effects in iron chalcogenides.** *Nature communications*
  Yi, M., Liu, Z., Zhang, Y., Yu, R., Zhu, J., Lee, J. J., Moore, R. G., Schmitt, F. T., Li, W., Riggs, S. C., Chu, J., Lv, B., Hu, et al
  2015; 6: 7777-?

- **Giant bandgap renormalization and excitonic effects in a monolayer transition metal dichalcogenide semiconductor** *NATURE MATERIALS*
  Ugeda, M. M., Bradley, A. J., Shi, S., da Jornada, F. H., Zhang, Y., Qiu, D. Y., Ruan, W., Mo, S., Hussain, Z., Shen, Z., Wang, F., Louie, S. G., Crommie, et al
  2014; 13 (12): 1091-1095

- **Interfacial mode coupling as the origin of the enhancement of T-c in FeSe films on SrTiO3** *NATURE*
  Lee, J. J., Schmitt, F. T., Moore, R. G., Johnston, S., Cui, Y., Li, W., Yi, M., Liu, Z. K., Hashimoto, M., Zhang, Y., Lu, D. H., Devereaux, T. P., Lee, et al
  2014; 515 (7526): 245-U207

- **Asymmetry of collective excitations in electron- and hole-doped cuprate superconductors** *NATURE PHYSICS*

Lee, W. S., Lee, J. J., Nowadnick, E. A., Gerber, S., Tabis, W., Huang, S. W., Strocov, V. N., Motoyama, E. M., Yu, G., Moritz, B., Huang, H. Y., Wang, R. P., Huang, et al
2014; 10 (11): 883-889

- **Distinguishing Bulk and Surface Electron-Phonon Coupling in the Topological Insulator Bi2Se3 Using Time-Resolved Photoemission Spectroscopy** *PHYSICAL REVIEW LETTERS*
  Sobota, J. A., Yang, S., Leuenberger, D., Kemper, A. F., Analytis, J. G., Fisher, I. R., Kirchmann, P. S., Devereaux, T. P., Shen, Z.
  2014; 113 (15)

- **Ultrafast electron dynamics in the topological insulator Bi2Se3 studied by time-resolved photoemission spectroscopy** *JOURNAL OF ELECTRON SPECTROSCOPY AND RELATED PHENOMENA*
  Sobota, J. A., Yang, S., Leuenberger, D., Kemper, A. F., Analytis, J. G., Fisher, I. R., Kirchmann, P. S., Devereaux, T. P., Shen, Z.
  2014; 195: 249-257

- **Molecular beam epitaxial growth of a three-dimensional topological Dirac semimetal Na3Bi** *APPLIED PHYSICS LETTERS*
  Zhang, Y., Liu, Z., Zhou, B., Kim, Y., Hussain, Z., Shen, Z., Chen, Y., Mo, S.
  2014; 105 (3)

- **Persistence of magnetic order in a highly excited Cu2+ state in CuO (vol 89, 220401, 2014)** *PHYSICAL REVIEW B*
  Staub, U., de Souza, R. A., Beaud, P., Moehr-Vorobeva, E., Ingold, G., Caviezel, A., Scagnoli, V., Delley, B., Schlotter, W. F., Turner, J. J., Krupin, O., Lee, W., Chuang, et al
  2014; 90 (1)

- **Energy gaps in high-transition-temperature cuprate superconductors** *NATURE PHYSICS*
  Hashimoto, M., Vishik, I. M., He, R., Devereaux, T. P., Shen, Z.
  2014; 10 (7): 483-495

- **A stable three-dimensional topological Dirac semimetal Cd3As2** *NATURE MATERIALS*
  Liu, Z. K., Jiang, J., Zhou, B., Wang, Z. J., Zhang, Y., Weng, H. M., Prabhakaran, D., Mo, S., Peng, H., Dudin, P., Kim, T., Hoesch, M., Fang, et al
  2014; 13 (7): 677-681

- **Electron propagation from a photo-excited surface: implications for time-resolved photoemission** *APPLIED PHYSICS A-MATERIALS SCIENCE & PROCESSING*
  Yang, S., Sobota, J. A., Kirchmann, P. S., Shen, Z.
  2014; 116 (1): 85-90

- **Direct observation of bulk charge modulations in optimally doped Bi1.5Pb0.6Sr1.54CaCu2O8+delta** *PHYSICAL REVIEW B*
  Hashimoto, M., Ghiringhelli, G., Lee, W., Dellea, G., AMORESE, A., Mazzoli, C., KUMMER, K., Brookes, N. B., Moritz, B., Yoshida, Y., Eisaki, H., Hussain, Z., Devereaux, et al
  2014; 89 (22)

- **Persistence of magnetic order in a highly excited Cu2+ state in CuO** *PHYSICAL REVIEW B*
  Staub, U., de Souza, R. A., Beaud, P., Moehr-Vorobeva, E., Ingold, G., Caviezel, A., Scagnoli, V., Delley, B., Turner, J. J., Krupin, O., Lee, W., Chuang, Y., Patthey, et al
  2014; 89 (22)

- **Strongly three-dimensional electronic structure and Fermi surfaces of SrFe2(As0.65P0.35)(2): Comparison with BaFe2(As1-xPx)(2)** *PHYSICAL REVIEW B*
  Suzuki, H., Kobayashi, T., Miyasaka, S., Yoshida, T., Okazaki, K., Ambolode, L. C., Ideta, S., Yi, M., Hashimoto, M., Lu, D. H., Shen, Z., Ono, K., Kumigashira, et al
  2014; 89 (18)

- **Angle-resolved photoemission spectroscopy study of HgBa2CuO4+delta** *PHYSICAL REVIEW B*
  Vishik, I. M., Barisic, N., Chan, M. K., Li, Y., Xia, D. D., Yu, G., Zhao, X., Lee, W. S., Meevasana, W., Devereaux, T. P., Greven, M., Shen, Z.
  2014; 89 (19)

- **Electronic structure of BaNi2P2 observed by angle-resolved photoemission spectroscopy** *PHYSICAL REVIEW B*
  Ideta, S., Yoshida, T., Nakajima, M., Malaeb, W., Kito, H., Eisaki, H., Iyo, A., Tomioka, Y., Ito, T., Kihou, K., Lee, C. H., Kotani, Y., Ono, et al
  2014; 89 (19)

- **Shielded piezoresistive cantilever probes for nanoscale topography and electrical imaging** *JOURNAL OF MICROMECHANICS AND MICROENGINEERING*

Yang, Y., Ma, E. Y., Cui, Y., Haemmerli, A., Lai, K., Kundhikanjana, W., Harjee, N., Pruitt, B. L., Kelly, M., Shen, Z.
2014; 24 (4)

- **Dynamic competition between spin-density wave order and superconductivity in underdoped Ba1-xKxFe2As2** *NATURE COMMUNICATIONS*
  Yi, M., Zhang, Y., Liu, Z., Ding, X., Chu, J., Kemper, A. F., Plonka, N., Moritz, B., Hashimoto, M., Mo, S., Hussain, Z., Devereaux, T. P., Fisher, et al
  2014; 5
- **Superconducting graphene sheets in CaC6 enabled by phonon-mediated interband interactions** *NATURE COMMUNICATIONS*
  Yang, S., Sobota, J. A., Howard, C. A., Pickard, C. J., Hashimoto, M., Lu, D. H., Mo, S., Kirchmann, P. S., Shen, Z.
  2014; 5
- **Discovery of a Three-Dimensional Topological Dirac Semimetal, Na3Bi** *SCIENCE*
  Liu, Z. K., Zhou, B., Zhang, Y., Wang, Z. J., Weng, H. M., Prabhakaran, D., Mo, S., Shen, Z. X., Fang, Z., Dai, X., Hussain, Z., Chen, Y. L.
  2014; 343 (6173): 864-867
- **Direct observation of the transition from indirect to direct bandgap in atomically thin epitaxial MoSe2.** *Nature nanotechnology*
  Zhang, Y., Chang, T., Zhou, B., Cui, Y., Yan, H., Liu, Z., Schmitt, F., Lee, J., Moore, R., Chen, Y., Lin, H., Jeng, H., Mo, et al
  2014; 9 (2): 111-115
- **Charge-orbital-lattice coupling effects in the dd excitation profile of one-dimensional cuprates** *PHYSICAL REVIEW B*
  Lee, J. J., Moritz, B., Lee, W. S., Yi, M., Jia, C. J., Sorini, A. P., Kudo, K., Koike, Y., Zhou, K. J., Monney, C., Strocov, V., Patthey, L., Schmitt, et al
  2014; 89 (4)
- **Fast vacancy-mediated oxygen ion incorporation across the ceria-gas electrochemical interface.** *Nature communications*
  Feng, Z. A., El Gabaly, F., Ye, X., Shen, Z., Chueh, W. C.
  2014; 5: 4374-?
- **Orbital character and electron correlation effects on two- and three-dimensional Fermi surfaces in KFe2As2 revealed by angle-resolved photoemission spectroscopy** *FRONTIERS IN PHYSICS*
  Yoshida, T., Ideta, S., Nishi, I., Fujimori, A., Yi, M., Moore, R. G., Mo, S., Lu, D., Shen, Z., Hussain, Z., Kihou, K., Shirage, P. M., Kito, et al
  2014; 2
- **Examining Electron-Boson Coupling Using Time-Resolved Spectroscopy** *PHYSICAL REVIEW X*
  Sentef, M., Kemper, A. F., Moritz, B., Freericks, J. K., Shen, Z., Devereaux, T. P.
  2013; 3 (4)
- **Discovery of a single topological Dirac fermion in the strong inversion asymmetric compound BiTeCl** *NATURE PHYSICS*
  Chen, Y. L., Kanou, M., Liu, Z. K., Zhang, H. J., Sobota, J. A., Leuenberger, D., Mo, S. K., Zhou, B., Yang, S., Kirchmann, P. S., Lu, D. H., Moore, R. G., Hussain, et al
  2013; 9 (11): 704-708
- **Ultrafast charge localization in a stripe-phase nickelate** *NATURE COMMUNICATIONS*
  Coslovich, G., Huber, B., Lee, W., Chuang, Y., Zhu, Y., Sasagawa, T., Hussain, Z., Bechtel, H. A., Martin, M. C., Shen, Z., Schoenlein, R. W., Kaindl, R. A.
  2013; 4
- **Direct Optical Coupling to an Unoccupied Dirac Surface State in the Topological Insulator Bi2Se3** *PHYSICAL REVIEW LETTERS*
  Sobota, J. A., Yang, S., Kemper, A. F., Lee, J. J., Schmitt, F. T., Li, W., Moore, R. G., Analytis, J. G., Fisher, I. R., Kirchmann, P. S., Devereaux, T. P., Shen, Z.
  2013; 111 (13)
- **Electronic structure of the metallic antiferromagnet PdCrO2 measured by angle-resolved photoemission spectroscopy** *PHYSICAL REVIEW B*
  Sobota, J. A., Kim, K., Takatsu, H., Hashimoto, M., Mo, S., Hussain, Z., Oguchi, T., Shishidou, T., Maeno, Y., Min, B. I., Shen, Z.
  2013; 88 (12)
- **Absence of superconductivity in the hole-doped Fe pnictide Ba(Fe1-xMnx)(2)As-2: Photoemission and x-ray absorption spectroscopy studies** *PHYSICAL REVIEW B*
  Suzuki, H., Yoshida, T., Ideta, S., Shibata, G., Ishigami, K., Kadono, T., Fujimori, A., Hashimoto, M., Lu, D. H., Shen, Z., Ono, K., Sakai, E., Kumigashira, et al

2013; 88 (10)

- **Covalent attachment of diamondoid phosphonic Acid dichlorides to tungsten oxide surfaces.** *Langmuir*
  Li, F. H., Fabbri, J. D., Yurchenko, R. I., Mileshkin, A. N., Hohman, J. N., Yan, H., Yuan, H., Tran, I. C., Willey, T. M., Bagge-Hansen, M., Dahl, J. E., Carlson, R. M., Fokin, et al
  2013; 29 (31): 9790-9797

- **Mapping of unoccupied states and relevant bosonic modes via the time-dependent momentum distribution** *PHYSICAL REVIEW B*
  Kemper, A. F., Sentef, M., Moritz, B., Kao, C. C., Shen, Z. X., Freericks, J. K., Devereaux, T. P.
  2013; 87 (23)

- **Role of Lattice Coupling in Establishing Electronic and Magnetic Properties in Quasi-One-Dimensional Cuprates** *PHYSICAL REVIEW LETTERS*
  Lee, W. S., Johnston, S., Moritz, B., Lee, J., Yi, M., Zhou, K. J., Schmitt, T., Patthey, L., Strocov, V., Kudo, K., Koike, Y., van den Brink, J., Devereaux, et al
  2013; 110 (26)

- **Formation of heavy d-electron quasiparticles in Sr3Ru2O7** *NEW JOURNAL OF PHYSICS*
  Allan, M. P., Tamai, A., Rozbicki, E., Fischer, M. H., Voss, J., King, P. D., Meevasana, W., Thirupathaiah, S., Rienks, E., Fink, J., Tennant, D. A., Perry, R. S., Mercure, et al
  2013; 15

- **High-pressure resistivity technique for quasi-hydrostatic compression experiments** *REVIEW OF SCIENTIFIC INSTRUMENTS*
  Rotundu, C. R., Cuk, T., Greene, R. L., Shen, Z., Hemley, R. J., Struzhkin, V. V.
  2013; 84 (6)

- **Interaction of itinerant electrons and spin fluctuations in electron-doped cuprates** *PHYSICAL REVIEW B*
  Park, S. R., Morinari, T., Song, D. J., Leem, C. S., Kim, C., Choi, S. K., Choi, K., Kim, J. H., Schmitt, F., Mo, S. K., Lu, D. H., Shen, Z., Eisaki, et al
  2013; 87 (17)

- **Real-Time Manifestation of Strongly Coupled Spin and Charge Order Parameters in Stripe-Ordered La1.75Sr0.25NiO4 Nickelate Crystals Using Time-Resolved Resonant X-Ray Diffraction** *PHYSICAL REVIEW LETTERS*
  Chuang, Y. D., Lee, W. S., Kung, Y. F., Sorini, A. P., Moritz, B., Moore, R. G., Patthey, L., Trigo, M., Lu, D. H., Kirchmann, P. S., Yi, M., Krupin, O., Langner, et al
  2013; 110 (12)

- **Observation of Temperature-Induced Crossover to an Orbital-Selective Mott Phase in A(x)Fe(2-y)Se(2) (A = K, Rb) Superconductors** *PHYSICAL REVIEW LETTERS*
  Yi, M., Lu, D. H., Yu, R., Riggs, S. C., Chu, J., Lv, B., Liu, Z. K., Lu, M., Cui, Y., Hashimoto, M., Mo, S., Hussain, Z., Chu, et al
  2013; 110 (6)

- **Unexpected surface implanted layer in static random access memory devices observed by microwave impedance microscope** *SEMICONDUCTOR SCIENCE AND TECHNOLOGY*
  Kundhikanjana, W., Yang, Y., Tanga, Q., Zhang, K., Lai, K., Ma, Y., Kelly, M. A., Li, X. X., Shen, Z.
  2013; 28 (2)

- **Observing electronic structures on ex-situ grown topological insulator thin films** *PHYSICA STATUS SOLIDI-RAPID RESEARCH LETTERS*
  Yao, S. H., Zhou, B., Lu, M. H., Liu, Z. K., Chen, Y. B., Analytis, J. G., Bruene, C., Dang, W. H., Mo, S., Shen, Z., Fisher, I. R., Molenkamp, L. W., Peng, et al
  2013; 7 (1-2): 130-132

- **Measurement of Coherent Polarons in the Strongly Coupled Antiferromagnetically Ordered Iron-Chalcogenide Fe1.02Te using Angle-Resolved Photoemission Spectroscopy** *PHYSICAL REVIEW LETTERS*
  Liu, Z. K., He, R., Lu, D. H., Yi, M., Chen, Y. L., Hashimoto, M., Moore, R. G., Mo, S., Nowadnick, E. A., Hu, J., Liu, T. J., Mao, Z. Q., Devereaux, et al
  2013; 110 (3)

- **PIEZORESISTIVE CANTILEVER PROBES FOR SIMULTANEOUS NANOSCALE TOPOGRAPHY AND CONDUCTIVITY IMAGING** *26th IEEE International Conference on Micro Electro Mechanical Systems (MEMS)*
  Yang, Y., Ma, Y., Haemmerli, A., Lai, K., Kundhikanjana, W., Harjee, N., Pruitt, B., Li, X., Kelly, M., Shen, Z.
  IEEE.2013: 323–326

- **Tracking Charge Localization via Transient Electron-Phonon Coupling in a Stripe-ordered Nickelate**
  Coslovich, G., Huber, B., Lee, W., Chuang, Y., Zhu, Y., Sasagawa, T., Hussain, Z., Bechtel, H. A., Martin, M. C., Shen, Z., Schoenlein, R. W., Kaindl, R. A., IEEE
  IEEE.2013
- **26aEC-13 Superconducting gap in isovalent-substituted Ba(Fe_<0.65>Ru_<0.35>)_2As_2 observed by angle-resolved photoemission spectroscopy** *The Physical Society of Japan*
  Liu, L., Suzuki, H., Horio, M., II Ambolode, L., Xu, J., Ideta, S., Okazaki, K., Fujimori, A., Yoshida, T., Hashimoto, M., Lu, D., Shen, Z., Nakajima, et al
  2013: 496
- **Time-resolved Fermi surface mapping of the charge density wave material DyTe3** *18th International Conference on Ultrafast Phenomena*
  Rettig, L., Cortes, R., Chu, J., Fisher, I. R., Schmitt, F., Kirchmann, P. S., Moore, R. G., Shen, Z., Wolf, M., Bovensiepen, U.
  E D P SCIENCES.2013
- **Excitation of Electromagnetic Waves in a Thin Water Layer Using a Coaxial Probe** *3rd Asia-Pacific Microwave Conference Proceedings (APMC)*
  Hu, Z., Shen, Z., Wu, W.
  IEEE.2013: 128–130
- **Ultrafast Mid-infrared Spectroscopy of the Charge- and Spin-ordered Nickelates** *Conference on Ultrafast Phenomena and Nanophotonics XVII*
  Coslovich, G., Huber, B., Lee, W., Chuang, Y., Zhu, Y., Sasagawa, T., Hussain, Z., Bechtel, H. A., Martin, M. C., Schoenlein, R. W., Shen, Z., Kaindl, R. A.
  SPIE-INT SOC OPTICAL ENGINEERING.2013
- **Ultrast Mid-infrared Spectroscopy of the Charge- and Spin-Ordered Nickelate La1.75Sr0.25NiO4** *18th International Conference on Ultrafast Phenomena*
  Coslovich, G., Huber, B., Lee, W., Chuang, Y., Zhu, Y., Sasagawa, T., Hussain, Z., Bechtel, H. A., Martin, M. C., Schoenlein, R. W., Shen, Z., Kaindl, R. A.
  E D P SCIENCES.2013
- **Photon-enhanced thermionic emission from heterostructures with low interface recombination.** *Nature communications*
  Schwede, J. W., Sarmiento, T., NARASIMHAN, V. K., Rosenthal, S. J., Riley, D. C., Schmitt, F., Bargatin, I., Sahasrabuddhe, K., Howe, R. T., Harris, J. S., Melosh, N. A., Shen, Z.
  2013; 4: 1576-?
- **Microbead-separated thermionic energy converter with enhanced emission current** *PHYSICAL CHEMISTRY CHEMICAL PHYSICS*
  Littau, K. A., Sahasrabuddhe, K., Barfield, D., Yuan, H., Shen, Z., Howe, R. T., Melosh, N. A.
  2013; 15 (34): 14442-14446
- **Photocathode device using diamondoid and cesium bromide films** *APPLIED PHYSICS LETTERS*
  Clay, W. A., Maldonado, J. R., Pianetta, P., Dahl, J. E., Carlson, R. M., Schreiner, P. R., Fokin, A. A., Tkachenko, B. A., Melosh, N. A., Shen, Z.
  2012; 101 (24)
- **Controlling the carriers of topological insulators by bulk and surface doping** *SEMICONDUCTOR SCIENCE AND TECHNOLOGY*
  Zhou, B., Liu, Z. K., Analytis, J. G., Igarashi, K., Mo, S. K., Lu, D. H., Moore, R. G., Fisher, I. R., Sasagawa, T., Shen, Z. X., Hussain, Z., Chen, Y. L.
  2012; 27 (12)
- **Phase competition in trisected superconducting dome** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Vishik, I. M., Hashimoto, M., He, R., LeeB, W., Schmitt, F., Lu, D., Moore, R. G., Zhang, C., Meevasana, W., Sasagawa, T., Uchida, S., Fujita, K., Ishida, et al
  2012; 109 (45): 18332-18337
- **A model for emission yield from planar photocathodes based on photon-enhanced thermionic emission or negative-electron-affinity photoemission** *JOURNAL OF APPLIED PHYSICS*
  Sahasrabuddhe, K., Schwede, J. W., Bargatin, I., Jean, J., Howe, R. T., Shen, Z., Melosh, N. A.
  2012; 112 (9)
- **Batch-fabricated cantilever probes with electrical shielding for nanoscale dielectric and conductivity imaging** *JOURNAL OF MICROMECHANICS AND MICROENGINEERING*
  Yang, Y., Lai, K., Tang, Q., Kundhikanjana, W., Kelly, M. A., Zhang, K., Shen, Z., Li, X.

