

Complete List of publications (As of January 30, 2012)

Including 1 Nature, 7 Physical Review Letters, 8 Applied Physics Letters, 16 Physical Review B, 3 Nano Letters, 1 Journal of American Chemical Society, 1 ACS Nano

86. Large magnetoresistance oscillations in mesoscopic superconductors due to current-excited moving vortices: a supplement to the Little-Parks effect
G. R. Berdiorov, M. V. Milosevic, M. L. Latimer, Z. L. Xiao, W. K. Kwok, and F. M. Peeters, **Phys. Rev. Lett.** (submitted, 2012).
85. Reliability of sensores based on nanowire networks
Nader Ebrahimi, Kristin McCullough, and Zhili Xiao, **IEEE Transactions** (to appear, 2012).
84. Vortex interaction enhanced saturation number and caging effect in a superconducting film with a honeycomb array of nanoscale holes
M. L. Latimer, G. R. Berdiorov, Z. L. Xiao, W. K. Kwok, and F. M. Peeters, **Phys. Rev. B** **85**, 012505 (2012).
83. Doping and irradiation controlled vortex pinning behavior in $\text{BaFe}_2(\text{As}_{1-x}\text{P}_x)_2$ single crystals
L. Fang, Y. Jia, J. A. Schlueter, A. Kayani, Z. L. Xiao, H. Claus, U. Welp, A. E. Koshelev, G. W. Crabtree, W.-K. Kwok, **Phys. Rev. B** **84**, (Rapid Communication) 140504 (2011).
82. Networks of ultrasmall Pd/Cr nanowires as high performance hydrogen sensors
X. Q. Zeng, Y. L. Wang, H. Deng, M. L. Latimer, Z. L. Xiao, J. Pearson, T. Xu, H. H. Wang, U. Welp, and G. W. Crabtree, and W. K. Kwok, **ACS Nano** **5**, 7443 (2011).
81. Conversion of carbon dioxide to few-layer graphene
Amartya Chakrabarti, Jun Lu, Jennifer C. Skrabutenas, Tao Xu, Zhili Xiao, John A. Maguire, and Narayan S. Hosmane, **J. Mater. Chem.** **21**, 9491 (2011)
80. Hydrogen gas sensing with networks of ultrasmall palladium nanowires formed on filtration membranes
X. Q. Zeng, M. L. Latimer, Z. L. Xiao, S. Panuganti, U. Welp, W. K. Kwok, T. Xu, **Nano Lett.** **11**, 262 (2011).
79. Tin(IV) sulfide: Novel nanocrystalline morphologies
Amartya Chakrabarti, Jun Lu, Adam M. McNamara, Lauren M. Kuta, Shena M. Stanley, Zhili Xiao, John A. Maguire, and Narayan S. Hosmane, **Inorganica Chimica Acta** **374**, 627 (2011).
78. Studying single nanocrystals under high pressure using an x-ray nanoprobe
Lin Wang, Yang Ding, Umesh Patel, Wenge Yang, Zhili Xiao, Zhonghou Cai, Wendy L. Mao, and Ho-kwang Mao, **Rev. Sci. Instrum.** **82**, 043903 (2011).
77. Transparent conducting films from NbSe_3 nanowires
Sukanta De, Conor S Boland, Paul J. King, Sophie Sorel, Mustafa Lotya, U. Patel, Z. L. Xiao, and Jonathan N Coleman, **Nanotechnology** **22**, article # 285202 (2011).
76. Low-temperature synthesis of superconducting nanocrystalline MgB_2
Jun Lu, Zhili Xiao, Qiyin Lin, Helmut Claus, and Zhigang Zak Fang, **J. Nanomater.** **2010**, article # 191058 (2010).
75. Matching effect and dynamic phases of vortex matter in $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_8$ nanoribbon with a periodic array of holes
S. Avci, Z. L. Xiao, J. Hua, A. Imre, R. Divan, J. Pearson, U. Welp, W. K. Kwok, and G. W. Crabtree, **Appl. Phys. Lett.** **97**, article # 042511 (2010).
74. Vortex pinning by compound defects in $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$
J. Hua, U. Welp, J. Schlueter, A. Kayani, Z. L. Xiao, G. W. Crabtree, and W. K. Kwok, **Phys. Rev. B** **82**, article # 024505 (2010).
73. Evaluating free flux flow in low-pinning molybdenum-germanium superconducting films