2012; 22 (11)

- **Oxygen-content-dependent electronic structures of electron-doped cuprates** *PHYSICAL REVIEW B*
  Song, D., Park, S. R., Kim, C., Kim, Y., Leem, C., Choi, S., Jung, W., Koh, Y., Han, G., Yoshida, Y., Eisaki, H., Lu, D. H., Shen, et al
  2012; 86 (14)

- **Diamondoid coating enables disruptive approach for chemical and magnetic imaging with 10 nm spatial resolution** *APPLIED PHYSICS LETTERS*
  Ishiwata, H., Acremann, Y., Scholl, A., Rotenberg, E., Hellwig, O., Dobisz, E., Doran, A., Tkachenko, B. A., Fokin, A. A., Schreiner, P. R., Dahl, J. E., Carlson, R. M., Melosh, et al
  2012; 101 (16)

- **Superconductivity distorted by the coexisting pseudogap in the antinodal region of Bi1.5Pb0.55Sr1.6La0.4CuO6+delta: A photon-energy-dependent angle-resolved photoemission study** *PHYSICAL REVIEW B*
  Hashimoto, M., He, R., Vishik, I. M., Schmitt, F., Moore, R. G., Lu, D. H., Yoshida, Y., Eisaki, H., Hussain, Z., Devereaux, T. P., Shen, Z.
  2012; 86 (9)

- **Electronic reconstruction through the structural and magnetic transitions in detwinned NaFeAs** *NEW JOURNAL OF PHYSICS*
  Yi, M., Lu, D. H., Moore, R. G., Kihou, K., Lee, C., Iyo, A., Eisaki, H., Yoshida, T., Fujimori, A., Shen, Z.
  2012; 14

- **Intrinsic ultrathin topological insulators grown via molecular beam epitaxy characterized by in-situ angle resolved photoemission spectroscopy** *APPLIED PHYSICS LETTERS*
  Lee, J. J., Schmitt, F. T., Moore, R. G., Vishik, I. M., Ma, Y., Shen, Z. X.
  2012; 101 (1)

- **Emerging coherence with unified energy, temperature, and lifetime scale in heavy fermion YbRh2Si2** *PHYSICAL REVIEW B*
  Mo, S., Lee, W. S., Schmitt, F., Chen, Y. L., Lu, D. H., Capan, C., Kim, D. J., Fisk, Z., Zhang, C., Hussain, Z., Shen, Z.
  2012; 85 (24)

- **Phase fluctuations and the absence of topological defects in a photo-excited charge-ordered nickelate** *NATURE COMMUNICATIONS*
  Lee, W. S., Chuang, Y. D., Moore, R. G., Zhu, Y., Patthey, L., Trigo, M., Lu, D. H., Kirchmann, P. S., Krupin, O., Yi, M., Langner, M., Huse, N., ROBINSON, et al
  2012; 3

- **Resonant enhancement of charge density wave diffraction in the rare-earth tritellurides** *PHYSICAL REVIEW B*
  Lee, W. S., Sorini, A. P., Yi, M., Chuang, Y. D., Moritz, B., Yang, W. L., Chu, J., Kuo, H. H., Gonzalez, A. G., Fisher, I. R., Hussain, Z., Devereaux, T. P., Shen, et al
  2012; 85 (15)

- **Evidence for the Importance of Extended Coulomb Interactions and Forward Scattering in Cuprate Superconductors** *PHYSICAL REVIEW LETTERS*
  Johnston, S., Vishik, I. M., Lee, W. S., Schmitt, F., Uchida, S., Fujita, K., Ishida, S., Nagaosa, N., Shen, Z. X., Devereaux, T. P.
  2012; 108 (16)

- **Topological insulator nanostructures for near-infrared transparent flexible electrodes** *NATURE CHEMISTRY*
  Peng, H., Dang, W., Cao, J., Chen, Y., Wu, D., Zheng, W., Li, H., Shen, Z., Liu, Z.
  2012; 4 (4): 281-286

- **Low-impedance shielded tip piezoresistive probe enables portable microwave impedance microscopy** *MICRO & NANO LETTERS*
  Haemmerli, A. J., Nielsen, R. T., Kundhikanjana, W., HARJEE, N., Goldhaber-Gordon, D., Shen, Z. X., Pruitt, B. L.
  2012; 7 (4): 321-324

- **Energy scale directly related to superconductivity in high-T-c cuprates: Universality from the temperature-dependent angle-resolved photoemission of Bi2Sr2Ca2Cu3O10+delta** *PHYSICAL REVIEW B*
  Ideta, S., Yoshida, T., Fujimori, A., Anzai, H., Fujita, T., Ino, A., Arita, M., Namatame, H., Taniguchi, M., Shen, Z., Takashima, K., Kojima, K., Uchida, et al
  2012; 85 (10)

- **Ultrafast Optical Excitation of a Persistent Surface-State Population in the Topological Insulator Bi2Se3** *PHYSICAL REVIEW LETTERS*
  Sobota, J. A., Yang, S., Analytis, J. G., Chen, Y. L., Fisher, I. R., Kirchmann, P. S., Shen, Z.

2012; 108 (11)

- **Subband Structure of a Two-Dimensional Electron Gas Formed at the Polar Surface of the Strong Spin-Orbit Perovskite KTaO3** *PHYSICAL REVIEW LETTERS*
  King, P. D., He, R. H., Eknapakul, T., Buaphet, P., Mo, S., Kaneko, Y., Harashima, S., Hikita, Y., Bahramy, M. S., Bell, C., Hussain, Z., Tokura, Y., Shen, et al
  2012; 108 (11)
- **Robust topological surface state against direct surface contamination** *PHYSICA E-LOW-DIMENSIONAL SYSTEMS & NANOSTRUCTURES*
  Liu, Z. K., Chen, Y. L., Analytis, J. G., Mo, S. K., Lu, D. H., Moore, R. G., Fisher, I. R., Hussain, Z., Shen, Z. X.
  2012; 44 (5): 891-894
- **Femtosecond Dynamics of the Collinear-to-Spiral Antiferromagnetic Phase Transition in CuO** *PHYSICAL REVIEW LETTERS*
  Johnson, S. L., de Souza, R. A., Staub, U., Beaud, P., Moehr-Vorobeva, E., Ingold, G., Caviezel, A., Scagnoli, V., Schlotter, W. F., Turner, J. J., Krupin, O., Lee, W., Chuang, et al
  2012; 108 (3)
- **Angle-Resolved Photoemission Studies of Quantum Materials** *ANNUAL REVIEW OF CONDENSED MATTER PHYSICS, VOL 3*
  Lu, D., Vishik, I. M., Yi, M., Chen, Y., Moore, R. G., Shen, Z.
  2012; 3: 129-167
- **MICROFABRICATED SILICON CARBIDE THERMIONIC ENERGY CONVERTER FOR SOLAR ELECTRICITY GENERATION** *25th IEEE International Conference on Micro Electro Mechanical Systems (MEMS)*
  Lee, J. H., Bargatin, I., Gwinn, T. O., Vincent, M., Littau, K. A., Maboudian, R., Shen, Z., Melosh, N. A., Howe, R. T.
  IEEE.2012
- **LOW-IMPEDANCE SHIELDED TIP PIEZORESISTIVE PROBE ENABLES PORTABLE MICROWAVE IMPEDANCE MICROSCOPY** *25th IEEE International Conference on Micro Electro Mechanical Systems (MEMS)*
  Haemmerli, A. J., Nielsen, R. T., Kundhikanjana, W., HARJEE, N., Lai, K., Yang, Y. L., Goldhaber-Gordon, D., Shen, Z. X., Pruitt, B. L.
  IEEE.2012
- **Pseudogap, Superconducting Gap, and Fermi Arc in High-T-c Cuprates Revealed by Angle-Resolved Photoemission Spectroscopy** *JOURNAL OF THE PHYSICAL SOCIETY OF JAPAN*
  Yoshida, T., Hashimoto, M., Vishik, I. M., Shen, Z., Fujimori, A.
  2012; 81 (1)
- **Pseudogap, Superconducting Gap, and Fermi Arc in High-T-c Cuprates Revealed by Angle-Resolved Photoemission Spectroscopy** *JOURNAL OF THE PHYSICAL SOCIETY OF JAPAN*
  Yoshida, T., Hashimoto, M., Vishik, I. M., Shen, Z., Fujimori, A.
  2012; 81 (1)
- **In-plane electronic anisotropy of underdoped '122' Fe-arsenide superconductors revealed by measurements of detwinned single crystals** *REPORTS ON PROGRESS IN PHYSICS*
  Fisher, I. R., Degiorgi, L., Shen, Z. X.
  2011; 74 (12)
- **Photoluminescence of diamondoid crystals** *JOURNAL OF APPLIED PHYSICS*
  Clay, W. A., Sasagawa, T., Iwasa, A., Liu, Z., Dahl, J. E., Carlson, R. M., Kelly, M., Melosh, N., Shen, Z.
  2011; 110 (9)
- **Ambipolar field effect in the ternary topological insulator (BixSb1-x)(2)Te-3 by composition tuning** *NATURE NANOTECHNOLOGY*
  Kong, D., Chen, Y., Cha, J. J., Zhang, Q., Analytis, J. G., Lai, K., Liu, Z., Hong, S. S., Koski, K. J., Mo, S., Hussain, Z., Fisher, I. R., Shen, et al
  2011; 6 (11): 705-709
- **Imaging of Coulomb-Driven Quantum Hall Edge States** *PHYSICAL REVIEW LETTERS*
  Lai, K., Kundhikanjana, W., Kelly, M. A., Shen, Z., Shabani, J., Shayegan, M.
  2011; 107 (17)
- **Widespread spin polarization effects in photoemission from topological insulators** *PHYSICAL REVIEW B*
  Jozwiak, C., Chen, Y. L., Fedorov, A. V., Analytis, J. G., Rotundu, C. R., Schmid, A. K., Denlinger, J. D., Chuang, Y., Lee, D., Fisher, I. R., Birgeneau, R. J., Shen, Z., Hussain, et al

2011; 84 (16)

- **Hidden Itinerant-Spin Phase in Heavily Overdoped La2-xSrxCuO4 Superconductors Revealed by Dilute Fe Doping: A Combined Neutron Scattering and Angle-Resolved Photoemission Study** *PHYSICAL REVIEW LETTERS*
  He, R., Fujita, M., Enoki, M., Hashimoto, M., Iikubo, S., Mo, S., Yao, H., Adachi, T., Koike, Y., Hussain, Z., Shen, Z., Yamada, K.
  2011; 107 (12)
- **Polaronic metal in lightly doped high-T-c cuprates** *EPL*
  Mishchenko, A. S., Nagaosa, N., Shen, K. M., Shen, Z., Zhou, X. J., Devereaux, T. P.
  2011; 95 (5)
- **Angle-resolved photoemission spectroscopy study of PrFeAsO0.7: Comparison with LaFePO** *PHYSICAL REVIEW B*
  Nishi, I., Ishikado, M., Ideta, S., Malaeb, W., Yoshida, T., Fujimori, A., Kotani, Y., Kubota, M., Ono, K., Yi, M., Lu, D. H., Moore, R., Shen, et al
  2011; 84 (1)
- **Ultrafast electron dynamics in the charge density wave material TbTe3** *NEW JOURNAL OF PHYSICS*
  Schmitt, F., Kirchmann, P. S., Bovensiepen, U., Moore, R. G., Chu, J., Lu, D. H., Rettig, L., Wolf, M., Fisher, I. R., Shen, Z.
  2011; 13
- **Rapid Surface Oxidation as a Source of Surface Degradation Factor for Bi2Se3** *ACS NANO*
  Kong, D., Cha, J. J., Lai, K., Peng, H., Analytis, J. G., Meister, S., Chen, Y., Zhang, H., Fisher, I. R., Shen, Z., Cui, Y.
  2011; 5 (6): 4698-4703
- **High-energy anomaly in Nd2-xCexCuO4 investigated by angle-resolved photoemission spectroscopy and quantum Monte Carlo simulations** *PHYSICAL REVIEW B*
  Schmitt, F., Moritz, B., Johnston, S., Mo, S., Hashimoto, M., Moore, R. G., Lu, D., Motoyama, E., Greven, M., Devereaux, T. P., Shen, Z.
  2011; 83 (19)
- **Photoemission studies on electron doped cuprate Pr0.85LaCe0.15CuO4: Revisiting the chemical pressure effect** *International Conference on Spectroscopies in Novel Superconductors (SNS2010)*
  Song, D. J., Kyung, W. S., Park, S. R., Leem, C. S., Kim, C., Kim, Y. K., Choi, S. K., Jung, W. S., Koh, Y. Y., Choi, H. Y., Han, G., Yoshida, Y., Eisaki, et al
  PERGAMON-ELSEVIER SCIENCE LTD.2011: 533–35
- **Nanoscale microwave microscopy using shielded cantilever probes** *APPLIED NANOSCIENCE*
  Lai, K., Kundhikanjana, W., Kelly, M. A., Shen, Z.
  2011; 1 (1): 13–18
- **Self-energy analysis of multiple-bosonic mode coupling in Sr2RuO4** *International Conference on Spectroscopies in Novel Superconductors (SNS2010)*
  Kim, C., Kyung, W. S., Park, S. R., Leem, C. S., Song, D. J., Kim, Y. K., Choi, S. K., Jung, W. S., Koh, Y. Y., Choi, H. Y., Yoshida, Y., Moore, R. G., Shen, et al
  PERGAMON-ELSEVIER SCIENCE LTD.2011: 556–58
- **Fermi surfaces and quasi-particle band dispersions of the iron pnictides superconductor KFe2As2 observed by angle-resolved photoemission spectroscopy** *International Conference on Spectroscopies in Novel Superconductors (SNS2010)*
  Yoshida, T., Nishi, I., Fujimori, A., Yi, M., Moore, R. G., Luc, D., Shen, Z., Kihou, K., Shirage, P. M., Kito, H., Lee, C. H., Iyo, A., Eisaki, et al
  PERGAMON-ELSEVIER SCIENCE LTD.2011: 465–68
- **Symmetry-breaking orbital anisotropy observed for detwinned Ba(Fe1-xCox)(2)As-2 above the spin density wave transition** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Yi, M., Lu, D., Chu, J., Analytis, J. G., Sorini, A. P., Kemper, A. F., Moritz, B., Mo, S., Moore, R. G., Hashimoto, M., Lee, W., Hussain, Z., Devereaux, et al
  2011; 108 (17): 6878-6883
- **Reaffirming the d(x2-y2) Superconducting Gap Using the Autocorrelation Angle-Resolved Photoemission Spectroscopy of Bi1.5Pb0.55Sr1.6La0.4CuO6+delta** *PHYSICAL REVIEW LETTERS*
  Hashimoto, M., He, R., Testaud, J. P., Meevasana, W., Moore, R. G., Lu, D. H., Yoshida, Y., Eisaki, H., Devereaux, T. P., Hussain, Z., Shen, Z.
  2011; 106 (16)
- **From a Single-Band Metal to a High-Temperature Superconductor via Two Thermal Phase Transitions** *SCIENCE*

He, R., Hashimoto, M., Karapetyan, H., Koralek, J. D., Hinton, J. P., Testaud, J. P., Nathan, V., Yoshida, Y., Yao, H., Tanaka, K., Meevasana, W., Moore, R. G., Lu, et al
2011; 331 (6024): 1579-1583

- **Quantum Hall Effect from the Topological Surface States of Strained Bulk HgTe** *PHYSICAL REVIEW LETTERS*
  Bruene, C., Liu, C. X., Novik, E. G., Hankiewicz, E. M., Buhmann, H., Chen, Y. L., Qi, X. L., Shen, Z. X., Zhang, S. C., Molenkamp, L. W.
  2011; 106 (12)
- **Cryogenic microwave imaging of metal-insulator transition in doped silicon** *REVIEW OF SCIENTIFIC INSTRUMENTS*
  Kundhikanjana, W., Lai, K., Kelly, M. A., Shen, Z.
  2011; 82 (3)
- **Creation and control of a two-dimensional electron liquid at the bare SrTiO3 surface** *NATURE MATERIALS*
  Meevasana, W., King, P. D., He, R. H., Mo, S., Hashimoto, M., Tamai, A., Songsiriritthigul, P., Baumberger, F., Shen, Z.
  2011; 10 (2): 114-118
- **Doping dependence of the (pi, pi) shadow band in La-based cuprates studied by angle-resolved photoemission spectroscopy** *NEW JOURNAL OF PHYSICS*
  He, R., Zhou, X. J., Hashimoto, M., Yoshida, T., Tanaka, K., Mo, S., Sasagawa, T., Mannella, N., Meevasana, W., Yao, H., Fujita, M., Adachi, T., Komiya, et al
  2011; 13
- **Time-resolved Fermi surface mapping and dynamics of the double-CDW transition in HoTe3** *Verhandlungen der Deutschen Physikalischen Gesellschaft*
  Rettig, L., Cortes, R., Chu, J., Fisher, I., Schmitt, F., Kirchmann, P., Shen, Z., Wolf, M., Bovensiepen, U.
  2011; 43 (5)
- **A SHIELDED CANTILEVER-TIP MICROWAVE PROBE FOR MICRO/NANO SURFACE IMAGING OF CONDUCTIVE PROPERTIES**
  Yang, Y. L., Lai, K. J., Tang, Q. C., Kundhikanjana, W., Kelly, M., Shen, Z. X., Li, X., IEEE
  IEEE.2011: 79–82
- **Emerging Properties of Quantum Matter-Case Studies of Topological and Superconducting Phases** *ANL (Argonne National Laboratory*
  Shen, Z.
  2011
- **The pseudogap phase in Bi2201 studied by ARPES** *The 26th International Conference on Low Temperature Physics*
  Hashimoto, M., Tanaka, K., Meevasana, W., Moore, R., Lu, D., Mo, S., Ishikado, M., Eisaki, H., Hussain, Z., Devereaux, T., Kivelson, S., He, R., Orenstein, et al
  2011: 328–29
- **Single Dirac Cone Topological Surface State and Unusual Thermoelectric Property of Compounds from a New Topological Insulator Family** *PHYSICAL REVIEW LETTERS*
  Chen, Y. L., Liu, Z. K., Analytis, J. G., Chu, J., Zhang, H. J., Yan, B. H., Mo, S., Moore, R. G., Lu, D. H., Fisher, I. R., Zhang, S. C., Hussain, Z., Shen, et al
  2010; 105 (26)
- **Angle-resolved photoemission study of the tri-layer high-T-c superconductor Bi2Sr2Ca2Cu3O10+delta: Effects of inter-layer hopping** *9th International Conference on Materials and Mechanisms of Superconductivity*
  Ideta, S., Takashima, K., Hashimoto, M., Yoshida, T., Fujimori, A., Anzai, H., Fujita, T., Nakashima, Y., Ino, A., Arita, M., Namatame, H., Taniguchi, M., Ono, et al
  ELSEVIER SCIENCE BV.2010: S14–S16
- **CORRELATED ELECTRON SYSTEMS Reaching for the stars** *NATURE MATERIALS*
  Balents, L., Shen, Z.
  2010; 9 (12): 963–64
- **Energy-Dependent Enhancement of the Electron-Coupling Spectrum of the Underdoped Bi2Sr2CaCu2O8+delta Superconductor** *PHYSICAL REVIEW LETTERS*
  Anzai, H., Ino, A., Kamo, T., Fujita, T., Arita, M., Namatame, H., Taniguchi, M., Fujimori, A., Shen, Z., Ishikado, M., Uchida, S.
  2010; 105 (22)

- **ARPES studies of cuprate Fermiology: superconductivity, pseudogap and quasiparticle dynamics** *NEW JOURNAL OF PHYSICS*
  Vishik, I. M., Lee, W. S., He, R., Hashimoto, M., Hussain, Z., Devereaux, T. P., Shen, Z.
  2010; 12

- **Surface and bulk electronic structures of LaFeAsO studied by angle-resolved photoemission spectroscopy** *PHYSICAL REVIEW B*
  Yang, L. X., Xie, B. P., Zhang, Y., He, C., Ge, Q. Q., Wang, X. F., Chen, X. H., Arita, M., Jiang, J., Shimada, K., Taniguchi, M., Vobornik, I., Rossi, et al
  2010; 82 (10)

- **Photon-enhanced thermionic emission for solar concentrator systems** *NATURE MATERIALS*
  Schwede, J. W., Bargatin, I., Riley, D. C., Hardin, B. E., Rosenthal, S. J., Sun, Y., Schmitt, F., Pianetta, P., Howe, R. T., Shen, Z., Melosh, N. A.
  2010; 9 (9): 762-767

- **Systematic study of electron-phonon coupling to oxygen modes across the cuprates** *PHYSICAL REVIEW B*
  Johnston, S., Vernay, F., Moritz, B., Shen, Z., Nagaosa, N., Zaanen, J., Devereaux, T. P.
  2010; 82 (6)

- **Massive Dirac Fermion on the Surface of a Magnetically Doped Topological Insulator** *SCIENCE*
  Chen, Y. L., Chu, J., Analytis, J. G., Liu, Z. K., Igarashi, K., Kuo, H., Qi, X. L., Mo, S. K., Moore, R. G., Lu, D. H., Hashimoto, M., Sasagawa, T., Zhang, et al
  2010; 329 (5992): 659-662

- **Ultrathin Topological Insulator Bi2Se3 Nanoribbons Exfoliated by Atomic Force Microscopy** *NANO LETTERS*
  Hong, S. S., Kundhikanjana, W., Cha, J. J., Lai, K., Kong, D., Meister, S., Kelly, M. A., Shen, Z., Cui, Y.
  2010; 10 (8): 3118-3122

- **Mesoscopic Percolating Resistance Network in a Strained Manganite Thin Film** *SCIENCE*
  Lai, K., Nakamura, M., Kundhikanjana, W., Kawasaki, M., Tokura, Y., Kelly, M. A., Shen, Z.
  2010; 329 (5988): 190-193

- **Particle-hole symmetry breaking in the pseudogap state of Bi2201** *NATURE PHYSICS*
  Hashimoto, M., He, R., Tanaka, K., Testaud, J., Meevasana, W., Moore, R. G., Lu, D., Yao, H., Yoshida, Y., Eisaki, H., Devereaux, T. P., Hussain, Z., Shen, et al
  2010; 6 (6): 414-418

- **Enhanced Superconducting Gaps in the Trilayer High-Temperature Bi2Sr2Ca2Cu3O10+delta Cuprate Superconductor** *PHYSICAL REVIEW LETTERS*
  Ideta, S., Takashima, K., Hashimoto, M., Yoshida, T., Fujimori, A., Anzai, H., Fujita, T., Nakashima, Y., Ino, A., Arita, M., Namatame, H., Taniguchi, M., Ono, et al
  2010; 104 (22)

- **Doping-Dependent Nodal Fermi Velocity of the High-Temperature Superconductor Bi2Sr2CaCu2O8+delta Revealed Using High-Resolution Angle-Resolved Photoemission Spectroscopy** *PHYSICAL REVIEW LETTERS*
  Vishik, I. M., Lee, W. S., Schmitt, F., Moritz, B., Sasagawa, T., Uchida, S., Fujita, K., Ishida, S., Zhang, C., Devereaux, T. P., Shen, Z. X.
  2010; 104 (20)

- **Signatures of pressure-induced superconductivity in insulating Bi1.98Sr2.06Y0.68CaCu2O8+delta** *PHYSICAL REVIEW B*
  Cuk, T., Zocco, D. A., Eisaki, H., Struzhkin, V., Grosche, F. M., Maple, M. B., Shen, Z.
  2010; 81 (18)

- **Aharonov-Bohm interference in topological insulator nanoribbons** *NATURE MATERIALS*
  Peng, H., Lai, K., Kong, D., Meister, S., Chen, Y., Qi, X., Zhang, S., Shen, Z., Cui, Y.
  2010; 9 (3): 225-229

- **Evolution of electronic structure from insulator to superconductor in Bi2Sr2-xLax(Ca,Y)Cu2O8+delta** *PHYSICAL REVIEW B*
  Tanaka, K., Yoshida, T., Shen, K. M., Lu, D. H., Lee, W. S., Yagi, H., Fujimori, A., Shen, Z., Risdiana, R., Fujii, T., Terasaki, I.
  2010; 81 (12)

- **Strong energy-momentum dispersion of phonon-dressed carriers in the lightly doped band insulator SrTiO3** *NEW JOURNAL OF PHYSICS*
  Meevasana, W., Zhou, X. J., Moritz, B., Chen, C., He, R. H., Fujimori, S., Lu, D. H., Mo, S., Moore, R. G., Baumberger, F., Devereaux, T. P., van der Marel, D., Nagaosa, et al

2010; 12

- **Environmentally Friendly Refining of Diamond-Molecules via the Growth of Large Single Crystals** *CRYSTAL GROWTH & DESIGN*
  Iwasa, A., Clay, W. A., Dahl, J. E., Carlson, R. M., Shen, Z., Sasagawa, T.
  2010; 10 (2): 870-873
- **Fermi surface evolution across multiple charge density wave transitions in ErTe3** *PHYSICAL REVIEW B*
  Moore, R. G., Brouet, V., He, R., Lu, D. H., Ru, N., Chu, J., Fisher, I. R., Shen, Z.
  2010; 81 (7)
- **STM Imaging of Electronic Waves on the Surface of Bi2Te3: Topologically Protected Surface States and Hexagonal Warping Effects** *PHYSICAL REVIEW LETTERS*
  Alpichshev, Z., Analytis, J. G., Chu, J., Fisher, I. R., Chen, Y. L., Shen, Z. X., Fang, A., Kapitulnik, A.
  2010; 104 (1)
- **Topological Insulator Nanowires and Nanoribbons** *NANO LETTERS*
  Kong, D., Randel, J. C., Peng, H., Cha, J. J., Meister, S., Lai, K., Chen, Y., Shen, Z., Manoharan, H. C., Cui, Y.
  2010; 10 (1): 329-333
- **Material and Doping Dependence of the Nodal and Antinodal Dispersion Renormalizations in Single- and Multilayer Cuprates** *ADVANCES IN CONDENSED MATTER PHYSICS*
  Johnston, S., Lee, W. S., Chen, Y., Nowadnick, E. A., Moritz, B., Shen, Z., Devereaux, T. P.
  2010
- **Bulk Fermi Surface Co-existence with Dirac Surface State in Bi2Se3: A Comparison of Photoemission and Shubnikov-de Haas Measurements** *Physical Review B*
  Analytis, J. G., Chu, J., Chen, Y., Corredor, F., McDonald, R. D., Shen, Z., Fisher, I. R.
  2010; 81 (20)
- **Material and Doping Dependence of the Nodal and Antinodal Dispersion Renormalizations in Single- and Multilayer Cuprates** *ADVANCES IN CONDENSED MATTER PHYSICS*
  Johnston, S., Lee, W. S., Chen, Y., Nowadnick, E. A., Moritz, B., Shen, Z., Devereaux, T. P.
  2010
- **Zn-impurity effects on quasiparticle scattering in La2-xSrxCuO4 studied by angle-resolved photoemission spectroscopy** *PHYSICAL REVIEW B*
  Yoshida, T., Komiya, S., Zhou, X. J., Tanaka, K., Fujimori, A., Hussain, Z., Shen, Z., Ando, Y., Eisaki, H., Uchida, S.
  2009; 80 (24)
- **Hierarchy of Electronic Properties of Chemically Derived and Pristine Graphene Probed by Microwave Imaging** *NANO LETTERS*
  Kundhikanjana, W., Lai, K., Wang, H., Dai, H., Kelly, M. A., Shen, Z.
  2009; 9 (11): 3762-3765
- **Unconventional electronic reconstruction in undoped (Ba,Sr)Fe2As2 across the spin density wave transition** *PHYSICAL REVIEW B*
  Yi, M., Lu, D. H., Analytis, J. G., Chu, J., Mo, S., He, R., Hashimoto, M., Moore, R. G., Mazin, I. I., Singh, D. J., Hussain, Z., Fisher, I. R., Shen, et al
  2009; 80 (17)
- **A momentum-dependent perspective on quasiparticle interference in Bi2Sr2CaCu2O8+delta** *NATURE PHYSICS*
  Vishik, I. M., Nowadnick, E. A., Lee, W. S., Shen, Z. X., Moritz, B., Devereaux, T. P., Tanaka, K., Sasagawa, T., Fujii, T.
  2009; 5 (10): 718-721
- **Effect of strong correlations on the high energy anomaly in hole- and electron-doped high-T-c superconductors** *NEW JOURNAL OF PHYSICS*
  Moritz, B., Schmitt, F., Meevasana, W., Johnston, S., Motoyama, E. M., Greven, M., Lu, D. H., Kim, C., Scalettar, R. T., Shen, Z., Devereaux, T. P.
  2009; 11
- **Dependence of Band-Renormalization Effects on the Number of Copper Oxide Layers in Tl-Based Copper Oxide Superconductors Revealed by Angle-Resolved Photoemission Spectroscopy** *PHYSICAL REVIEW LETTERS*
  Lee, W. S., Tanaka, K., Vishik, I. M., Lu, D. H., Moore, R. G., Eisaki, H., Iyo, A., Devereaux, T. P., Shen, Z. X.
  2009; 103 (6)

- **Underlying Fermi surface of Sr14-xCaxCu24O41 in two-dimensional momentum space observed by angle-resolved photoemission spectroscopy** *PHYSICAL REVIEW B*
  Yoshida, T., Zhou, X. J., Hussain, Z., Shen, Z., Fujimori, A., Eisaki, H., Uchida, S.
  2009; 80 (5)

- **Universal versus Material-Dependent Two-Gap Behaviors of the High-T-c Cuprate Superconductors: Angle-Resolved Photoemission Study of La2-xSrxCuO4** *PHYSICAL REVIEW LETTERS*
  Yoshida, T., Hashimoto, M., Ideta, S., Fujimori, A., Tanaka, K., Mannella, N., Hussain, Z., Shen, Z., Kubota, M., Ono, K., Komiya, S., Ando, Y., Eisaki, et al
  2009; 103 (3)

- **Unusual Layer-Dependent Charge Distribution, Collective Mode Coupling, and Superconductivity in Multilayer Cuprate Ba2Ca3Cu4O8F2** *PHYSICAL REVIEW LETTERS*
  Chen, Y., Iyo, A., Yang, W., Ino, A., Arita, M., Johnston, S., Eisaki, H., Namatame, H., Taniguchi, M., Devereaux, T. P., Hussain, Z., Shen, Z.
  2009; 103 (3)

- **Experimental Realization of a Three-Dimensional Topological Insulator, Bi2Te3** *SCIENCE*
  Chen, Y. L., Analytis, J. G., Chu, J., Liu, Z. K., Mo, S., Qi, X. L., Zhang, H. J., Lu, D. H., Dai, X., Fang, Z., Zhang, S. C., Fisher, I. R., Hussain, et al
  2009; 325 (5937): 178-181

- **Electronic structure of the BaFe2As2 family of iron-pnictide superconductors** *PHYSICAL REVIEW B*
  Yi, M., Lu, D. H., Analytis, J. G., Chu, J., Mo, S., He, R., Moore, R. G., Zhou, X. J., Chen, G. F., Luo, J. L., Wang, N. L., Hussain, Z., Singh, et al
  2009; 80 (2)

- **Evidence for weak electronic correlations in iron pnictides** *PHYSICAL REVIEW B*
  Yang, W. L., Sorini, A. P., Chen, C., Moritz, B., Lee, W., Vernay, F., Olalde-Velasco, P., Denlinger, J. D., Delley, B., Chu, J., Analytis, J. G., Fisher, I. R., Ren, et al
  2009; 80 (1)

- **ARPES studies of the electronic structure of LaOFe(P, As)** *PHYSICA C-SUPERCONDUCTIVITY AND ITS APPLICATIONS*
  Lu, D. H., Yi, M., Mo, S., Analytis, J. G., Chu, J., Erickson, A. S., Singh, D. J., Hussain, Z., Geballe, T. H., Fisher, I. R., Shen, Z.
  2009; 469 (9-12): 452-458

- **A brief update of angle-resolved photoemission spectroscopy on a correlated electron system** *25th International Conference on Low Temperature Physics (LT25)*
  Lee, W. S., Vishik, I. M., Lu, D. H., Shen, Z.
  IOP PUBLISHING LTD.2009

- **Tapping mode microwave impedance microscopy** *REVIEW OF SCIENTIFIC INSTRUMENTS*
  Lai, K., Kundhikanjana, W., Peng, H., Cui, Y., Kelly, M. A., Shen, Z. X.
  2009; 80 (4)

- **Effects of out-of-plane disorder on the nodal quasiparticle and superconducting gap in single-layer Bi2Sr1.6L0.4CuO6+delta (L=La,Nd,Gd)** *PHYSICAL REVIEW B*
  Hashimoto, M., Yoshida, T., Fujimori, A., Lu, D. H., Shen, Z., Kubota, M., Ono, K., Ishikado, M., Fujita, K., Uchida, S.
  2009; 79 (14)

- **Nanoscale Electronic Inhomogeneity in In2Se3 Nanoribbons Revealed by Microwave Impedance Microscopy** *NANO LETTERS*
  Lai, K., Peng, H., Kundhikanjana, W., Schoen, D. T., Xie, C., Meister, S., Cui, Y., Kelly, M. A., Shen, Z.
  2009; 9 (3): 1265-1269

- **Energy gaps in the failed high-T-c superconductor La1:875Ba0:125CuO4** *NATURE PHYSICS*
  He, R., Tanaka, K., Mo, S., Sasagawa, T., Fujita, M., Adachi, T., Mannella, N., Yamada, K., Koike, Y., Hussain, Z., Shen, Z.
  2009; 5 (2): 119-123

- **A step closer to visualizing the electron-phonon interplay in real time** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Chen, Y. L., Lee, W. S., Shen, Z. X.
  2009; 106 (4): 963-964

- **Intrinsic electron and hole bands in electron-doped cuprate superconductors** *PHYSICAL REVIEW B*

Xiang, T., Luo, H. G., Lu, D. H., Shen, K. M., Shen, Z. X.
2009; 79 (1)

- **Bogoliubov angle, particle-hole mixture, and angle-resolved photoemission spectroscopy in superconductors** *PHYSICAL REVIEW B*
  Balatsky, A. V., Lee, W. S., Shen, Z. X.
  2009; 79 (2)
- **Thermionic emission from microfabricated silicon-carbide filaments** *Power MEMS*
  Lee, J., Bargatin, I., Provine, J., Clay, W., Schwede, J., Liu, F., Maboudian, R., Melosh, N., Shen, Z., Howe, R.
  2009: 1-4
- **Origin of the Monochromatic Photoemission Peak in Diamondoid Monolayers** *NANO LETTERS*
  Clay, W. A., Liu, Z., Yang, W., Fabbri, J. D., Dahl, J. E., Carlson, R. M., Sun, Y., Schreiner, P. R., Fokin, A. A., Tkachenko, B. A., Fokina, N. A., Pianetta, P. A., Melosh, et al
  2009; 9 (1): 57-61
- **Rare earth ion effects on the pseudo-gap in electron-doped superconductors and possible nodeless d-wave gap** *61st Yamada Conference on Spectroscopies in Novel Superconductors*
  Park, S. R., Leem, C. S., Roh, Y. S., Choi, K. J., Kim, J. H., Kim, B. J., Koh, H., Eisaki, H., Lu, D. H., Shen, Z., Armitage, N. P., Kim, C.
  PERGAMON-ELSEVIER SCIENCE LTD.2008: 2939–43
- **Diamondoids as low-kappa dielectric materials** *APPLIED PHYSICS LETTERS*
  Clay, W. A., Sasagawa, T., Kelly, M., Dahl, J. E., Carlson, R. M., Melosh, N., Shen, Z.
  2008; 93 (17)
- **A route to tunable direct band-gap diamond devices: Electronic structures of nanodiamond crystals** *JOURNAL OF APPLIED PHYSICS*
  Sasagawa, T., Shen, Z.
  2008; 104 (7)
- **Calibration of shielded microwave probes using bulk dielectrics** *APPLIED PHYSICS LETTERS*
  Lai, K., Kundhikanjana, W., Kelly, M. A., Shen, Z. X.
  2008; 93 (12)
- **Transient electronic structure and melting of a charge density wave in TbTe3** *SCIENCE*
  Schmitt, F., Kirchmann, P. S., Bovensiepen, U., Moore, R. G., Rettig, L., Krenz, M., Chu, J., Ru, N., Perfetti, L., Lu, D. H., Wolf, M., Fisher, I. R., Shen, et al
  2008; 321 (5896): 1649-1652
- **Electronic structure of the iron-based superconductor LaOFeP** *NATURE*
  Lu, D. H., Yi, M., Mo, S., Erickson, A. S., Analytis, J., Chu, J., Singh, D. J., Hussain, Z., Geballe, T. H., Fisher, I. R., Shen, Z.
  2008; 455 (7209): 81-84
- **Analysis of the spectral function of Nd1.85Ce0.15CuO4 obtained by angle-resolved photoemission spectroscopy** *PHYSICAL REVIEW B*
  Schmitt, F., Lee, W. S., Lu, D., Meevasana, W., Motoyama, E., Greven, M., Shen, Z.
  2008; 78 (10)
- **Appearance of universal metallic dispersion in a doped Mott insulator** *PHYSICAL REVIEW B*
  Sahrakorpi, S., Markiewicz, R. S., Lin, H., Lindroos, M., Zhou, X. J., Yoshida, T., Yang, W. L., Kakeshita, T., Eisaki, H., Uchida, S., Komiya, S., Ando, Y., Zhou, et al
  2008; 78 (10)
- **Modeling and characterization of a cantilever-based near-field scanning microwave impedance microscope** *REVIEW OF SCIENTIFIC INSTRUMENTS*
  Lai, K., Kundhikanjana, W., Kelly, M., Shen, Z. X.
  2008; 79 (6)
- **Uncovering a pressure-tuned electronic transition in Bi1.98Sr2.06Y0.68Cu2O8+delta using Raman scattering and x-ray diffraction** *PHYSICAL REVIEW LETTERS*
  Cuk, T., Struzhkin, V. V., Devereaux, T. P., Goncharov, A. F., Kendziora, C. A., Eisaki, H., Mao, H., Shen, Z.
  2008; 100 (21)

- **Superconductivity-induced self-energy evolution of the nodal electron of optimally doped Bi2Sr2Ca0.92Y0.08Cu2O8+delta** *PHYSICAL REVIEW B*
  Lee, W. S., Meevasana, W., Johnston, S., Lu, D. H., Vishik, I. M., Moore, R. G., Eisaki, H., Kaneko, N., Devereaux, T. P., Shen, Z. X.
  2008; 77 (14)
- **Extracting the spectral function of the cuprates by a full two-dimensional analysis: Angle-resolved photoemission spectra of Bi2Sr2CuO6** *PHYSICAL REVIEW B*
  Meevasana, W., Baumberger, F., Tanaka, K., Schmitt, F., Dunkel, W. R., Lu, D. H., Mo, S., Eisaki, H., Shen, Z.
  2008; 77 (10)
- **Direct evidence of two gaps in underdoped Bi2212** *International Symposium on Lattice Effects in Cuprate High Temperature Superconductors*
  Tanaka, K., Lee, W. S., Hussain, Z., Shen, Z. X.
  IOP PUBLISHING LTD.2008
- **Fermi surface and van hove singularities in the itinerant metamagnet Sr3Ru2O7** *PHYSICAL REVIEW LETTERS*
  Tamai, A., Allan, M., Mercure, J., Meevasana, W., Dunkel, R., Lu, D., Perry, R., Mackenzie, A., Singh, D., Shen, Z., Baumberger, F.
  2008; 101 (2)
- **Superconductivity: Brings About Real Resonance** *Nature Physics*
  Lee, W., Shen, Z.
  2008; 4 (2): 95-96
- **Electronic Structure at the C60/Metal Interface: An angle-resolved photoemission and first principle study** *PHYSICAL REVIEW B*
  Tamai, A., Seitsonen, A., Baumberger, F., Hengsberger, M., Shen, Z., Greber, T., Osterwalder, J.
  2008; 77 (7)
- **Doping Evolution of the Electronic Structure in the Single-Layer Cuprates Bi2Sr2-xLaxCuO6+d: Comparison with Other Single-Layer Cuprates** *PHYSICAL REVIEW B*
  Hashimoto, M., Yoshida, T., Yagi, H., Takizawa, M., Fujimori, A., Kubota, M., Ono, K., Tanaka, K., Lu, D., Shen, Z., Ono, S., Ando, Y.
  2008; 77 (9)
- **Charge Dynamics of Doped Holes in High-Tc Cuprates – A Clue from Optical Conductivity** *PHYSICAL REVIEW LETTERS*
  Mishchenko, A., Nagaosa, N., Shen, Z., De Filippis, G., Cataudella, V., Devereaux, T., Bernhard, C., Kim, K., Zaanen, J.
  2008; 100 (16)
- **ARPES Study of the Evolution of Band Structure and Charge Density Wave Properties in Rte3 for R = Y, La, Ce, Sm, Gd, Tb and Dy** *Physical Review B*
  Hussain, Z., Brouet, V., Yang, W., Zhou, X., Moore, R., He, R., Lu, D., Shen, Z., Laverock, J., Dugdale, S., Ru, N., Fisher, R.
  2008; 77 (235104)
- **A route to tunable direct band-gap diamond devices: Electronic structure of nanodiamond crystals** *Journal of applied physics*
  Sasagawa, T., Shen, Z.
  2008; 104 (7): 073704
- **Scientific Needs for Future X-ray Sources in the US--A White Paper** *Lawrence Berkeley National Lab.(LBNL)*
  Falcone, R., Stohr, J., Bergmann, U., Corlett, J., Galayda, J., Hastings, J., Hettel, B., Hussain, Z., Kirz, J., McCurdy, B., Raubernheimer, T., Sannibale, F., Seeman, et al
  2008
- **Polaron coherence condensation as the mechanism for colossal magnetoresistance in layered manganites** *PHYSICAL REVIEW B*
  Mannella, N., Yang, W. L., Tanaka, K., Zhou, X. J., Zheng, H., Mitchell, J. F., Zaanen, J., Devereaux, T. P., Nagaosa, N., Hussain, Z., Shen, Z.
  2007; 76 (23)
- **Complete momentum and energy resolved TOF electron spectrometer for time-resolved photoemission spectroscopy** *14th National Conference on Synchrotron Radiation Instrumentation*
  Lebedev, G., Tremsin, A., Siegmund, O., Chen, Y., Shen, Z., Hussain, Z.
  ELSEVIER SCIENCE BV.2007: 168–71
- **Design of an elliptically bent refocus mirror for the MERLIN beamline at the advanced light source** *14th National Conference on Synchrotron Radiation Instrumentation*
  Kelez, N., Chuang, Y., Smith-Baumann, A., Franck, K., Duarte, R., Lanzara, A., Hasan, M. Z., Dessau, D. S., Chiang, T. C., Shen, Z., Hussain, Z.