- M. L. Liang, M. N. Kunchur, J. Hua, and Z. L. Xiao, **Phys. Rev. B** **82**, article # 064502 (2010).
72. Multi-gap nodeless superconductivity in iron selenide FeSe_x: evident from quasiparticle heat transport
J. K. Dong, T. Y. Guan, S. Y. Zhou, X. Qiu, L. Ding, C. Zhang, U. Patel, Z. L. Xiao, S. Y. Li, **Phys. Rev. B** **80**, article # 024518 (2009).
 71. Effect of sample geometry on the phase boundary of a mesoscopic superconducting loop
G. R. Berdiyorov, S. H. Yu, Z. L. Xiao, F. M. Peeters, J. Hua, A. Imre, and W. K. Kwok, **Phys. Rev. B** **80**, article # 064511 (2009)
 70. Magnetoresistance oscillations in granular superconducting niobium nitride nanowires
U. Patel, Z. L. Xiao, A. Gurevich, S. Avci, J. Hua, R. Divan, U. Welp, and W. K. Kwok, **Phys. Rev. B** **80**, article # 147003 (2009).
 69. Facile synthesis of highly aligned multiwalled carbon nanotubes from polymer precursors
Catherine Y. Han, Zhi-Li Xiao, H. Hau Wang, Xiao-Min Lin, Susana Trasobares, and Russell E. Cook, **J. Nanomater.** **2009**, article # 562376 (2009).
 68. Hydrogen spillover enhanced hydriding kinetics of palladium-doped lithium nitride to lithium imide
Chikai Lin, Tao Xu, Jiamei Yu, Qingfeng Ge, and Zhili Xiao, **J. Phys. Chem. C** **113**, 8513 (2009).
 67. Growth and superconductivity of FeSe_x crystals
U. Patel, J. Hua, S. H. Yu, S. Avci, and Z. L. Xiao, H. Claus, J. Schlueter, V. V. Vlasko-Vlasov, U. Welp, and W. K. Kwok, **Appl. Phys. Lett.** **94**, article # 082508 (2009).
 66. Magnetoresistance anisotropy of a one-dimensional superconducting niobium strip
J. Hua, Z. L. Xiao, A. Imre, S. H. Yu, U. Patel, L. E. Ocola, R. Divan, A. Koshelev, J. Pearson, U. Welp, and W. K. Kwok, **Phys. Rev. Lett.** **101**, article # 077003 (2008).
 65. Quasiparticle density of state of 2H-NbSe₂ single crystals revealed by low temperature specific heat measurements according to a two-component model
J. Yang, L. Shan, Y. Wang, Z. L. Xiao, and H. H. Wen, **Chinese Physics B** **17**, 2229 (2008).
 64. Synthesis and superconducting properties of niobium nitride nanowires and nanoribbons
U. Patel, S. Avci, Z. L. Xiao, J. Hua, S. H. Yu, Y. Ito, R. Divan, L. E. Ocola, C. Zheng, H. Claus, J. Hiller, U. Welp, D. J. Miller, and W. K. Kwok, **Appl. Phys. Lett.** **91**, article # 162508 (2007).
 63. Resistance and current-voltage characteristics of individual superconducting NbSe₂ nanowires
Zhixiao Zhou, Rongying Jin, Gyula Eres, David Mandrus, Victor Barzykin, Pedro Schlottmann, Yew-San Hor, Zhili Xiao and John F. Mitchell. **Phys. Rev. B** **76**, article # 104511 (2007).
 62. Origin of the Matching Effect in a Superconducting Film Containing a Hole-array
U. Patel, Z. L. Xiao, J. Hua, T. Xu, D. Rosenmann, V. Novosad, J. Pearson, U. Welp, W. K. Kwok, and G. W. Crabtree, **Phys. Rev. B** **76**, (Rapid Communication) article # 020508 (2007).
 61. Resistance anomaly in Disordered Superconducting Films
J. Hua, Z. L. Xiao, D. Rosenmann, I. Beloborodov, U. Welp, W. K. Kwok and G. W. Crabtree **Appl. Phys. Lett.** **90**, article # 072507 (2007).
 60. Wet chemical etching of the anodic aluminum oxide barrier layer
Catherine Y. Han, Gerold A. Willing, Zhili Xiao and H. Hau Wang, **Langmuir** **23**, 1564 (2007).
 59. Nanostructured and chemically modified hydrophobic polyolefin surfaces,
Esa Puukilainen, Hanna-Kaisa Koponen, Zhili Xiao, Sari Suvanto, Tapani A. Pakkanen, **Colloids and Surfaces A: Physicochem. Eng. Aspects** **287**, 175 (2006).
 58. Onset of motion and dynamic reordering of a vortex lattice
G. H. Li, E. Y. Andrei, Z. L. Xiao, P. Shuk and M. Greenblatt, **Phys. Rev. Lett.** **96**, 084502 (2006).
 57. Onset of motion and glassy dynamics of a moving vortex lattice
Guohong Li, Eva Y. Andrei, Xu Du, Z. L. Xiao, P. Shuk and M. Greenblatt, **J. Phys. IV** **131**, 101 (2005).
 56. Superconducting NbSe₂ nanowires and nanoribbons converted from NbSe₃ nanostructures