ELSEVIER SCIENCE BV.2007: 135–37

- **Evolution of the fermi surface and quasiparticle renormalization through a van hove singularity in Sr2-yLayRuO4** *PHYSICAL REVIEW LETTERS*
  Shen, K. M., Kikugawa, N., Bergemann, C., Balicas, L., Baumberger, F., Meevasana, W., Ingle, N. J., Maeno, Y., Shen, Z., Mackenzie, A. P.
  2007; 99 (18)

- **Abrupt onset of a second energy gap at the superconducting transition of underdoped Bi2212** *NATURE*
  Lee, W. S., Vishik, I. M., Tanaka, K., Lu, D. H., Sasagawa, T., Nagaosa, N., Devereaux, T. P., Hussain, Z., Shen, Z.
  2007; 450 (7166): 81-84

- **High spatial and temporal resolution photon/electron counting detector for synchrotron radiation research** *3rd International Conference on Imaging Techniques in Subatomic Physics, Astrophysics, Medicine, Biology and Industry*
  Tremsin, A. S., LEBEDEV, G. V., Siegmund, O. H., Vallerga, J. V., Hull, J. S., McPhate, J. B., Jozwiak, C., Chen, Y., Guo, J. H., Shen, Z. X., Hussain, Z.
  ELSEVIER SCIENCE BV.2007: 853–57

- **Effects of Zn-impurity scattering in La2-xSrxCuO4 studied by angle-resolved photoemission spectroscopy** *8th International Conference on Materials and Mechanisms of Superconductivity and High Temperature Superconductors*
  Yoshida, T., Zhou, X. J., Hussain, Z., Shen, Z. X., Fujimori, A., Komiya, S., Ando, Y., Eisaki, H., Uchinda, S.
  ELSEVIER SCIENCE BV.2007: 872–873

- **Existence of a quasiparticle remnant in angle-resolved photoemission spectrum of La2-xSrxCuO4** *8th International Conference on Materials and Mechanisms of Superconductivity and High Temperature Superconductors*
  Lindroos, M., Arpiainen, V., Sahrakorpi, S., Markiewicz, R. S., Zhou, X. J., Yoshida, T., Yang, W. L., Kakeshita, T., Eisaki, H., Uchida, S., Fujimori, A., Hussain, Z., Shen, et al
  ELSEVIER SCIENCE BV.2007: 941–942

- **Electronic band structure and Kondo coupling in YbRh2Si2** *PHYSICAL REVIEW B*
  Wigger, G. A., Baumberger, F., Shen, Z., Yin, Z. P., Pickett, W. E., Maquilon, S., Fisk, Z.
  2007; 76 (3)

- **Monochromatic electron photoemission from diamondoid monolayers** *SCIENCE*
  Yang, W. L., Fabbri, J. D., Willey, T. M., Lee, J. R., Dahl, J. E., Carlson, R. M., Schreiner, P. R., Fokin, A. A., Tkachenko, B. A., Fokina, N. A., Meevasana, W., Mannella, N., Tanaka, et al
  2007; 316 (5830): 1460-1462

- **Atomic-force-microscope-compatible near-field scanning microwave microscope with separated excitation and sensing probes** *REVIEW OF SCIENTIFIC INSTRUMENTS*
  Lai, K., Ji, M. B., Leindecker, N., Kelly, M. A., Shen, Z. X.
  2007; 78 (6)

- **Hierarchy of multiple many-body interaction scales in high-temperature superconductors** *PHYSICAL REVIEW B*
  Meevasana, W., Zhou, X. J., Sahrakorpi, S., Lee, W. S., Yang, W. L., Tanaka, K., Mannella, N., Yoshida, T., Lu, D. H., Chen, Y. L., He, R. H., Lin, H., Komiya, et al
  2007; 75 (17)

- **Aspects of electron-phonon self-energy revealed from angle-resolved photoemission spectroscopy** *PHYSICAL REVIEW B*
  Lee, W. S., Johnston, S., Devereaux, T. P., Shen, Z.
  2007; 75 (19)

- **Unmasking the nodal quasiparticle dynamics in cuprate superconductors using low-energy photoemission** *PHYSICAL REVIEW B*
  Yamasaki, T., Yamazaki, K., Ino, A., Arita, M., Namatame, H., Taniguchi, M., Fujimori, A., Shen, Z., Ishikado, M., Uchida, S.
  2007; 75 (14)

- **Ca3Ru2O7: Electronic instability and extremely strong quasiparticle renormalisation** *17th International Conference on Magnetism (ICM 2006)*
  Kikugawa, N., Rost, A., Baumberger, F., Ingle, N. J., Hossain, M. A., Meevasana, W., Shen, K. M., Lu, D. H., Damascelli, A., Mackenzie, A. P., Hussain, Z., Shen, Z. X.
  ELSEVIER SCIENCE BV.2007: 1027–29

- **Hybridization of 4f states in heavy-fermion compounds YbRh2Si2 and YbIr2Si2** *17th International Conference on Magnetism (ICM 2006)*

Molodtsov, S. L., Danzenbaecher, S., Kucherenko, Y., Laubschat, C., Vyalikh, D. V., Hossain, Z., Geibel, C., Zhou, X. J., Yang, W. L., Mannella, N., Hussain, Z., Shen, Z., Shi, et al
ELSEVIER SCIENCE BV.2007: 443–45

- **Angle-resolved photoemission studies of lattice polaron formation in the cuprate Ca2CuO2Cl2** *PHYSICAL REVIEW B*
  Shen, K. M., Ronning, F., Meevasana, W., Lu, D. H., Ingle, N. J., Baumberger, F., Lee, W. S., MILLER, L. L., Kohsaka, Y., Azuma, M., Takano, M., Takagi, H., Shen, et al
  2007; 75 (7)
- **Doping Evolution of the Cuprate Superconductors from High Resolution ARPES** *Very High Resolution Photoelectron Spectroscopy*
  Shen, K., Shen, Z.
  Springer, Berlin, Heidelberg.2007: 243–270
- **Insights from ARPES for an undoped, four-layered, two gap high-Tc superconductor** *Physical review letters*
  Xie, W., Jepsen, O., Andersen, O., Chen, Y., Shen, Z.
  2007; 98 (4): 047001
- **Angle-Resolved Photoemission Spectroscopy on Electronic Structure and lectron–Phonon Coupling in Cuprate Superconductors** *Handbook of High-Temperature Superconductivity*
  Zhou, X., Cuk, T., Devereaux, T., Nagaosa, N., Shen, Z.
  Springer, New York, NY.2007: 87–144
- **Momentum dependence of 4f hybridization in heavy-fermion compounds: Angle-resolved photoemission study of YbIr2Si2 and YbRh2Si2** *PHYSICAL REVIEW B*
  Danzenbaecher, S., Kucherenko, Y., Vyalikh, D. V., Holder, M., Laubschat, C., Yaresko, A. N., Krellner, C., Hossain, Z., Geibel, C., Zhou, X. J., Yang, W. L., Mannella, N., Hussain, et al
  2007; 75 (4)
- **Band Renormalization Effect in Bi2Sr2Ca2Cu3O10 δ** *High Tc Superconductors and Related Transition Metal Oxides*
  Lee, W., Cuk, T., Meevasane, W., Lu, D., Shen, K., Shen, Z., Yang, W., Zhou, X., Hussain, Z., Shimoyama, J., Devereaux, T.
  2007
- **Low-energy electronic structure of the high-Tc cuprates La2− xSrxCuO4 studied by angle-resolved photoemission spectroscopy** *Journal of Physics: Condensed Matter*
  Yoshida, Y., Zhou, X., Lu, D., Komiya, S., Ando, Y., Eisaki, H., Kakeshita, T., Uchida, S., Hussain, Z., Shen, Z., Fujimori, A.
  2007; 19 (12)
- **Distinct Fermi-momentum-dependent energy gaps in deeply underdoped Bi2212** *SCIENCE*
  Tanaka, K., Lee, W. S., Lu, D. H., Fujimori, A., Fujii, T., Risdiana, Terasaki, I., Scalapino, D. J., Devereaux, T. P., Hussain, Z., Shen, Z.
  2006; 314 (5807): 1910-1913
- **Anomalous Fermi-surface dependent pairing in a self-doped high-T-c superconductor** *PHYSICAL REVIEW LETTERS*
  Chen, Y., Iyo, A., Yang, W., Zhou, X., Lu, D., Eisaki, H., Devereaux, T. P., Hussain, Z., Shen, Z.
  2006; 97 (23)
- **Systematic doping evolution of the underlying Fermi surface of La2-xSrxCuO4** *PHYSICAL REVIEW B*
  Yoshida, T., Zhou, X. J., Tanaka, K., Yang, W. L., Hussain, Z., Shen, Z., Fujimori, A., Sahrakorpi, S., Lindroos, M., Markiewicz, R. S., Bansil, A., Komiya, S., Ando, et al
  2006; 74 (22)
- **Calculation of overdamped c-axis charge dynamics and the coupling to polar phonons in cuprate superconductors** *PHYSICAL REVIEW B*
  Meevasana, W., Devereaux, T. P., Nagaosa, N., Shen, Z., Zaanen, J.
  2006; 74 (17)
- **Photoemission study of excess oxygen-doped La2CuO4.10** *18th International Symposium on Superconductivity (ISS 2005)*
  Hashimoto, M., Yoshida, T., Tanaka, K., Fujimori, A., Lu, D. H., Shen, Z. X., Wakimoto, S., Okusawa, M., Yamada, K.
  ELSEVIER SCIENCE BV.2006: 80–83
- **Sr2RhO4: a new, clean correlated electron metal** *NEW JOURNAL OF PHYSICS*
  Perry, R. S., Baumberger, F., Balicas, L., Kikugawa, N., Ingle, N. J., Rost, A., Mercure, J. F., Maeno, Y., Shen, Z. X., Mackenzie, A. P.
  2006; 8

- **Angle-resolved photoemission spectroscopy of perovskite-type transition-metal oxides and their analyses using tight-binding band structure** *Indo-US Conference on Novel and Complex Materials*
  Wadati, H., Yoshida, T., Chikamatsu, A., Kumigashira, H., Oshima, M., Eisaki, H., Shen, Z., Mizokawa, T., Fujimori, A.
  TAYLOR & FRANCIS LTD.2006: 617–35

- **Fermi surface and quasiparticle excitations of Sr2RhO4** *PHYSICAL REVIEW LETTERS*
  Baumberger, F., Ingle, N. J., Meevasana, W., Shen, K. M., Lu, D. H., Perry, R. S., Mackenzie, A. P., Hussain, Z., Singh, D. J., Shen, Z.
  2006; 96 (24)

- **Distinct spinon and holon dispersions in photoemission spectral functions from one-dimensional SrCuO2** *NATURE PHYSICS*
  Kim, B. J., Koh, H., Rotenberg, E., Oh, S., Eisaki, H., Motoyama, N., Uchida, S., Tohyama, T., Maekawa, S., Shen, Z., Kim, C.
  2006; 2 (6): 397-401

- **Doping dependence of the coupling of electrons to bosonic modes in the single-layer high-temperature Bi2Sr2CuO6 superconductor** *PHYSICAL REVIEW LETTERS*
  Meevasana, W., Ingle, N. J., Lu, D. H., Shi, J. R., Baumberger, F., Shen, K. M., Lee, W. S., Cuk, T., Eisaki, H., Devereaux, T. P., Nagaosa, N., Zaanen, J., Shen, et al
  2006; 96 (15)

- **Comment on "Multiple bosonic mode coupling in the electron self-energy of (La2-xSrx)CuO4" - Zhou et al. reply** *PHYSICAL REVIEW LETTERS*
  Zhou, X. J., Shi, J. R., Yang, W. L., Komiya, S., Ando, Y., Plummer, W., Hussain, Z., Shen, Z. X.
  2006; 96 (11)

- **Nested Fermi surface and electronic instability in Ca3Ru2O7** *PHYSICAL REVIEW LETTERS*
  Baumberger, F., Ingle, N. J., Kikugawa, N., Hossain, M. A., Meevasana, W., Perry, R. S., Shen, K. M., Lu, D. H., Damascelli, A., Rost, A., Mackenzie, A. P., Hussain, Z., Shen, et al
  2006; 96 (10)

- **Energy dispersion of 4f-derived emissions in photoelectron spectra of the heavy-fermion compound YbIr2Si2** *PHYSICAL REVIEW LETTERS*
  Danzenbacher, S., Kucherenko, Y., Laubschat, C., Vyalikh, D. V., Hossain, Z., Geibel, C., Zhou, X. J., Yang, W. L., Mannella, N., Hussain, Z., Shen, Z. X., Molodtsov, S. L.
  2006; 96 (10)

- **Puzzles about 1/8 magic doping in cuprate** *7th International Conference on Spectroscopies in Novel Superconductors (SNS 04)*
  Feng, D. L., Shen, Z. X., Zhou, X. J., Shen, K. M., Lu, D. H., van der Marel, D.
  PERGAMON-ELSEVIER SCIENCE LTD.2006: 198–200

- **Dependence of the Band Structure of C60 Monolayers on Molecular Orientations and Doping Observed by Angle-Resolved Photoemission** *JOURNAL OF PHYSICS AND CHEMISTRY OF SOLID*
  Brouet, V., Yang, W., Zhou, X., Hussain, Z., Shen, Z.
  2006; 67 (1-3): 218-222

- **Systematic Doping Evolution of the Underlying Fermi Surface in La2-xSrxCuO4** *PHYSICAL REVIEW B*
  Yoshida, Y., Zhou, X., Tanaka, K., Yang, W., Hussain, Z., Shen, Z., Fujimori, A., Sahrakorpi, S., Lindroos, M., Markiewicz, R., Bansil, A., Komiya, S., Ando, et al
  2006; 74 (22)

- **Normal state spectral lineshapes of nodal quasiparticles in single layer Bi2201 superconductor** *7th International Conference on Spectroscopies in Novel Superconductors (SNS 04)*
  Lanzara, A., Bogdanov, P. V., Zhou, X. J., Kaneko, N., Eisaki, H., Greven, M., Hussain, Z., Shen, Z. X.
  PERGAMON-ELSEVIER SCIENCE LTD.2006: 239–43

- **Polaronic behavior of undoped high-T-c cuprate superconductors from angle-resolved photoemission spectra** *PHYSICAL REVIEW LETTERS*
  Rosch, O., Gunnarsson, O., Zhou, X. J., Yoshida, T., Sasagawa, T., Fujimori, A., Hussain, Z., Shen, Z. X., Uchida, S.
  2005; 95 (22)

- **Nodal quasiparticle in pseudogapped colossal magnetoresistive manganites** *NATURE*
  Mannella, N., Yang, W. L., Zhou, X. J., Zheng, H., Mitchell, J. F., Zaanen, J., Devereaux, T. P., Nagaosa, N., Hussain, Z., Shen, Z. X.

2005; 438 (7067): 474-478

- **Quantitative analysis of Sr2RuO4 angle-resolved photoemission spectra: Many-body interactions in a model Fermi liquid** *PHYSICAL REVIEW B*
  Ingle, N. J., Shen, K. M., Baumberger, F., Meevasana, W., Lu, D. H., Shen, Z. X., Damascelli, A., Nakatsuji, S., Mao, Z. Q., Maeno, Y., Kimura, T., Tokura, Y.
  2005; 72 (20)

- **Direct observation of the mass renormalization in SrVO3 by angle resolved photoemission spectroscopy** *PHYSICAL REVIEW LETTERS*
  Yoshida, T., Tanaka, K., Yagi, H., Ino, A., Eisaki, H., Fujimori, A., Shen, Z. X.
  2005; 95 (14)

- **Multiple bosonic mode coupling in the electron self-energy of (La2-xSrx)CuO4** *PHYSICAL REVIEW LETTERS*
  Zhou, X. J., Shi, J. R., Yoshida, T., Cuk, T., Yang, W. L., Brouet, V., Nakamura, J., Mannella, N., Komiya, S., Ando, Y., Zhou, F., Ti, W. X., Xiong, et al
  2005; 95 (11)

- **Orientation-dependent C-60 electronic structures revealed by photoemission spectroscopy (vol 93, pg 197601, 2004)** *PHYSICAL REVIEW LETTERS*
  Brouet, Yang, W. L., Zhou, X. J., Choi, H. J., Louie, S. G., Cohen, M. L., Goldoni, A., Parmigiani, F., Hussain, Z., Shen, Z. X.
  2005; 95 (9)

- **Doping-induced reorientation of C-60 molecules on Ag(111)** *PHYSICAL REVIEW B*
  Tamai, A., Seitsonen, A. P., Fasel, R., Shen, Z. X., Osterwalder, J., Greber, T.
  2005; 72 (8)

- **Quantitative measurement of sheet resistance by evanescent microwave probe** *APPLIED PHYSICS LETTERS*
  Wang, Z. Y., Kelly, M. A., Shen, Z. X., Shao, L., Chu, W. K., Edwards, H.
  2005; 86 (15)

- **Anomalous high-energy dispersion in angle-resolved photoemission spectra from the insulating cuprate Ca2CuO2Cl2** *PHYSICAL REVIEW B*
  Ronning, F., Shen, K. M., Armitage, N. P., Damascelli, A., Lu, D. H., Shen, Z. X., MILLER, L. L., Kim, C.
  2005; 71 (9)

- **Nodal quasiparticles and antinodal charge ordering in Ca2-xNaxCuO2Cl2** *SCIENCE*
  Shen, K. M., Ronning, F., Lu, D. H., Baumberger, F., Ingle, N. J., Lee, W. S., Meevasana, W., Kohsaka, Y., Azuma, M., Takano, M., Takagi, H., Shen, Z. X.
  2005; 307 (5711): 901-904

- **Space charge effect and mirror charge effect in photoemission spectroscopy** *JOURNAL OF ELECTRON SPECTROSCOPY AND RELATED PHENOMENA*
  Zhou, X. J., WANNBERG, B., Yang, W. L., Brouet, V., Sun, Z., DOUGLAS, J. F., Dessau, D., Hussain, Z., Shen, Z. X.
  2005; 142 (1): 27-38

- **Quantitative analysis of Sr 2 RuO 4 angle-resolved photoemission spectra: Many-body interactions in a model Fermi liquid** *PHYSICAL REVIEW B*
  Ingle, N., Shen, K., Baumberger, F., Meevasana, W., Lu, D., Shen, Z., Damascelli, A., Nakatsuji, S., Mao, Z., Maeno, Y., Kimura, T., Tokura, Y.
  2005; 72 (205114)

- **Electron-Phonon Coupling in High-Temperature Cuprate Superconductors as Revealed by Angle-Resolved Photoemission Spectroscopy** *Synchrotron Radiation News*
  Zhou, X., Hussain, J., Shen, Z.
  2005; 18 (3)

- **Electronic structure and charge-density wave formation in La Te 1.95 and Ce Te 2.00** *PHYSICAL REVIEW B*
  Shin, K., Brouet, V., Ru, N., Shen, Z., Fisher, I.
  2005; 72 (8)

- **Missing quasiparticles and the chemical potential puzzle in the doping evolution of the cuprate superconductors** *PHYSICAL REVIEW LETTERS*
  Shen, K. M., Ronning, F., Lu, D. H., Lee, W. S., Ingle, N. J., Meevasana, W., Baumberger, F., Damascelli, A., Armitage, N. P., MILLER, L. L., Kohsaka, Y., Azuma, M., Takano, et al

2004; 93 (26)

- **Fermi surface reconstruction in the CDW state of CeTe3 observed by photoemission** *PHYSICAL REVIEW LETTERS*
  Brouet, V., Yang, W. L., Zhou, X. J., Hussain, Z., Ru, N., Shin, K. Y., Fisher, I. R., Shen, Z. X.
  2004; 93 (12)
- **Angle-resolved photoemission study of the lightly doped cuprates Bi2212** *International Symposium on Synchrotron Radiation Research for Spin and Electronic States in d and f Electron Systems*
  Tanaka, K., Yoshida, T., Fujimori, A., Lu, D. H., Zhou, X. J., Shen, Z. X., Hussain, Z., Eisaki, H., Uchida, S., Sugaya, T., Mizuno, T., Terasaki, I.
  ELSEVIER SCIENCE BV.2004: 277–79
- **ARPES study of T*-phase cuprate superconductor SmLa0.85Sr0.15CuO4-delta** *International Symposium on Synchrotron Radiation Research for Spin and Electronic States in d and f Electron Systems*
  Ino, A., Higashiguchi, M., Yamazaki, K., Yamasaki, T., Narimura, T., Kobayashi, K., Shimada, K., Namatame, H., Taniguchi, M., Yoshida, T., Fujimori, A., Shen, Z. X., Kakeshita, et al
  ELSEVIER SCIENCE BV.2004: 274–76
- **Thermodynamic and transport properties of underdoped cuprates from ARPES data** *International Symposium on Synchrotron Radiation Research for Spin and Electronic States in d and f Electron Systems*
  Yoshida, T., Zhou, X. J., Yagi, H., Lu, D. H., Tanaka, K., Fujimori, A., Hussain, Z., Shen, Z. X., Kakeshita, T., Eisaki, H., Uchida, S., Segawa, K., Lavrov, et al
  ELSEVIER SCIENCE BV.2004: 250–55
- **Coupling of the B-1g phonon to the antinodal electronic states of Bi2Sr2Ca0.92Y0.08Cu2O8+delta** *PHYSICAL REVIEW LETTERS*
  Cuk, T., Baumberger, F., Lu, D. H., Ingle, N., Zhou, X. J., Eisaki, H., Kaneko, N., Hussain, Z., Devereaux, T. P., Nagaosa, N., Shen, Z. X.
  2004; 93 (11)
- **Anisotropic electron-phonon interaction in the cuprates** *PHYSICAL REVIEW LETTERS*
  Devereaux, T. P., Cuk, T., Shen, Z. X., Nagaosa, N.
  2004; 93 (11)
- **Effects of next-nearest-neighbor hopping t ' on the electronic structure of cuprate superconductors** *PHYSICAL REVIEW B*
  Tanaka, K., Yoshida, T., Fujimori, A., Lu, D. H., Shen, Z. X., Zhou, X. J., Eisaki, H., Hussain, Z., Uchida, S., Aiura, Y., Ono, K., Sugaya, T., Mizuno, et al
  2004; 70 (9)
- **A spectroscopic view of electron-phonon coupling at metal surfaces** *5th Motorola Workshop on Computational Materials and Electronics*
  Tang, S. J., Shi, J. R., Wu, B., Sprunger, P. T., Yang, W. L., Brouet, V., Zhou, X. J., Hussain, Z., Shen, Z. A., Zhang, Z. Y., Plummer, E. W.
  WILEY-V C H VERLAG GMBH.2004: 2345–52
- **Dichotomy between nodal and antinodal quasiparticles in underdoped (La2-xSrx)CuO4 superconductors** *PHYSICAL REVIEW LETTERS*
  Zhou, X. J., Yoshida, T., Lee, D. H., Yang, W. L., Brouet, V., Zhou, F., Ti, W. X., Xiong, J. W., Zhao, Z. X., Sasagawa, T., Kakeshita, T., Eisaki, H., Uchida, et al
  2004; 92 (18)
- **Direct extraction of the Eliashberg function for electron-phonon coupling: A case study of Be(10(1)over-bar0)** *PHYSICAL REVIEW LETTERS*
  Shi, J. R., Tang, S. J., Wu, B., Sprunger, P. T., Yang, W. L., Brouet, V., Zhou, X. J., Hussain, Z., Shen, Z. X., Zhang, Z. Y., Plummer, E. W.
  2004; 92 (18)
- **Fully gapped single-particle excitations in lightly doped cuprates** *PHYSICAL REVIEW B*
  Shen, K. M., Yoshida, T., Lu, D. H., Ronning, F., Armitage, N. P., Lee, W. S., Zhou, X. J., Damascelli, A., Feng, D. L., Ingle, N. J., Eisaki, H., Kohsaka, Y., Takagi, et al
  2004; 69 (5)
- **Effect of chemical inhomogeneity in bismuth-based copper oxide superconductors** *PHYSICAL REVIEW B*
  Eisaki, H., Kaneko, N., Feng, D. L., Damascelli, A., Mang, P. K., Shen, K. M., Shen, Z. X., Greven, M.
  2004; 69 (6)
- **Sharp-mode coupling in high-Tc superconductors** *Nature*
  Cuk, T., Shen, Z., Gromko, A., Sun, Z., Dessau, D.

2004; 432 (1)

- **A Review of Electron-Phonon Coupling Seen in the High-Tc Superconductors by ARPES** *IPSS, basic solid state physics*
  Cuk, T., Lu, D., Zhou, X., Shen, Z., Devereaux, T., Nagaosa, N.
  2004
- **Angle-resolved photoemission spectral function analysis of the electron-doped cuprate Nd1.85Ce0.15CuO4** *PHYSICAL REVIEW B*
  Armitage, N. P., Lu, D. H., Kim, C., Damascelli, A., Shen, K. M., Ronning, F., Feng, D. L., Bogdanov, P., Zhou, X. J., Yang, W. L., Hussain, Z., Mang, P. K., Kaneko, et al
  2003; 68 (6)
- **Metallic behavior of lightly doped La2-xSrxCuO4 with a Fermi surface forming an arc** *PHYSICAL REVIEW LETTERS*
  Yoshida, T., Zhou, X. J., Sasagawa, T., Yang, W. L., Bogdanov, P. V., Lanzara, A., Hussain, Z., Mizokawa, T., Fujimori, A., Eisaki, H., Shen, Z. X., Kakeshita, T., Uchida, et al
  2003; 91 (2)
- **High-temperature superconductors: Universal nodal Fermi velocity.** *Nature*
  Zhou, X. J., Yoshida, T., Lanzara, A., Bogdanov, P. V., Kellar, S. A., Shen, K. M., Yang, W. L., Ronning, F., Sasagawa, T., Kakeshita, T., Noda, T., Eisaki, H., Uchida, et al
  2003; 423 (6938): 398-?
- **Universal nodal Fermi velocity** *NATURE*
  Zhou, X. J., Yoshida, T., Lanzara, A., Bogdanov, P. V., Kellar, S. A., Shen, K. M., Yang, W. L., Ronning, F., Sasagawa, T., Kakeshita, T., Noda, T., Eisaki, H., Uchida, et al
  2003; 423 (6938): 398-398
- **ARPES study on electronic evolution in Ca2-xNaxCuO2Cl2** *23rd International Conference on Low Temperature Physics (LT23)*
  Sasagawa, T., Ronning, F., Kohsaka, Y., Shen, K. M., Yoshida, T., Azuma, M., Takano, M., Shen, Z. X., Takagi, H.
  ELSEVIER SCIENCE BV.2003: 307–308
- **Angle-resolved photoemission spectroscopy of (Ca,Na)(2)CuO2Cl2 crystals: Fingerprints of a magnetic insulator in a heavily underdoped superconductor** *JOURNAL OF THE PHYSICAL SOCIETY OF JAPAN*
  Kohsaka, Y., Sasagawa, T., Ronning, F., Yoshida, T., Kim, C., Hanaguri, T., Azuma, M., Takano, M., Shen, Z. X., Takagi, H.
  2003; 72 (5): 1018-1021
- **ARPES study of lightly doped La2-xSrxCuO4** *23rd International Conference on Low Temperature Physics (LT23)*
  Yoshida, T., Zhou, X. J., Sasagawa, T., Yang, W. L., Bogdanov, P. V., Lanzara, A., Hussain, Z., Mizokawa, T., Fujimori, A., Eisaki, H., Shen, Z. X., Kakeshita, T., Uchida, et al
  ELSEVIER SCIENCE BV.2003: 303–304
- **Evolution of a metal to insulator transition in Ca2-xNaxCuO2Cl2 as seen by angle-resolved photoemission** *PHYSICAL REVIEW B*
  Ronning, F., Sasagawa, T., Kohsaka, Y., Shen, K. M., Damascelli, A., Kim, C., Yoshida, T., Armitage, N. P., Lu, D. H., Feng, D. L., MILLER, L. L., Takagi, H., Shen, et al
  2003; 67 (16)
- **Band structure and Fermi surface of electron-doped C-60 monolayers** *SCIENCE*
  Yang, W. L., Brouet, V., Zhou, X. J., Choi, H. J., Louie, S. G., Cohen, M. L., Kellar, S. A., Bogdanov, P. V., Lanzara, A., Goldoni, A., Parmigiani, F., Hussain, Z., Shen, et al
  2003; 300 (5617): 303-307
- **Angle-resolved photoemission studies of the cuprate superconductors** *REVIEWS OF MODERN PHYSICS*
  Damascelli, A., Hussain, Z., Shen, Z. X.
  2003; 75 (2): 473-541
- **Photoemission studies in MgB2** *PHYSICA C-SUPERCONDUCTIVITY AND ITS APPLICATIONS*
  Uchiyama, H., Tajima, S., Shen, K. M., Lu, D. H., Shen, Z. X.
  2003; 385 (1-2): 85-90
- **Universality of the electronic structure from a half-filled CuO2 plane** *PHYSICAL REVIEW B*
  Ronning, F., Kim, C., Shen, K. M., Armitage, N. P., Damascelli, A., Lu, D. H., Feng, D. L., Shen, Z. X., MILLER, L. L., Kim, Y. J., Chou, F., Terasaki, I.
  2003; 67 (3)

- **Angle-Resolved Photoemission Spectroscopy Studies of Cuprate Superconductors** *Frontiers of Science*
  Shen, Z.
  2003: 71-94

- **Coupling of quasiparticles to phonons in high temperature superconductors** *JOURNAL OF ELECTRON SPECTROSCOPY AND RELATED PHENOMENA*
  Lanzara, A., Bogdanov, P. V., Zhou, X. J., Eisaki, H., Yoshida, T., Fujimori, A., Hussain, Z., Shen, Z. X.
  2002; 127 (1-2): 37-41

- **Anomalous momentum dependence of the quasiparticle scattering rate in overdoped Bi2Sr2CaCu2O8** *PHYSICAL REVIEW LETTERS*
  Bogdanov, P. V., Lanzara, A., Zhou, X. J., Yang, W. L., Eisaki, H., Hussain, Z., Shen, Z. X.
  2002; 89 (16)

- **High resolution angle-resolved photoemission study of high temperature superconductors: charge-ordering, bilayer splitting and electron-phonon coupling** *JOURNAL OF ELECTRON SPECTROSCOPY AND RELATED PHENOMENA*
  Zhou, X. J., Hussain, Z., Shen, Z. X.
  2002; 126 (1-3): 145-162

- **Role of the electron-phonon interaction in the strongly correlated cuprate superconductors** *PHILOSOPHICAL MAGAZINE B-PHYSICS OF CONDENSED MATTER STATISTICAL MECHANICS ELECTRONIC OPTICAL AND MAGNETIC PROPERTIES*
  Shen, Z. X., Lanzara, A., Ishihara, S., Nagaosa, N.
  2002; 82 (13): 1349-1368

- **Evanescent microwave probe measurement of low-k dielectric films** *JOURNAL OF APPLIED PHYSICS*
  Wang, Z. Y., Kelly, M. A., Shen, Z. X., Wang, G., Xiang, X. D., Wetzel, J. T.
  2002; 92 (2): 808-811

- **Doping dependence of an n-type cuprate superconductor investigated by angle-resolved photoemission spectroscopy** *PHYSICAL REVIEW LETTERS*
  Armitage, N. P., Ronning, F., Lu, D. H., Kim, C., Damascelli, A., Shen, K. M., Feng, D. L., Eisaki, H., Shen, Z. X., Mang, P. K., Kaneko, N., Greven, M., Onose, et al
  2002; 88 (25)

- **Electronic excitations near the Brillouin zone boundary of Bi2Sr2CaCu2O8+delta** *PHYSICAL REVIEW B*
  Feng, D. L., Kim, C., Eisaki, H., Lu, D. H., Damascelli, A., Shen, K. M., Ronning, F., Armitage, N. P., Kaneko, N., Greven, M., Shimoyama, J., Kishio, K., Yoshizaki, et al
  2002; 65 (22)

- **Photoemission study of the intra-unit-cell coupling in a trilayer cuprate** *INTERNATIONAL JOURNAL OF MODERN PHYSICS B*
  Feng, D. L., Eisaki, H., Shen, K. M., Damascelli, A., Kim, C., Lu, D. H., Shen, Z. X., Shimizu, K., Shimoyama, J. I., Kishio, K., Motoyama, N., Kaneko, N., Greven, et al
  2002; 16 (11-12): 1691-1696

- **Coexistence of interfering and noninterfering channels in resonant photoemission spectra across the Cu 2p -> 3d threshold** *PHYSICAL REVIEW B*
  Pagliara, S., Sangaletti, L., Goldoni, A., Kim, C., Shen, Z. X., Revcolevschi, A., Dhalenne, G., Parmigiani, F.
  2002; 65 (20)

- **Anomalous temperature dependence in the photoemission spectral function of cuprates** *PHYSICAL REVIEW B*
  Kim, C., Ronning, F., Damascelli, A., Feng, D. L., Shen, Z. X., Wells, B. O., Kim, Y. J., Birgeneau, R. J., Kastner, M. A., MILLER, L. L., Eisaki, H., Uchida, S.
  2002; 65 (17)

- **Momentum-resolved charge excitations in a prototype one-dimensional Mott insulator** *PHYSICAL REVIEW LETTERS*
  Hasan, M. Z., Montano, P. A., Isaacs, E. D., Shen, Z. X., Eisaki, H., Sinha, S. K., Islam, Z., Motoyama, N., Uchida, S.
  2002; 88 (17)

- **Electronic structure of MgB2 from angle-resolved photoemission spectroscopy** *PHYSICAL REVIEW LETTERS*
  Uchiyama, H., Shen, K. M., Lee, S., Damascelli, A., Lu, D. H., Feng, D. L., Shen, Z. X., Tajima, S.
  2002; 88 (15)

- **Electronic structure of the trilayer cuprate superconductor Bi2Sr2Ca2Cu3O10+delta** *PHYSICAL REVIEW LETTERS*
  Feng, D. L., Damascelli, A., Shen, K. M., Motoyama, N., Lu, D. H., Eisaki, H., Shimizu, K., Shimoyama, J., Kishio, K., Kaneko, N., Greven, M., Gu, G. D., Zhou, et al
  2002; 88 (10)

- **Doping-dependent evolution of the electronic structure of La2-xSrxCuO4 in the superconducting and metallic phases** *PHYSICAL REVIEW B*
  Ino, A., Kim, C., Nakamura, M., Yoshida, T., Mizokawa, T., Fujimori, A., Shen, Z. X., Kakeshita, T., Eisaki, H., Uchida, S.
  2002; 65 (9)

- **Electronic Band Structure of Layered Ruthenates** *Electron Spectroscopies Applied to Low-Dimensional Materials*
  Puchkov, A., Shen, Z.
  Springer, Dordrecht.2002: 445–496

- **Angle-resolved photoemission study of Zn-doped PrBa 2 Cu 4 O 8 : Possible observation of single-particle spectral function for a Tomonaga-Luttinger liquid** *Phys. Rev. B*
  Mizokawa, T., Nakada, K., Kim, C., Shen, Z., Yoshida, T., Fujimori, A., Horii, S., Yamada, Y., Ikuta, H., Mizutani, U.
  2002; 65 (19): 193101

- **Comment on "Fermi surface, surface states, and surface reconstruction in Sr2RuO4" - Reply** *PHYSICAL REVIEW LETTERS*
  Damascelli, A., Shen, K. M., Lu, D. H., Shen, Z. X.
  2001; 87 (23)

- **Surface electronic structure of Sr2RuO4** *PHYSICAL REVIEW B*
  Shen, K. M., Damascelli, A., Lu, D. H., Armitage, N. P., Ronning, F., Feng, D. L., Kim, C., Shen, Z. X., Singh, D. J., Mazin, I. I., Nakatsuji, S., Mao, Z. Q., Maeno, et al
  2001; 64 (18)

- **Photoemission study of Pb doped Bi2Sr2CaCu2O8: A Fermi surface picture** *PHYSICAL REVIEW B*
  Bogdanov, P. V., Lanzara, A., Zhou, X. J., Kellar, S. A., Feng, D. L., Lu, E. D., Eisaki, H., Shimoyama, J. I., Kishio, K., Hussain, Z., Shen, Z. X.
  2001; 64 (18)

- **Charge excitations in a quantum antiferromagnet** *3rd International Conference on New Theories, Discoveries and Applications of Superconductors and Related Materials*
  Hasan, M. Z., Isaacs, E. D., Shen, Z. X., MILLER, L. L.
  ELSEVIER SCIENCE BV.2001: 618–621

- **Momentum resolved resonant inelastic X-ray scattering as a novel tool to study electronic structure of complex insulators** *3rd International Conference on New Theories, Discoveries and Applications of Superconductors and Related Materials*
  Hasan, M. Z., Isaacs, E. D., Shen, Z. X.
  ELSEVIER SCIENCE BV.2001: 265–268

- **Anomalous electronic structure and pseudogap effects in Nd1.85Ce0.15CuO4** *PHYSICAL REVIEW LETTERS*
  Armitage, N. P., Lu, D. H., Kim, C., Damascelli, A., Shen, K. M., Ronning, F., Feng, D. L., Bogdanov, P., Shen, Z. X., Onose, Y., Taguchi, Y., Tokura, Y., Mang, et al
  2001; 87 (14)

- **X-ray standing-wave investigations of valence electronic structure** *PHYSICAL REVIEW B*
  Woicik, J. C., Nelson, E. J., Heskett, D., Warner, J., Berman, L. E., Karlin, B. A., Vartanyants, I. A., Hasan, M. Z., Kendelewicz, T., Shen, Z. X., Pianetta, P.
  2001; 64 (12)

- **Evidence for ubiquitous strong electron-phonon coupling in high-temperature superconductors** *NATURE*
  Lanzara, A., Bogdanov, P. V., Zhou, X. J., Kellar, S. A., Feng, D. L., Lu, E. D., Yoshida, T., Eisaki, H., Fujimori, A., Kishio, K., Shimoyama, J. I., Noda, T., Uchida, et al
  2001; 412 (6846): 510-514

- **Dual nature of the electronic structure of (La2-x-yNdySrx)CuO4 and La1.85Sr0.15CuO4** *PHYSICAL REVIEW LETTERS*
  Zhou, X. J., Yoshida, T., Kellar, S. A., Bogdanov, P. V., Lu, E. D., Lanzara, A., Nakamura, M., Noda, T., Kakeshita, T., Eisaki, H., Uchida, S., Fujimora, A., Hussain, et al
  2001; 86 (24): 5578-5581

- **Bilayer splitting in the electronic structure of heavily overdoped Bi2Sr2CaCu2O8+delta** *PHYSICAL REVIEW LETTERS*
  Feng, D. L., Armitage, N. P., Lu, D. H., Damascelli, A., Hu, J. P., Bogdanov, P., Lanzara, A., Ronning, F., Shen, K. M., Eisaki, H., Kim, C., Shen, Z. X., Shimoyama, et al
  2001; 86 (24): 5550-5553

- **From Mott insulator to overdoped superconductor: evolution of the electronic structure of cuprates studied by ARPES** *JOURNAL OF ELECTRON SPECTROSCOPY AND RELATED PHENOMENA*
  Damascelli, A., Lu, D. H., Shen, Z. X.
  2001; 117: 165-187

- **Electronlike Fermi surface and remnant (pi,0) feature in overdoped La1.78Sr0.22CuO4** *PHYSICAL REVIEW B*
  Yoshida, T., Zhou, X. J., Nakamura, M., Kellar, S. A., Bogdanov, P. V., Lu, E. D., Lanzara, A., Hussain, Z., Ino, A., Mizokawa, T., Fujimori, A., Eisaki, H., Kim, et al
  2001; 63 (22)

- **Superconducting gap and strong in-plane anisotropy in untwinned YBa2Cu3O7-delta** *PHYSICAL REVIEW LETTERS*
  Lu, D. H., Feng, D. L., Armitage, N. P., Shen, K. M., Damascelli, A., Kim, C., Ronning, F., Shen, Z. X., Bonn, D. A., Liang, R., Hardy, W. N., Rykov, A. I., Tajima, et al
  2001; 86 (19): 4370-4373

- **Evidence of electron fractionalization from photoemission spectra in the high temperature superconductors** *PHYSICAL REVIEW LETTERS*
  Orgad, D., Kivelson, S. A., Carlson, E. W., Emery, V. J., Zhou, X. J., Shen, Z. X.
  2001; 86 (19): 4362-4365

- **A photoemission investigation of the superconducting gap in an electron-doped cuprate superconductor** *8th International Conference on Electronic Spectroscopy and Structure*
  Armitage, N. P., Lu, D. H., Kim, C., Damascelli, A., Shen, K. M., Ronning, F., Shen, Z. X., Onose, Y., Taguchi, Y., Tokura, Y.
  ELSEVIER SCIENCE BV.2001: 623–627

- **Inelastic X-ray scattering as a novel tool to study electronic excitations in complex insulators** *8th International Conference on Electronic Spectroscopy and Structure*
  Hasan, M. Z., Isaacs, E., Shen, Z. X., MILLER, L. L.
  ELSEVIER SCIENCE BV.2001: 705–709

- **Fermi surface of Sr2RuO4 from angle resolved photoemission** *8th International Conference on Electronic Spectroscopy and Structure*
  Damascelli, A., Shen, K. M., Lu, D. H., Armitage, N. P., Ronning, F., Feng, D. L., Kim, C., Shen, Z. X., Kimura, T., Tokura, Y., Mao, Z. Q., Maeno, Y.
  ELSEVIER SCIENCE BV.2001: 641–646

- **Superconducting gap anisotropy in Nd1.85Ce0.15CuO4: Results from photoemission** *PHYSICAL REVIEW LETTERS*
  Armitage, N. P., Lu, D. H., Feng, D. L., Kim, C., Damascelli, A., Shen, K. M., Ronning, F., Shen, Z. X., Onose, Y., Taguchi, Y., Tokura, Y.
  2001; 86 (6): 1126-1129

- **Pseudogaps and dynamical stripes in La2-xSrxCuO4 from photoemission spectroscopy** *CREST International Workshop on Pseudo Gap, Spin Gap and Anomalous Metals*
  Fujimori, A., Ino, A., Yoshida, T., Mizokawa, T., Nakamura, M., Kim, C., Shen, Z. X., Kishio, K., Kakeshita, T., Eisaki, H., Uchida, S.
  PERGAMON-ELSEVIER SCIENCE LTD.2001: 15–19

- **Angle resolved photoemission spectroscopy of Sr2CuO2Cl2 - a revisit** *American Physical Society*
  Dürr, C., Legner, S., Hayn, R., Borisenko, S., Hu, Z., Theresiak, A., Knupfer, M., Golden, M., Fink, J., Ronning, F., Shen, Z., Eisaki, H., Uchida, et al
  2001; 63 (1): 014505

- **Photoemission study of Pb doped Bi 2 Sr 2 CaCu 2 O 8 : A Fermi surface picture** *Photoemission study of Pb doped Bi 2 Sr 2 CaCu 2 O 8 : A Fermi surface picture*
  Bogdanov, P., Lanzara, A., Zhou, X., Kellar, S., Feng, D., Lu, E., Eisaki, H., Shimoyama, J., Kishio, K., Hussain, Z., Shen, Z.
  2001; 64 (18)

- **Chapter 201 Angle-resolved photoemission studies of untwinned yttrium barium copper oxide** *Handbook on the Physics and Chemistry of Rare Earths*
  Schabel, M., Shen, Z.
  Elsevier.2001: 391–435

- **Evidence for abrupt change in dispersion and scattering rate of quasiparticles in Bi2Sr2CaCu2O8** *CREST International Workshop on Pseudo Gap, Spin Gap and Anomalous Metals*
  Lanzara, A., Bogdanov, P. V., Kellar, S. A., Zhou, X. J., Lu, E. D., Gu, G., Shimoyama, J. I., Kishio, K., Hussain, Z., Shen, Z. X.
  PERGAMON-ELSEVIER SCIENCE LTD.2001: 21–24

- **Nodal spectral weight and Fermi surface in La2-xSrxCuO4** *3rd International Conference on Stripes and High Tc Superconductivity (STRIPES 2000)*
  Yoshida, T., Nakamura, M., Ino, A., Mizokawa, T., Fujimori, A., Zhou, X. J., Kellar, S. A., Bogdanov, P. V., Lu, E. D., Lanzara, A., Eisaki, H., Hussain, Z., Shen, et al
  WORLD SCIENTIFIC PUBL CO PTE LTD.2000: 3777–82

- **ARPES study of LSCO and PBCO: Electronic structure of the stripe phase and the 1/4-filled Cu-O chains** *3rd International Conference on Stripes and High Tc Superconductivity (STRIPES 2000)*
  Mizokawa, T., Ino, A., Yoshida, T., Fujimori, A., Kim, C., Eisaki, H., Shen, Z. X., Horii, S., Kakeshita, T., Uchida, S., Tomimoto, K., Tajima, S., Yamada, et al
  WORLD SCIENTIFIC PUBL CO PTE LTD.2000: 3602–9

- **Fermi surface, surface states, and surface reconstruction in Sr2RuO4** *PHYSICAL REVIEW LETTERS*
  Damascelli, A., Lu, D. H., Shen, K. M., Armitage, N. P., Ronning, F., Feng, D. L., Kim, C., Shen, Z. X., Kimura, T., Tokura, Y., Mao, Z. Q., Maeno, Y.
  2000; 85 (24): 5194-5197

- **Angle-resolved photoemission study of insulating and metallic Cu-O chains in PrBa2Cu3O7 and PrBa2Cu4O8** *PHYSICAL REVIEW LETTERS*
  Mizokawa, T., Kim, C., Shen, Z. X., Ino, A., Yoshida, T., Fujimori, A., Goto, M., Eisaki, H., Uchida, S., Tagami, M., Yoshida, K., Rykov, A. I., Siohara, et al
  2000; 85 (22): 4779-4782

- **On the similarity of the spectral weight pattern of Bi2Sr2CaCuO8+delta and La1.48Nd0.4Sr0.12CuO4** *International Conference on Materials and Mechanisms of Superconductivity High Temperature Superconductors VI*
  Feng, D. L., Lu, D. H., Shen, K. M., Oh, S., Andrus, A., O'Donnell, J., Eckstein, J. N., Shimoyama, J., Kishio, K., Shen, Z. X.
  ELSEVIER SCIENCE BV.2000: 2097–2098

- **Particle-hole excitations in insulating antiferromagnet Ca2CuO2Cl2** *International Conference on Materials and Mechanisms of Superconductivity High Temperature Superconductors VI*
  Hasan, M. Z., Isaacs, E. D., Shen, Z. X., MILLER, L. L.
  ELSEVIER SCIENCE BV.2000: 781–782

- **Fermi surface, pseudogap and superconducting gap in La2-xSrxCuO4** *International Conference on Materials and Mechanisms of Superconductivity High Temperature Superconductors VI*
  Fujimori, A., Ino, A., Yoshida, T., Mizokawa, T., Nakamura, M., Kim, C., Shen, Z. X., Kakeshita, T., Eisaki, H., Uchida, S.
  ELSEVIER SCIENCE BV.2000: 2067–2070

- **Electronic structure of Nd1.85Ce0.15CuO4: Evidence for a disparity between hole and electron doped cuprate superconductors** *International Conference on Materials and Mechanisms of Superconductivity High Temperature Superconductors VI*
  Armitage, N. P., Lu, D. H., Kim, C., Damascelli, A., Shen, K. M., Ronning, F., Onose, Y., Taguchi, Y., Tokura, Y., Shen, Z. X.
  ELSEVIER SCIENCE BV.2000: 2083–2086

- **ARPES features of the AF insulators Sr2CuO2Cl2 and Ca2CuO2Cl2 close to the AF zone boundary** *International Conference on Materials and Mechanisms of Superconductivity High Temperature Superconductors VI*
  Ronning, F., Kim, C., Damascelli, A., Armitage, N. P., Lu, D. H., Shen, K. M., MILLER, L. L., Kim, Y. J., Kastner, M. A., Birgeneau, R. J., Shen, Z. X.
  ELSEVIER SCIENCE BV.2000: 2087–2090

- **Evidence for an energy scale for quasiparticle dispersion in Bi2Sr2CaCu2O8** *Physical review letters*
  Bogdanov, P. V., Lanzara, A., Kellar, S. A., Zhou, X. J., Lu, E. D., Zheng, W. J., Gu, G., Shimoyama, J., Kishio, K., Ikeda, H., Yoshizaki, R., Hussain, Z., Shen, et al
  2000; 85 (12): 2581-4

- **Electronic structure of La2-xSrxCuO4 in the vicinity of the superconductor-insulator transition** *PHYSICAL REVIEW B*
  Ino, A., Kim, C., Nakamura, M., Yoshida, T., Mizokawa, T., Shen, Z. X., Fujimori, A., Kakeshita, T., Eisaki, H., Uchida, S.
  2000; 62 (6): 4137-4141

- **Signature of superfluid density in the single-particle excitation spectrum of Bi(2)Sr(2)CaCu(2)O(8+delta)** *Science (New York, N.Y.)*
  Feng, D. L., Lu, D. H., Shen, K. M., Kim, C., Eisaki, H., Damascelli, A., Yoshizaki, R., Shimoyama, J., Kishio, K., Gu, G. D., Oh, S., Andrus, A., O'Donnell, et al
  2000; 289 (5477): 277-81
- **Signature of superfluid density in the single-particle excitation spectrum of Bi2Sr2CaCu2O8+delta** *SCIENCE*
  Feng, D. L., Lu, D. H., Shen, K. M., Kim, C., Eisaki, H., Damascelli, A., Yoshizaki, R., Shimoyama, J., Kishio, K., Gu, G. D., Oh, S., Andrus, A., O'Donnell, et al
  2000; 289 (5477): 277-281
- **Electronic structure of mott insulators studied by inelastic X-ray scattering** *Science (New York, N.Y.)*
  Hasan, M. Z., Isaacs, E. D., Shen, Z., Miller, L. L., Tsutsui, K., Tohyama, T., Maekawa, S.
  2000; 288 (5472): 1811-4
- **Electronic structure of Mott insulators studied by inelastic X-ray scattering** *SCIENCE*
  Hasan, M. Z., Isaacs, E. D., Shen, Z. X., MILLER, L. L., Tsutsui, K., Tohyama, T., Maekawa, S.
  2000; 288 (5472): 1811-1814
- **Final Report to the DOE on the Construction of the High Energy Resolution Spectrometer (HERS) Endstation on Beamline 10.0.1.1 of the Advanced Light Source**
  Kellar, S., Shen, Z.
  Stanford University.
  2000
- **Cover-Superconducting secrets-(ARPES data for Nd1. 85Ce0. 15CuO4, an electron-doped cuprate superconductor** *Physics World*
  Armitage, N., Shen, Z., Tokura, Y.
  2000; 13 (2): 33
- **Metallic character in the electronic structure of the stripe phase** *Physical Review Letters*
  Zhou, ., Yoshida, T., Kellar, S., Bogdanov, P., Lu, E., Lanzara, A., Nakamura, M., Noda, T., Kakeshita, T., Eisaki, H., Uchida, S., Fujimori, A., Hussain, et al
  2000; 86
- **Temperature Dependence of electronic Properties of K3C60 and K4C60 Single Phase Films Investigated by Means of Electron Spectroscopies** *JOURNAL OF CHEMICAL PHYSICS*
  Goldoni, A., Sangaletti, L., Friedmann, S., Shen, Z., Peloi, M., Parmigiani, F., Comelli, G., Paolucci, G.
  2000; 113 (18): 8266-8275
- **Spin liquid state around a doped hole in insulating cuprates** *JOURNAL OF THE PHYSICAL SOCIETY OF JAPAN*
  Tohyama, T., Shibata, Y., Maekawa, S., Shen, Z. X., Nagaosa, N., Miller, L. L.
  2000; 69 (1): 9–12
- **Direct Electronic Structure Measurements of the Colossal Magnetoresistive Oxides** *Colossal Magnetoresistive Oxides*
  Dessau, D., Shen, Z.
  Gordon and Breach Publishers.2000
- **Angle-resolved photoemission study of untwinned PrBa2Cu3O7: Undoped CuO2 plane and doped CuO3 chain** *PHYSICAL REVIEW B*
  Mizokawa, T., Kim, C., Shen, Z. X., Ino, A., Fujimori, A., Goto, M., Eisaki, H., Uchida, S., Tagami, M., Yoshida, K., Rykov, A. I., Siohara, Y., Tomimoto, et al
  1999; 60 (17): 12335-12341
- **One-Dimensional Electronic Structure and Suppression of d-Wave Node State in (La(1.28)Nd(0.6)Sr(0.12))CuO(4).** *Science (New York, N.Y.)*
  Zhou, X. J., Bogdanov, P., Kellar, S. A., Noda, T., Eisaki, H., Uchida, S., Hussain, Z., Shen, Z.
  1999; 286 (5438): 268-272
- **Novel electronic structure of cuprate superconductors revealed by the anomalous spectral lineshape in ARPES experiments**
  Shen, Z. X., Sawatzky, G. A.
  WILEY-V C H VERLAG GMBH.1999: 523–29
- **Angle-resolved photoemission electron spectroscopy reveals a Fermi surface remnant with a d-wave like dispersion in the Mott insulator, Ca2CuO2Cl2** *7th NEC Symposium on Fundamental Approaches to New Material Phases - Phase Control in Spin-Charge-Orbital Complex Systems*

Ronning, F., Kim, C., Shen, Z. X.
ELSEVIER SCIENCE SA.1999: 17–21

- **Phase transition, molecular motions, and inequivalent carbon atoms in K3C60 (111) single-phase ordered films** *PHYSICAL REVIEW B*
  Goldoni, A., Sangaletti, L., Parmagiani, F., Friedmann, S. L., Shen, Z. X., Peloi, M., Comelli, G., Paolucci, G.
  1999; 59 (24): 16071–75
- **Condensed matter physics - Is this why T-c is so low?** *SCIENCE*
  Balatsky, A. V., Shen, Z. X.
  1999; 284 (5417): 1137-1138
- **Fermi surface evolution in cuprates: an angle-resolved photoemission study** *1st Euroconference on Anomalous Complex Superconductors*
  Ronning, F., Kim, C., Shen, Z. X.
  ELSEVIER SCIENCE BV.1999: 320–324
- **Fermi surface and band dispersion in La2-xSrxCuO4** *JOURNAL OF THE PHYSICAL SOCIETY OF JAPAN*
  Ino, A., Kim, C., Mizokawa, T., Shen, Z. X., Fujimori, A., Takaba, M., Tamasaku, K., Eisaki, H., Uchida, S.
  1999; 68 (5): 1496–99
- **Electronic structure measurements of colossal magnetoresistive manganese-oxides: Polaronic effects on the band structure** *International Conference on Superconductivity and Magnetism*
  Dessau, D. S., Saitoh, T., Park, C. H., Shen, Z. X., Villella, P., Hamada, N., Moritomo, Y., Tokura, Y.
  SPRINGER/PLENUM PUBLISHERS.1999: 273–76
- **Fermi-Liquid Versus Pseudogap Behaviors in Filling-Control Transition-Metal Oxides** *Physics and Chemistry of Transition Metal Oxides*
  Fujimori, A., Yoshida, T., Ino, A., Mizokawa, T., Kim, C., Shen, Z., Taguchi, Y., Katsufuji, T., Tokura, Y., Eisaki, H., Uchida, S., Kishio, K.
  Springer, Berlin, Heidelberg.1999: 111–119
- **Dominant role of a pseudogap in the physics of the colossal magnetoresistive oxides** *1st International Conference on New Theories, Discoveries, and Applications of Superconductors and Related Materials (New3SC-1)*
  Dessau, D. S., Saitoh, T., Park, C. H., Shen, Z. X., Moritomo, Y., Tokura, Y.
  WORLD SCIENTIFIC PUBL CO PTE LTD.1998: 3389–92
- **Photoemission evidence for a remnant fermi surface and a d-wave-like dispersion in insulating Ca2CuO2Cl2** *Science (New York, N.Y.)*
  Ronning, F., Kim, C., Feng, D. L., Marshall, D. S., Loeser, A. G., Miller, L. L., Eckstein, J. N., Bozovic, I., Shen, Z.
  1998; 282 (5396): 2067-72
- **ARPES results on Sr2RuO4: Fermi surface revisited** *PHYSICAL REVIEW B*
  Puchkov, A. V., Shen, Z. X., Kimura, T., Tokura, Y.
  1998; 58 (20): 13322-13325
- **Correlation and electron-phonon effects in the valence-band photoemission spectra of single-phase K3C60 films** *PHYSICAL REVIEW B*
  Goldoni, A., Friedmann, S. L., Shen, Z. X., Parmigiani, F.
  1998; 58 (16): 11023-11028
- **Chemical potential shift, density of states and Fermi surfaces in overdoped and underdoped La2-xSrxCuO4** *International Conference on Spectroscopies in Novel Superconductors (SNS'97)*
  Fujimori, A., Ino, A., Mizokawa, T., Kim, C., Shen, Z. X., Sasagawa, T., Kimura, T., Kishio, K., Takaba, M., Tamasaku, K., Eisaki, H., Uchidau, S.
  PERGAMON-ELSEVIER SCIENCE LTD.1998: 1892–96
- **(Sr1-xCax)(3)Ru2O7 system: Optical and ARPES results**
  Puchkov, A. V., Schabel, M. C., Basov, D. N., Startseva, T., Cao, G., Timusk, T., Shen, Z. X.
  PERGAMON-ELSEVIER SCIENCE LTD.1998: 1907–11
- **Comparison of the measured electronic structure of the colossal magnetoresistive manganites and high T-c superconductors: Band structure, photoemission lineshapes, and a pseudogap** *International Conference on Spectroscopies in Novel Superconductors (SNS'97)*
  Dessau, D. S., Saitoh, T., Villella, P., Park, C. H., Shen, Z. X., Moritomo, Y., Tokura, Y.
  PERGAMON-ELSEVIER SCIENCE LTD.1998: 1917–20
- **Layered ruthenium oxides: From band metal to Mott insulator** *PHYSICAL REVIEW LETTERS*
  Puchkov, A. V., Schabel, M. C., Basov, D. N., Startseva, T., Cao, G., Timusk, T., Shen, Z. X.

1998; 81 (13): 2747–50

- **Electronic band structure of Sr3Ru2O7** *PHYSICAL REVIEW B*
  Puchkov, A. V., Shen, Z. X., Cao, G.
  1998; 58 (11): 6671–75
- **Systematics of the photoemission spectral function of cuprates: Insulators and hole- and electron-doped superconductors** *PHYSICAL REVIEW LETTERS*
  Kim, C., White, P. J., Shen, Z. X., Tohyama, T., Shibata, Y., Maekawa, S., Wells, B. O., Kim, Y. J., Birgeneau, R. J., Kastner, M. A.
  1998; 80 (19): 4245-4248
- **Temperature-induced momentum-dependent spectral weight transfer in Bi2Sr2CaCu2O8+delta** *Science (New York, N.Y.)*
  Shen, Z., White, P. J., Feng, D. L., Kim, C., Gu, G. D., Ikeda, H., Yoshizaki, R., Koshizuka, N.
  1998; 280 (5361): 259-62
- **Angle-resolved photoemission on untwinned YBa2Cu3O6.95. I. Electronic structure and dispersion relations of surface and bulk bands** *PHYSICAL REVIEW B*
  Schabel, M. C., Park, C. H., Matsuura, A., Shen, Z. X., Bonn, D. A., Liang, R. X., Hardy, W. N.
  1998; 57 (10): 6090–6106
- **Angle-resolved photoemission on untwinned YBa2Cu3O6.95. II. Determination of Fermi surfaces** *PHYSICAL REVIEW B*
  Schabel, M. C., Park, C. H., Matsuura, A., Shen, Z. X., Bonn, D. A., Liang, R. X., Hardy, W. N.
  1998; 57 (10): 6107–15
- **Low energy k-dependent electronic structure of the layered magnetoresistive oxide La1.2Sr1.8Mn2O7** *Symposium on Metallic Magnetic Oxides at the Materials-Research-Society Fall Meeting*
  Saitoh, T., Dessau, D. S., Park, C. H., Shen, Z. X., Villella, P., Hamada, N., Moritomo, Y., Tokura, Y.
  MATERIALS RESEARCH SOCIETY.1998: 213–218
- **Angle-Resolved Photoemission Study of High-Tc Superconductors: Insulators, Metals and Superconductors** *Models and Phenomenology fro Conventional and High-temperature Superconductivity*
  Shen, Z.
  IOS Press/Ohmsha.1998: 141
- **Metal-insulator transition in NiS 2 − x Se x and the local impurity self-consistent approximation model** *Physical Review B*
  Matsuura, A., Watanabe, H., Kim, C., Doniach, S., Shen, Z., Thio, T., Bennett, J.
  1998; 58 (7): 3690
- **k -Dependent Electronic Structure, a Large “Ghost” Fermi Surface, and a Pseudogap in a Layered Magnetoresistive Oxide** *Physical Review Letters*
  Dessau, D., Saitoh, T., Park, C., Shen, Z., Villella, P., Hamada, N., Moritomo, Y., Tokura, Y.
  1998; 81 (1)
- **Experimental determination of the key energy scales in the colossal magnetoresistive manganites** *Symposium on Metallic Magnetic Oxides at the Materials-Research-Society Fall Meeting*
  Dessau, D. S., Saitoh, T., Park, C. H., Shen, Z. X., Moritomo, Y., Tokura, Y.
  MATERIALS RESEARCH SOCIETY.1998: 181–186
- **Separation of spin and charge excitations in one-dimensional SrCuO2** *PHYSICAL REVIEW B*
  Kim, C., Shen, Z. X., Motoyama, N., Eisaki, H., Uchida, S., Tohyama, T., Maekawa, S.
  1997; 56 (24): 15589-15595
- **Temperature and doping dependence of the Bi-Sr-Ca-Cu-O electronic structure and fluctuation effects** *PHYSICAL REVIEW B*
  Loeser, A. G., Shen, Z. X., Schabel, M. C., Kim, C., Zhang, M., Kapitulnik, A., Fournier, P.
  1997; 56 (21): 14185–89
- **Recent photoemission data from underdoped Bi2212 single crystals**
  Shen, Z. X.
  ELSEVIER SCIENCE BV.1997: 123–123
- **Measurement of an anisotropic energy gap in single plane Bi2Sr2-xLaxCuO6+delta** *PHYSICAL REVIEW LETTERS*

Harris, J. M., White, P. J., Shen, Z. X., Ikeda, H., Yoshizaki, R., Eisaki, H., Uchida, S., Si, W. D., Xiong, J. W., Zhao, Z. X., Dessau, D. S.
1997; 79 (1): 143-146

- **Electronic states and effective Hamiltonian of CuGeO3** *5th International Conference / 45th Yamada Conference on Physics of Transition Metals (ICPTM 96)*
  Tohyama, T., Mizuno, Y., Maekawa, S., Kim, C., Shen, Z. X.
  ELSEVIER SCIENCE BV.1997: 135–136
- **Site-specific unoccupied electronic structure of one-dimensional SrCuO2** *PHYSICAL REVIEW B*
  Knupfer, M., Neudert, R., Kielwein, M., Haffner, S., Golden, M. S., Fink, J., Kim, C., Shen, Z. X., Merz, M., Nucker, N., Schuppler, S., Motoyama, N., Eisaki, et al
  1997; 55 (12): R7291–R7294
- **Momentum, temperature, and doping dependence of photoemission lineshape and implications for the nature of the pairing potential in high-T-c superconducting materials** *PHYSICAL REVIEW LETTERS*
  Shen, Z. X., Schrieffer
  1997; 78 (9): 1771–74
- **Superconducting-gap anisotropy in YBa2CU3O7-delta: Photoemission results on untwinned crystals** *PHYSICAL REVIEW B*
  Schabel, M. C., Park, C. H., Matsuura, A., Shen, Z. X., Bonn, D. A., Liang, R. X., Hardy, W. N.
  1997; 55 (5): 2796–99
- **Electron-spectroscopy study of correlation mechanisms in CuGeO3 single crystals** *PHYSICAL REVIEW B*
  Parmigiani, F., Sangaletti, L., Goldoni, A., delPennino, U., Kim, C., Shen, Z. X., Revcolevschi, A., Dhalenne, G.
  1997; 55 (3): 1459–68
- **Excitation gap in the normal and superconducting state of underdoped Bi2Sr2Ca1-xDyxCu2O8+delta thin film and single crystals** *7th International Conference on Muon Spin Rotation, Relaxation, Resonance*
  Shen, Z. X., Harris, J. M., Loeser, A. G.
  SPRINGER.1997: 13–25
- **Rapid suppression of the superconducting gap in overdoped Bi2Sr2CaCu2O8+delta** *PHYSICAL REVIEW B*
  White, P. J., Shen, Z. X., Kim, C., Harris, J. M., Loeser, A. G., Fournier, P., Kapitulnik, A.
  1996; 54 (22): 15669-15672
- **Observation of spin-charge separation in one-dimensional SrCuO2** *PHYSICAL REVIEW LETTERS*
  Kim, C., Matsuura, A. Y., Shen, Z. X., Motoyama, N., Eisaki, H., Uchida, S., Tohyama, T., Maekawa, S.
  1996; 77 (19): 4054-4057
- **Electronic structure momentum dependence of Bi2Sr2CaCu2O8+delta in the normal and superconducting state** *JOURNAL OF SUPERCONDUCTIVITY*
  Loeser, A. G., Shen, Z. X., Dessau, D. S.
  1996; 9 (4): 373-378
- **Excitation Gap in the Normal State of Underdoped Bi2Sr2CaCu2O8+delta** *Science (New York, N.Y.)*
  Loeser, A. G., Shen, Z., Dessau, D. S., Marshall, D. S., Park, C. H., Fournier, P., Kapitulnik, A.
  1996; 273 (5273): 325-9
- **Excitation gap in the normal state of underdoped Bi2Sr2CaCu2O8+delta** *SCIENCE*
  Loeser, A. G., Shen, Z. X., Dessau, D. S., Marshall, D. S., Park, C. H., Fournier, P., Kapitulnik, A.
  1996; 273 (5273): 325-329
- **Complete band-structure determination of the quasi-two-dimensional Fermi-liquid reference compound TiTe2** *PHYSICAL REVIEW B*
  Claessen, R., Anderson, R. O., Gweon, G. H., Allen, J. W., Ellis, W. P., Janowitz, C., Olson, C. G., Shen, Z. X., Eyert, Skibowski, M., Friemelt, K., Bucher, E., Hufner, S.
  1996; 54 (4): 2453–65
- **Unconventional electronic structure evolution with hole doping in Bi2Sr2CaCu2O8+delta: Angle-resolved photoemission results** *PHYSICAL REVIEW LETTERS*
  Marshall, D. S., Dessau, D. S., Loeser, A. G., Park, C. H., Matsuura, A. Y., Eckstein, J. N., Bozovic, I., Fournier, P., Kapitulnik, A., SPICER, W. E., Shen, Z. X.

1996; 76 (25): 4841-4844

- **Doping dependence of Bi2Sr2CaCu2O8+delta in the normal state** *International Symposium on Frontiers of High -T(c) Superconductivity*
  Loeser, A. G., Dessau, D. S., Shen, Z. X.
  ELSEVIER SCIENCE BV.1996: 208–13
- **Evolution of the electronic structure with doping in Bi2Sr2CaCu2O8+delta - Angle resolved photoemission results** *11th International Conference on Vacuum Ultraviolet Radiation Physics (VUV-11 Conference)*
  Dessau, D. S., Marshall, D. S., Loeser, A. G., Park, C. H., Matsuura, A. Y., Shen, Z. X., Fournier, P., Kapitulnik, A., Kishio, K., Eckstein, J., Bozovic, I.
  ELSEVIER SCIENCE BV.1996: 167–170
- **Electronic structure and the metal-insulator transition in Ni S 2 − x Se x** *PHYSICAL REVIEW B*
  Matsuura, A., Shen, Z., Dessau, D., Park, C., Thio, T., Bennett, J., Jepsen, O.
  1996; 53 (12)
- **Anomalous Energy Gap in the Normal and Superconducting State of Underdoped Bi~2Sr~2Ca~1~-~xDy~xCu~2O~8~ ~ Thin Film and Single Crystals**
  Shen, Z., Harris, J., Loeser, A.
  World Scientific. River Edge, N.J..
  1996 240–243
- **Anomalous superconducting state gap size versus T c behavior in underdoped Bi 2 Sr 2 Ca 1 − x Dy x Cu 2 O 8 δ** *Phys. Rev. B*
  Harris, J., Shen, Z., White, P., Marshall, D., Schabel, M., Eckstein, J., Bozovic, I.
  1996; 54 (22)
- **Angle-resolved photoemission of quasi-one-dimensional metals: Evidence for Luttinger liquid behavior** *6th International Conference on Electron Spectroscopy (ICES 6)*
  Claessen, R., Gweon, G. H., Reinert, F., Allen, J. W., Ellis, W. P., Shen, Z. X., Olson, C. G., Schneemeyer, L. F., Levy, F.
  ELSEVIER SCIENCE BV.1995: 121–126
- **Band mapping of the model insulator Sr2CuO2Cl2 - Dispersion of a single hole in an antiferromagnetic background** *Conference on Spectroscopies in Novel Superconductors*
  Wells, B. O., Shen, Z. X., Matsuura, A., King, D. M., Kastner, M. A., Greven, M., Birgeneau, R. J.
  PERGAMON-ELSEVIER SCIENCE LTD.1995: 1871–74
- **Special issue - Spectroscopies in novel superconductors - Preface** *JOURNAL OF PHYSICS AND CHEMISTRY OF SOLIDS*
  Shen, Z. X., Liebenberg, D., Bansil, A.
  1995; 56 (12): R15–R16
- **ANGLE-RESOLVED PHOTOEMISSION SPECTROSCOPY STUDY OF BI2SR2CACU2O8+DELTA THIN-FILMS** *PHYSICAL REVIEW B*
  Marshall, D. S., Dessau, D. S., King, D. M., Park, C. H., Matsuura, A. Y., Shen, Z. X., SPICER, W. E., Eckstein, J. N., Bozovic, I.
  1995; 52 (17): 12548-12551
- **INTERFACE STRUCTURE AND PERPENDICULAR MAGNETIC-ANISOTROPY IN PT/CO MULTILAYERS** *JOURNAL OF APPLIED PHYSICS*
  Bertero, G. A., Sinclair, R., Park, C. H., Shen, Z. X.
  1995; 77 (8): 3953-3959
- **ELECTRONIC-STRUCTURE AND PHOTOEMISSION-STUDIES OF LATE TRANSITION-METAL OXIDES - MOTT INSULATORS AND HIGH-TEMPERATURE SUPERCONDUCTORS** *PHYSICS REPORTS-REVIEW SECTION OF PHYSICS LETTERS*
  Shen, Z. X., Dessau, D. S.
  1995; 253 (1-3): 2-162
- **E VERSUS K RELATIONS AND MANY-BODY EFFECTS IN THE MODEL INSULATING COPPER-OXIDE SR2CUO2CL2** *PHYSICAL REVIEW LETTERS*
  Wells, B. O., Shen, Z. X., Matsuura, A., King, D. M., Kastner, M. A., Greven, M., Birgeneau, R. J.
  1995; 74 (6): 964-967
- **PHOTOEMISSION-STUDIES OF HIGH-T-C SUPERCONDUCTORS - THE SUPERCONDUCTING GAP** *SCIENCE*
  Shen, Z. X., SPICER, W. E., King, D. M., Dessau, D. S., Wells, B. O.
  1995; 267 (5196): 343-350

- **DIRECT OBSERVATION OF A VERY SHARP SPECTRAL FEATURE AT THE BAND EDGE OF FeSi** *PHYSICAL REVIEW B 52*
  Park, C., Shen, Z., Loeser, A., Dessau, D., Aeppli, G., Fisk, Z.
  1995
- **Signature of Superfluid Density in the Single-Particle Excitation Spectrum of Bi2Sr2CaCu2O8+δ**
  Feng, D., Lu, D., Shen, K., Kim, C., Eisaki, H., Damascelli, A., Yoshizaki, R., Shimoyama, J., Kishio, K., Gu, G., Oh, S., Andrus, A., O'Donnell, et al
  Quaternary Research.
  1995 341
- **ELECTRONIC STRUCTURE EVOLUTION FROM MOTT INSULATOR TO SUPERCONDUCTOR--AN ANGLE-RESOVED PHOTOEMISSION INVESTIGATION** *Journal of Physics and Chemistry of Solids*
  King, D., Dessau, D., Loeser, A., Shen, Z., Wells, B.
  1995; 56 (12): 1865-1869
- **PHOTOEMISSION STUDIES OF NOVEL SUPERCONDUCTORS** *China Center of Advanced Science and Technology*
  Matthias, C., Shen, Z.
  1995: 81–113
- **ELECTRONIC-STRUCTURE OF K2NIF4** *PHYSICAL REVIEW B*
  Sangaletti, L., Parmigiani, F., Ratner, E., Shen, Z. X., CHEMELLI, C., JEPSEN, O.
  1994; 50 (24): 17854-17866
- **SYMMETRY OF THE GAP IN BI2212 FROM PHOTOEMISSION SPECTROSCOPY - REPLY** *PHYSICAL REVIEW LETTERS*
  Dessau, D. S., Shen, Z. X., Wells, B. O.
  1994; 73 (22): 3045-3045
- **FERMIOLOGY AND SUPERCONDUCTING GAP ANISOTROPY OF CUPRATE SUPERCONDUCTORS** *20th International Conference on Low Temperature Physics*
  Shen, Z. X.
  ELSEVIER SCIENCE BV.1994: 632–35
- **IN EXPLAINING HIGH-T(C) IS D-WAVE A WASHOUT - REPLY** *PHYSICS TODAY*
  Shen, Z. X.
  1994; 47 (2): 120-120
- **PHOTOEMISSION-STUDIES OF THE BI-SR-CA-CU-O VALENCE-BAND** *JOURNAL OF ELECTRON SPECTROSCOPY AND RELATED PHENOMENA*
  Loeser, A. G., Shen, Z. X., Dessau, D. S., SPICER, W. E.
  1994; 66 (3-4): 359-385
- **FERMI SURFACES AND ENERGY GAPS OF HIGH-TEMPERATURE SUPERCONDUCTORS** *Conference on Oxide Superconductor Physics and Nano-Engineering*
  Shen, Z. X., Dessau, D. S.
  SPIE - INT SOC OPTICAL ENGINEERING.1994: 64–69
- **In Explaining High TC, is D-Wave a Washout?** *Physics Today*
  Anderson, P. W., Pines, D., Scalapino, D. J., Shen, Z.
  1994; 47 (2): 11
- **OBSERVATION OF A SADDLE POINT SINGULARITY IN Bi2201 AND ITS IMPLICATIONS FOR NORMAL AND SUPERCONDUCTING STATE PROPERTIES**
  King, D., Shen, Z., Dessau, D., Marshall, D., Park, C., Spicer, W., Peng, J., Li, Z., Greene, R.
  Physical Review Letters.
  1994 ; 73 3298
- **ANOMALOUSLY LARGE GAP ANISOTROPY IN THE A-B PLANE OF BI2SR2CACUZO8+DELTA - REPLY** *PHYSICAL REVIEW LETTERS*
  Dessau, D. S., Shen, Z. X., Marshall, D. M.
  1993; 71 (25): 4278-4278
- **KEY FEATURES IN THE MEASURED BAND-STRUCTURE OF BI2SR2CACU2O8+DELTA - FLAT BANDS AT E(F) AND FERMI-SURFACE NESTING** *PHYSICAL REVIEW LETTERS*

Dessau, D. S., Shen, Z. X., King, D. M., Marshall, D. S., Lombardo, L. W., DICKINSON, P. H., Loeser, A. G., DiCarlo, J., Park, C. H., Kapitulnik, A., SPICER, W. E.

1993; 71 (17): 2781-2784

- **RECENT RESULTS FROM BI2SR2CACU2O8 AND ND2-XCEXCUO4** *Conference on Spectroscopies in Novel Superconductors*

  Shen, Z. X., Dessau, D. S., Wells, B. O., King, D. M.

  PERGAMON-ELSEVIER SCIENCE LTD.1993: 1169–76

- **STRUCTURAL INFORMATION ON Y-IONS IN C82 FROM EXAFS EXPERIMENTS** *CHEMICAL PHYSICS LETTERS*

  Park, C. H., Wells, B. O., DiCarlo, J., Shen, Z. X., Salem, J. R., Bethune, D. S., Yannoni, C. S., Johnson, R. D., deVries, M. S., Booth, C., Bridges, F., Pianetta, P.

  1993; 213 (1-2): 196-201

- **FERMI-SURFACE AND ELECTRONIC-STRUCTURE OF ND2-XCEXCUO4-DELTA** *PHYSICAL REVIEW LETTERS*

  King, D. M., Shen, Z. X., Dessau, D. S., Wells, B. O., SPICER, W. E., Arko, A. J., Marshall, D. S., DiCarlo, J., Loeser, A. G., Park, C. H., Ratner, E. R., Peng, J. L., Li, et al

  1993; 70 (20): 3159-3162

- **ANOMALOUSLY LARGE GAP ANISOTROPY IN THE A-B PLANE OF BI2SR2CACU2O8+DELTA** *PHYSICAL REVIEW LETTERS*

  Shen, Z. X., Dessau, D. S., Wells, B. O., King, D. M., SPICER, W. E., Arko, A. J., Marshall, D., Lombardo, L. W., Kapitulnik, A., Dickinson, P., Doniach, S., DiCarlo, J., Loeser, et al

  1993; 70 (10): 1553-1556

- **HIGH-ENERGY RESOLUTION ARPES MEASUREMENTS OF THE NORMAL AND SUPERCONDUCTING STATES OF BI2SR2CACU2O8+DELTA** *SYMP ON APPLICATIONS OF SYNCHROTON RADIATION TECHNIQUES TO MATERIALS SCIENCE, AT THE 1993 SPRING MEETING OF THE MATERIALS RESEARCH SOC*

  Dessau, D. S., Shen, Z. X., King, D. M., Wells, B. O., Marshall, D. S., Lombardo, L. W., DICKINSON, P. H., DiCarlo, J., Park, C. H., Loeser, A. G., Kapitulnik, A., SPICER, W. E., Arko, et al

  MATERIALS RESEARCH SOC.1993: 187–192

- **High-Resolution Photoemission Study of High-Temperature Superconductors** *OCPA Newsletter*

  Shen, Z.

  1993

- **High energy resolution ARPES measurements of the normal and superconducting states of Bi2Sr2CaCu2O8+δ** *Los Alamos National Lab., LA-UR-93-2693; CONF-930405-34*

  Dessau, D., King, D., Shen, Z.

  1993

- **PHOTOEMISSION STUDY OF SINGLE CRYSTAL Bi2Sr1.9Pr0.1CuO6 #** *Physical Review B*

  Ratner, E., Shen, Z., Dessau, D., Wells, B., Marshall, D., King, D., Spicer, W., Peng, J., Li, Z., Greene, R.

  1993: 10482

- **K-DEPENDENT SUPERCONDUCTING GAP ANISOTROPY IN THE A-B-PLANE AND ITS IMPLICATIONS** *JOURNAL OF PHYSICS AND CHEMISTRY OF SOLIDS*

  SHEN, Z. X.

  1992; 53 (12): 1583–87

- **ANGLE-RESOLVED-PHOTOEMISSION STUDY OF BI2SR2CACU2O8+8+DELTA - METALLICITY OF THE BI-O PLANE - REPLY** *PHYSICAL REVIEW LETTERS*

  Wells, B. O., Shen, Z. X., Dessau, D. S., SPICER, W. E.

  1992; 68 (3): 417-417

- **PHOTOEMISSION-STUDY OF SINGLE-CRYSTAL C-60** *SYMP ON NOVEL FORMS OF CARBON*

  Wu, J., Shen, Z. X., Dessau, D. S., Cao, R., Marshall, D. S., Pianetta, P., LINDAU, I., Yang, X., Terry, J., King, D. M., Wells, B. O.

  MATERIALS RESEARCH SOC.1992: 235–240

- **ANGLE-RESOLVED PHOTOEMISSION OF C60** *proceedings of the 10th VUV conference, edited by F.J. Wuillenmier, Y. Petroff, and I. Nenner,*

  Shen, Z.

  1992: 301

- **ELECTRONIC STRUCTURE OF SINGLE CRYSTAL C60** *Physica C: Superconductivity*
  Wu, J., Shen, Z., Cao, R., Dessau, D., Yang, X., Pianetta, P., Marshall, D., Wells, B., King, D., Terry, J., Elloway, D., Wendt, H., Brown, et al
  1992; 197 (3-4): 251-260
- **NATURE OF THE HIGH-BINDING-ENERGY DIP IN THE LOW-TEMPERATURE PHOTOEMISSION SPECTRA OF Bi2212** *Phys. Rev.*
  Dessau, D., Shen, Z., Wells, B., Spicer, W., Arko, A., Lambardo, L., Mitzi, D., Kapitulnik, A.
  1992
- **EVIDENCE FOR IN-PLANE ANISOTROPY OF THE SUPERCONDUCTING GAP IN Bi2Sr2CaCu2O8 #** *Phys. Rev*
  Wells, B., Shen, Z., Dessau, D., Spicer, W., Arko, A., Mitzi, D., Lambardo, L., Kapitulnik, A.
  1992
- **ANGLE RESOLVED PHOTOEMISSION STUDY OF BI2SR2CACU208 8 DELTA-METALLICITY OF THE BI-O PLANE** *Reply Physicial Review Letters*
  Wells, B., Shen, Z., Dessau, D., Spicer, W.
  1992: 417-417
- **ELECTRONIC-STRUCTURE OF NIO - CORRELATION AND BAND EFFECTS** *PHYSICAL REVIEW B*
  Shen, Z. X., LIST, R. S., Dessau, D. S., Wells, B. O., JEPSEN, O., Arko, A. J., BARTTLET, R., Shih, C. K., Parmigiani, F., Huang, J. C., LINDBERG, P. A.
  1991; 44 (8): 3604-3626
- **ANGLE RESOLVED PHOTOEMISSION OF NIO(001)** *SOLID STATE COMMUNICATIONS*
  Shen, Z. X., LIST, R. S., Dessau, D. S., Arko, A. J., BARTTLET, R., JEPSEN, O., Wells, B. O., Parmigiani, F.
  1991; 79 (7): 623-628
- **THE GOLD HIGH-TEMPERATURE SUPERCONDUCTOR INTERFACE - METALLICITY OF THE NEAR-SURFACE REGION AND A SEARCH FOR THE PROXIMITY EFFECT** *37TH NATIONAL SYMP OF THE AMERICAN VACUUM SOC*
  Dessau, D. S., Shen, Z. X., Wells, B. O., SPICER, W. E., LIST, R. S., Arko, A. J., BARTLETT, R. J., Olson, C. G., Mitzi, D. B., Eom, C. B., Kapitulnik, A., Geballe, T. H.
  AMER INST PHYSICS.1991: 383–89
- **ANOMALOUS SPECTRAL WEIGHT TRANSFER AT THE SUPERCONDUCTING TRANSITION OF BI2SR2CACU2O8+DELTA** *PHYSICAL REVIEW LETTERS*
  Dessau, D. S., Wells, B. O., Shen, Z. X., SPICER, W. E., Arko, A. J., LIST, R. S., Mitzi, D. B., Kapitulnik, A.
  1991; 66 (16): 2160-2163
- **O 1S CORE LEVELS IN BI2SR2CACU2O8+DELTA SINGLE-CRYSTALS** *PHYSICAL REVIEW B*
  Parmigiani, F., Shen, Z. X., Mitzi, D. B., LINDAU, I., SPICER, W. E., Kapitulnik, A.
  1991; 43 (4): 3085-3090
- **SPIN-DEPENDENT ELECTRON ATTENUATION BY TRANSMISSION THROUGH THIN FERROMAGNETIC-FILMS** *PHYSICAL REVIEW LETTERS*
  PAPPAS, D. P., KAMPER, K. P., MILLER, B. P., HOPSTER, H., FOWLER, D. E., BRUNDLE, C. R., LUNTZ, A. C., SHEN, Z. X.
  1991; 66 (4): 504–7
- **SPECTRAL WEIGHT CHANGES AT THE SUPERCONDUCTING TRANSITION OF BI2SR2CACU2O8+DELTA** *WORKSHOP ON FERMIOLOGY OF HIGH-TC SUPERCONDUCTORS*
  Dessau, D. S., Shen, Z. X., Wells, B. O., SPICER, W. E., Arko, A. J.
  PERGAMON-ELSEVIER SCIENCE LTD.1991: 1401–9
- **Magnetism of ultrathin films of Fe on Cu(100)** *Journal of Applied Physics*
  Pappas, D., Kamper, K., Miller, B., Hopster, H., Fowler, D., Brundle, C., Luntz, A., Shen, Z.
  1991; 69 (8): 5209
- **SPIN POLARIZED PHOTOEMISSION FROM Fe on Cu(100)** *Magnetic Surfaces, Thin Films, and Multilayers Symposium.*
  Pappas, D., Kamper, K., Miller, B., Hopster, H., Fowler, D., Brundle, C., Luntz, A., Shen, Z.
  1991
- **A SEARCH FOR A PROXIMITY EFFECT INDUCED GAP IN GOLD/HIGH Tc JUNCTIONS**
  Dessau, D., Wells, B., Shen, Z., Spicer, W., Arko, A., List, R., Olson, C., Eom, C., Mitzi, D., Kapitulnik, A., Geballe, T.

Appl. Phys. Lett. .
1991 58, 1332

- **EVIDENCE for CHEMICAL POTENTIAL SHIFT WITH DOPING IN Bi2Sr2CaCu2O8+DELTA** *Phys. Rev. B*
  Shen, Z., Dessau, D., Wells, B., Spicer, W., Olson, C., Mitzi, D., List, R., Arko, A.
  1991; 44 (21): 12098-12101

- **ELECTRONIC-STRUCTURE AND THE SUPERCONDUCTING GAP OF BI2SR2CACU2O8+DELTA** *WORKSHOP ON THE ELECTRONIC STRUCTURE AND MECHANISMS FOR HIGH-TEMPERATURE SUPERCONDUCTIVITY*
  Shen, Z. X., Dessau, D. S., Wells, B. O.
  PLENUM PRESS DIV PLENUM PUBLISHING CORP.1991: 113–118

- **ANGLE-RESOLVED-PHOTOEMISSION STUDY OF BI2SR2CACU2O8+DELTA - METALLICITY OF THE BI-O PLANE** *PHYSICAL REVIEW LETTERS*
  Wells, B. O., Shen, Z. X., Dessau, D. S., SPICER, W. E., Olson, C. G., Mitzi, D. B., Kapitulnik, A., LIST, R. S., Arko, A.
  1990; 65 (24): 3056-3059

- **PHOTOEMISSION-STUDY OF CUO AND CU2O SINGLE-CRYSTALS** *PHYSICAL REVIEW B*
  Shen, Z. X., LIST, R. S., Dessau, D. S., Parmigiani, F., Arko, A. J., Bartlett, R., Wells, B. O., LINDAU, I., SPICER, W. E.
  1990; 42 (13): 8081-8085

- **LOCAL SINGLET FOR CUO AND ND2CUO4** *PHYSICAL REVIEW B*
  Gunnarsson, O., JEPSEN, O., Shen, Z. X.
  1990; 42 (13): 8707-8709

- **ELECTRONIC-STRUCTURE OF THE GOLD BI2SR2CACU2O8 AND GOLD EUBA2CU3O7-DELTA INTERFACES AS STUDIED BY PHOTOEMISSION SPECTROSCOPY** *APPLIED PHYSICS LETTERS*
  Dessau, D. S., Shen, Z. X., Wells, B. O., SPICER, W. E., LIST, R. S., Arko, A. J., BARTLETT, R. J., Fisk, Z., Cheong, S. W., Mitzi, D. B., Kapitulnik, A., Schirber, J. E.
  1990; 57 (3): 307-309

- **PHOTOEMISSION-STUDY OF COO** *PHYSICAL REVIEW B*
  Shen, Z. X., Allen, J. W., LINDBERG, P. A., Dessau, D. S., Wells, B. O., Borg, A., Ellis, W., Kang, J. S., Oh, S. J., LINDAU, I., SPICER, W. E.
  1990; 42 (3): 1817-1828

- **YB MEAN VALENCE IN CHEMICALLY COMPRESSED YB1-XSCXAL2 PSEUDOBINARY ALLOYS - AN X-RAY ABSORPTION-SPECTROSCOPY INVESTIGATION** *SOLID STATE COMMUNICATIONS*
  Sancrotti, M., ABBATI, I., Puppin, E., Shen, Z. X., LINDAU, I., Eggenhoffner, R., Iandelli, A., Olcese, G. L.
  1990; 74 (10): 1131-1135

- **YB VALENCE IN YB1-XCAXAL2 PSEUDOBINARY ALLOYS VIA YB LIII X-RAY ABSORPTION-SPECTROSCOPY** *SOLID STATE COMMUNICATIONS*
  Eggenhoffner, R., Sancrotti, M., ABBATI, I., Puppin, E., Shen, Z. X., LINDAU, I., Iandelli, A., Olcese, G. L.
  1990; 74 (9): 1009-1012

- **ASPECTS OF THE CORRELATION-EFFECTS, ANTIFERROMAGNETIC ORDER, AND TRANSLATIONAL SYMMETRY OF THE ELECTRONIC-STRUCTURE OF NIO AND COO** *PHYSICAL REVIEW LETTERS*
  Shen, Z. X., Shih, C. K., JEPSEN, O., SPICER, W. E., LINDAU, I., Allen, J. W.
  1990; 64 (20): 2442-2445

- **POLARIZED RESONANCE PHOTOEMISSION FOR ND2CUO4** *PHYSICAL REVIEW B*
  Gunnarsson, O., Allen, J. W., JEPSEN, O., FUJIWARA, T., Andersen, O. K., Olsen, C. G., Maple, M. B., Kang, J. S., Liu, L. Z., Park, J. H., Anderson, R. O., Ellis, W. P., Liu, et al
  1990; 41 (7): 4811-4814

- **PHOTOEMISSION-STUDIES OF HIGH-TEMPERATURE SUPERCONDUCTORS** *SURFACE SCIENCE REPORTS*
  LINDBERG, P. A., Shen, Z. X., SPICER, W. E., LINDAU, I.
  1990; 11 (1-4): 1-?

- **NATURE OF THE VALENCE BAND STATES IN BI2(CA,SR,LA)3CU2O8** *3RD TOPICAL SYMP OF THE AMERICAN VACUUM SOC - HIGH TC SUPERCONDUCTING THIN FILMS : PROCESSING, CHARACTERIZATION AND APPLICATIONS*

Wells, B. O., LINDBERG, P. A., Shen, Z. X., Dessau, D. S., SPICER, W. E., LINDAU, I., Mitzi, D. B., Kapitulnik, A.
AIP PRESS.1990: 36–41

- **ELECTRON-SPECTROSCOPY OF HEAVY-FERMION MATERIALS** *9TH INTERNATIONAL CONF ON VACUUM ULTRAVIOLET RADIATION PHYSICS ( VUV 9 )*
  Allen, J. W., Kang, J. S., Liu, L. Z., Gunnarsson, O., Christensen, N. E., Andersen, O. K., Maple, M. B., Torikachvili, M. S., Koelling, D. D., Ellis, W. P., Pate, B. B., Shen, Z. X., Yeh, et al
  IOP PUBLISHING LTD.1990: 232–238

- **INTERACTION OF OVERLAYERS OF Al AND Rb WITH SINGLE CRYSTALLINE SURFACES OF Bi2Sr2CaCu2O8** *J. of Appl. Phys.*
  Lindberg, P., Wells, B., Shen, Z., Dessau, D., Mitzi, D., Lindau, I., Spicer, W., Kapitulnik, A.
  1990: 67, 2667

- **ELECTRONIC STRUCTURE OF BaBiO3** *AVS/AIP conference proceeding*
  Shen, Z., Lindberg, P., Wells, B., Dessau, D., Borg, A., Lindau, I., Spicer, W., Ellis, W., Kwei, G., Ott, K., Kang, J., Allen, J.
  1990: No.200, page 30, 1990, edited by R.L. Stockbauer et al.,

- **ELECTRONIC-STRUCTURE OF MONOCLINIC BABIO3** *3RD TOPICAL SYMP OF THE AMERICAN VACUUM SOC - HIGH TC SUPERCONDUCTING THIN FILMS : PROCESSING, CHARACTERIZATION AND APPLICATIONS*
  Shen, Z. X., LINDBERG, P. A., Wells, B. O., Dessau, D. S., Borg, A., LINDAU, I., SPICER, W. E., Ellis, W. P., Kwei, G. H., Ott, K. C., Kang, J. S., Allen, J. W.
  AIP PRESS.1990: 30–35

- **NATURE OF THE VALENCE BAND STATES IN Bi2(Ca,Sr,La)3Cu2O8** *3RD TOPICAL SYMP OF THE AMERICAN VACUUM SOC - HIGH TC SUPERCONDUCTING THIN FILMS : PROCESSING, CHARACTERIZATION AND APPLICATIONS*
  Wells, B. O., LINDBERG, P. A., Shen, Z. X., Dessau, D. S., SPICER, W. E., LINDAU, I., Mitzi, D. B., Kapitulnik, A.
  AIP PRESS.1990: 36–41

- **ELECTRON-SPECTROSCOPY OF HEAVY-FERMION MATERIALS** *9TH INTERNATIONAL CONF ON VACUUM ULTRAVIOLET RADIATION PHYSICS ( VUV 9 )*
  Allen, J. W., Kang, J. S., Liu, L. Z., Gunnarsson, O., Christensen, N. E., Andersen, O. K., Maple, M. B., Torikachvili, M. S., Koelling, D. D., Ellis, W. P., Pate, B. B., Shen, Z. X., Yeh, et al
  IOP PUBLISHING LTD.1990: 232–238

- **ELECTRONIC-STRUCTURE OF SINGLE CRYSTALLINE Bi2(SR,CA,LA)3CU2O8** *INTERNATIONAL CONF ON MATERIALS AND MECHANISMS OF SUPERCONDUCTIVITY : HIGH TEMPERATURE SUPERCONDUCTORS 2*
  LINDBERG, P. A., Shen, Z. X., Dessau, D. S., Wells, B. O., Borg, A., Mitzi, D. B., LINDAU, I., SPICER, W. E., Kapitulnik, A.
  ELSEVIER SCIENCE BV.1989: 1313–1314

- **THE ELECTRONIC-STRUCTURE OF PB2SR2PRCU3O8 AS STUDIED BY RESONANT PHOTOEMISSION SPECTROSCOPY** *INTERNATIONAL CONF ON MATERIALS AND MECHANISMS OF SUPERCONDUCTIVITY : HIGH TEMPERATURE SUPERCONDUCTORS 2*
  Dessau, D. S., Shen, Z. X., LINDBERG, P. A., Wells, B. O., Borg, A., LINDAU, I., SPICER, W. E., Waszczak, J. V., Schneemeyer, L. F.
  ELSEVIER SCIENCE BV.1989: 1373–1374

- **ANGLE-RESOLVED PHOTOEMISSION-STUDY OF NIO AND COO** *INTERNATIONAL CONF ON MATERIALS AND MECHANISMS OF SUPERCONDUCTIVITY : HIGH TEMPERATURE SUPERCONDUCTORS 2*
  Shen, Z. X., LINDBERG, P. A., Shih, C. K., SPICER, W. E., LINDAU, I.
  ELSEVIER SCIENCE BV.1989: 1311–1312

- **PHOTOEMISSION-STUDY OF ABSORPTION MECHANISMS IN Bi2.0SR1.8CA0.8LA0.3CU2.1O8+DELTA, BABIO3, AND Nd1.85Ce0.15CUO4** *PHYSICAL REVIEW B*
  LINDBERG, P. A., Shen, Z. X., Wells, B. O., Dessau, D. S., Ellis, W. P., Borg, A., Kang, J. S., Mitzi, D. B., LINDAU, I., SPICER, W. E., Kapitulnik, A.
  1989; 40 (13): 8840-8843

- **PHOTOEMISSION-STUDY OF THE ELECTRONIC-STRUCTURE (Pr0.2La0.8)(Ba1.875La0.125)Cu3O7-DELTA SYSTEM** *SOLID STATE COMMUNICATIONS*
  LINDBERG, P. A., Shen, Z. X., LINDAU, I., SPICER, W. E., Mitzi, D. B., Kapitulnik, A.
  1989; 72 (6): 575-578

- **ELECTRONIC-STRUCTURE OF CLEAN AND AG-COVERED SINGLE-CRYSTALLINE Bi2Sr2CuO6** *PHYSICAL REVIEW B*
  LINDBERG, P. A., Shen, Z. X., Wells, B. O., Mitzi, D. B., LINDAU, I., SPICER, W. E., Kapitulnik, A.

1989; 40 (13): 8769-8773

- **ELECTRONIC-STRUCTURE OF PB2SR2PRCU3O8 AS STUDIED BY RESONANT PHOTOEMISSION SPECTROSCOPY** *PHYSICAL REVIEW B*
  Dessau, D. S., Shen, Z. X., LINDBERG, P. A., Wells, B. O., Borg, A., LINDAU, I., SPICER, W. E., Waszczak, J. V., Schneemeyer, L. F.
  1989; 40 (10): 6726-6730

- **PHOTOEMISSION-STUDY OF MONOCLINIC BABIO3** *PHYSICAL REVIEW B*
  Shen, Z. X., LINDBERG, P. A., Wells, B. O., Dessau, D. S., Borg, A., LINDAU, I., SPICER, W. E., Ellis, W. P., Kwei, G. H., Ott, K. C., Kang, J. S., Allen, J. W.
  1989; 40 (10): 6912-6918

- **SPECTROSCOPIC EVIDENCE OF TWO-DIMENSIONAL CHARACTER OF THE 90-K BI2(SR,LA,CA)3CU2O8 SUPERCONDUCTORS** *APPLIED PHYSICS LETTERS*
  LINDBERG, P. A., Shen, Z. X., Wells, B. O., Dessau, D. S., Borg, A., LINDAU, I., SPICER, W. E., Mitzi, D. B., Kapitulnik, A.
  1989; 55 (11): 1141-1143

- **THE ELECTRONIC-STRUCTURE OF BI2.0SR1.8LA0.3CA0.8CU2.1O8+DELTA-SUPERCONDUCTORS STUDIED USING ULTRAVIOLET AND X-RAY PHOTOELECTRON-SPECTROSCOPY** *PHYSICA C*
  LINDBERG, P. A., Shen, Z. X., Dessau, D. S., Wells, B. O., Borg, A., Ellis, W., Mitzi, D. B., LINDAU, I., SPICER, W. E., Kapitulnik, A.
  1989; 159 (5): 649-653

- **FERMI-LEVEL TUNING IN Y1-XUXPD3** *PHYSICAL REVIEW B*
  Kang, J. S., Allen, J. W., Maple, M. B., Torikachvili, M. S., Ellis, W. P., Pate, B. B., Shen, Z. X., Yeh, J. J., LINDAU, I.
  1989; 39 (18): 13529-13532

- **ELECTRONIC-STRUCTURE OF THE QUENCHED SUPERCONDUCTIVITY MATERIALS Y1-XPRXBA2CU3O7-DELTA** *JOURNAL OF THE LESS-COMMON METALS*
  Kang, J. S., Allen, J. W., Shen, Z. X., Ellis, W. P., Yeh, J. J., Lee, B. W., Maple, M. B., SPICER, W. E., LINDAU, I.
  1989; 148 (1-2): 121-132

- **PHOTOELECTRON ENERGY-LOSS STUDY OF THE BI2CASR2CU2O8 SUPERCONDUCTOR** *PHYSICAL REVIEW B*
  Shen, Z. X., LINDBERG, P. A., Dessau, D. S., LINDAU, I., SPICER, W. E., Mitzi, D. B., Bozovic, I., Kapitulnik, A.
  1989; 39 (7): 4295-4298

- **ELECTRONIC-STRUCTURE OF THE LA1+XBA2-XCU3O7+DELTA-SYSTEM STUDIED BY PHOTOELECTRON-SPECTROSCOPY** *SOLID STATE COMMUNICATIONS*
  LINDBERG, P. A., Shen, Z. X., Hwang, J., Shih, C. K., LINDAU, I., SPICER, W. E., Mitzi, D. B.
  1989; 69 (1): 27-31

- **NATURE OF THE VALENCE BAND STATES IN Bi2(SrCaLa)3Cu2O8** *Phys. Rev. B 40, 5259*
  Wells, B., Lindberg, P., Shen, Z., Dessau, D., Lindau, I., Spicer, W., Mitzi, D., Kapitulnik, A.
  1989

- **ENERGY DISPERSIONS OF SINGLE CRYSTALLINE Bi2.0Sr1.8La0.3Ca0.8Cu2.1O8 # SUPERCONDUCTORS DETERMINED USING ANGLE-RESOLVED PHOTOELECTRON SPECTROSCOPY** *Phys. Rev. B 40, 5169 (1989)*
  Lindberg, P., Shen, Z., Dessau, D., Wells, B., Mitzi, D., Lindau, I., Spicer, W., Kapitulnik, A.
  1989

- **REACTION OF Rb AND OXYGEN OVERLAYERS WITH SINGLE-CRYSTALLINE Bi2CaSr2CaCu2O8 SUPERCONDUCTORS** *Phys. Rev. B 39, 2890 (1989)*
  Lindberg, P., Shen, Z., Wells, B., Dessau, D., Mitzi, D., Lindau, I., Spicer, W., Kapitulnik, A.
  1989

- **ALUMINUM AND GOLD DEPOSITION ON CLEAVED SINGLE CRYSTALS OF Bi2CaSr2CaCu2O8 SUPERCONDUCTORS** *AIP/AVS Conference Proceedings 182, 391-398 (1989)*
  Wells, B., Lindberg, P., Shen, Z., Dessau, D., Lindau, I., Spicer, W., Mitzi, D., Kapitulnik, A.
  1989

- **PHOTOEMISSION STUDY OF HIGH TEMPERATURE SUPERCONDUCTORS** *AIP/AVS Conference Proceedings, 182, 330-349*
  Shen, Z., Lindberg, P., Spicer, W., Lindau, I., Allen, J.
  1989

- **SURFACE AND ELECTRONIC STRUCTURE OF Bi-Ca-Sr-Cu-O SUPERCONDUCTORS STUDIED USING LEED, UPS, AND XPS** *AIP/AVS Conference Proceedings 182, 312-317, (1989)*
  Shen, Z., Lindberg, P., Spicer, W., Soukiassian, P., Mitzi, D., Kapitulnik, A., Geballe, T.
  1989
- **NATURE OF THE STATES NEAR THE FERMI LEVEL OF THE LAYERED SUPERCONDUCTORS OF BI2CA1SR2CU2O8 AND BI2SR2CUO6** *PHYSICAL REVIEW B*
  Shen, Z. X., LINDBERG, P. A., Soukiassian, P., Eom, C. B., LINDAU, I., SPICER, W. E., Geballe, T. H.
  1989; 39 (1): 823-826
- **SURFACE-STRUCTURE OF BI2SR2CACU2O8+SIGMA HIGH-TEMPERATURE SUPERCONDUCTORS STUDIED USING LOW-ENERGY ELECTRON-DIFFRACTION** *APPLIED PHYSICS LETTERS*
  LINDBERG, P. A., Shen, Z. X., Wells, B. O., Mitzi, D. B., LINDAU, I., SPICER, W. E., Kapitulnik, A.
  1988; 53 (25): 2563-2565
- **VALENCE-BAND AND CORE-LEVEL PHOTOEMISSION-STUDY OF SINGLE-CRYSTAL BI2CASR2CU2O8 SUPERCONDUCTORS** *PHYSICAL REVIEW B*
  Shen, Z. X., LINDBERG, P. A., Wells, B. O., Mitzi, D. B., LINDAU, I., SPICER, W. E., Kapitulnik, A.
  1988; 38 (16): 11820-11823
- **ELECTRONIC-STRUCTURE OF CERAMICS AND THIN-FILM SAMPLES OF HIGH-TC BI2SR2CACU2O8+DELTA SUPERCONDUCTORS - EFFECTS OF AR+ SPUTTERING, O-2 EXPOSURE, AND RB DEPOSITION** *APPLIED PHYSICS LETTERS*
  LINDBERG, P. A., Soukiassian, P., Shen, Z. X., Shah, S. I., Eom, C. B., LINDAU, I., SPICER, W. E., Geballe, T. H.
  1988; 53 (20): 1970-1972
- **ELECTRONIC-STRUCTURE OF BI-CA-SR-CU-O SUPERCONDUCTORS STUDIED BY PHOTOELECTRON-SPECTROSCOPY** *PHYSICAL REVIEW B*
  Shen, Z. X., LINDBERG, P. A., LINDAU, I., SPICER, W. E., Eom, C. B., Geballe, T. H.
  1988; 38 (10): 7152-7155
- **KAPPA-RESOLVED ALLOY BOWING IN PSEUDOBINARY INXGA1-XAS ALLOYS** *PHYSICAL REVIEW LETTERS*
  Hwang, J., Pianetta, P., Pao, Y. C., Shih, C. K., Shen, Z. X., LINDBERG, P. A., Chow, R.
  1988; 61 (7): 877-880
- **PHOTOEMISSION-STUDY OF THE SURFACE ELECTRONIC-STRUCTURE OF BI-CA-SR-CU-O SUPERCONDUCTORS MODIFIED BY NE SPUTTERING, AG DEPOSITION, AND HEAT-TREATMENT** *APPLIED PHYSICS LETTERS*
  LINDBERG, P. A., Shen, Z. X., LINDAU, I., SPICER, W. E., Eom, C. B., Geballe, T. H.
  1988; 53 (6): 529-531
- **PHOTOEMISSION FROM THE SI/LA INTERFACE** *SOLID STATE COMMUNICATIONS*
  Puppin, E., Guyot, H., Shen, Z. X., Hwang, J., LINDAU, I.
  1988; 67 (1): 23-27
- **THE EFFECT OF STRAIN ON THE BAND-STRUCTURE OF INXGA1-XAS** *JOURNAL OF VACUUM SCIENCE & TECHNOLOGY B*
  Hwang, J., Pianetta, P., Kubiak, G. D., Stulen, R. H., Shin, C. K., Pao, Y. C., Shen, Z. X., LINDBERG, P. A., Chow, R.
  1988; 6 (4): 1234-1239
- **Photoemission Study Of The Surface Chemistry And The Electronic Structure Of Copper Oxide Superconducting Thin Films** *Proc. SPIE 0948, High-Tc Superconductivity: Thin Films and Devices*
  Shen, Z., Yeh, J., Lindau, I., Spicer, W., Sun, J., Char, K., Missert, N., Kapitulnik, A., Geballe, T., Beasley, M.
  1988
- **Electronic Spectroscopy Studies of High Temperature Superconductors: Y1-xPrxBa2Cu3O7- δ** *The Proceedings of the International Symposium on the Electronic Structure of High Tc Superconductors*
  Kang, J., Allen, J., Lee, B., Maple, M., Shen, Z., Yeh, J., Ellis, W., Spicer, W., Lindau, I.
  1988
- **ANDERSON HAMILTONIAN DESCRIPTION OF THE EXPERIMENTAL ELECTRONIC-STRUCTURE AND MAGNETIC-INTERACTIONS OF COPPER-OXIDE SUPERCONDUCTORS** *PHYSICAL REVIEW B*
  Shen, Z. X., Allen, J. W., Yeh, J. J., Kang, J. S., Ellis, W., Spicer, W., LINDAU, I., Maple, M. B., DALICHAOUCH, Y. D., Torikachvili, M. S., Sun, J. Z., Geballe, T. H.

1987; 36 (16): 8414-8428

- **A PHOTOEMISSION-STUDY OF THE SI(111)/GD INTERFACE - A COMPARISON WITH THE BULK SILICIDES** *JOURNAL OF VACUUM SCIENCE & TECHNOLOGY B*
  Puppin, E., Nogami, J., Carbone, C., Shen, Z. X., LINDAU, I., Pate, B. B., ABBATI, I., Braicovich, L.
  1987; 5 (4): 1083-1086

- **PHOTOEMISSION STUDY OF THE ELECTRONIC STRUCTURE of COPPER OXIDE SUPERCONDUCTORS** *MRS Online, Volume 99 (Symposium AA – High-Temperature Superconductors)1*
  Shen, Z., Allen, J., Yeh, J., Kang, J., Ellis, W., Spicer, W., Lindau, I., Sun, J., Geballe, T., Maple, M., Dalichaouch, Y., Torikachvei, M.
  1987