- Y. S. Hor, U. Welp, Y. Ito, Z. L. Xiao, U. Patel, J. F. Mitchell, W. K. Kwok and G. W. Crabtree, **Appl. Phys. Lett.** **87**, article # 142506 (2005).
55. Self-assembled monolayer promoted hydrogen sensing of ultra-thin palladium films
T. Xu, M. P. Zach, Z. L. Xiao, D. Rosenmann, U. Welp, W. K. Kwok and G. W. Crabtree, **Appl. Phys. Lett.** **86**, article # 203104 (2005).
54. Nanowires and nanoribbons of charge-density-wave conductor NbSe₃
Y. S. Hor, Z. L. Xiao, U. Welp, Y. Ito, J. F. Mitchell, R. E. Cook, W. K. Kwok, and G. W. Crabtree, **Nano Lett.** **5**, 397 (2005).
53. Commensurability and strong vortex pinning in nanopatterned Nb films
U. Welp, Z. L. Xiao, Novasad, and V. K. Vlasko-Vlasov, **Phys. Rev. B** **71**, article # 014505 (2005).
52. Tuning the architecture of mesostructures by electrodeposition
Zhi-Li Xiao, Catherine Y. Han, Wai-Kwong Kwok, Hsien-Hau Wang, Ulrich Welp, Jian Wang, and George W. Crabtree, **J. Am. Chem. Soc. (Communications)** **126**, 2316 (2004).
51. Observation of the vortex lattice spinodal in NbSe₂
Z. L. Xiao, O. Dogru, E. Y. Andrei, P. Shuk, M. Greenblatt, **Phys. Rev. Lett.** **92**, article # 227004 (2004).
50. Anodized aluminum oxide membranes as templates for nanoscale structures
C. Y. Han, Z. L. Xiao, H. H. Wang, G. A. Willing, U. Geiser, U. Welp, W. K. Kwok, S. D. Bader, G. W. Crabtree, **Plating and Surface Finishing** **91**, 40 (2004).
49. Commensurate vortex pinning in Nb films patterned onto anodized aluminum oxide
W. K. Kwok, Z. L. Xiao, U. Welp, V. K. Vlasko-Vlasov, V. Novosad, **Physica C** **412**, 347 (2004).
48. Vortex pinning in Nb films patterned with nano-scale hole-arrays
U. Welp, Z. L. Xiao, J. S. Jiang, V. K. Vlasko-Vlasov, S. D. Bader, G. W. Crabtree, J. Liang, H. Chik, J. M. Xu, **Physica B** **329**, 1338 (2003).
47. Magnetic antidot Arrays with a storage density of 10 Gbits/cm²
Z. L. Xiao, Catherine Y. Han, U. Welp, H. H. Wang, G. A. Willing, V. K. Vlasko-Vlasov, W. K. Kwok, D. J. Miller, J. M. Hiller, R. E. Cook, and G. W. Crabtree, **Nanotech** **3**, 357 (2003)
46. Vortices in dense self-assembled hole arrays
G. W. Crabtree, U. Welp, Z. L. Xiao, J. S. Jiang, V. K. Vlasko-Vlasov, S. D. Bader, J. Liang, H. Chik, J. M. Xu, **Physica C** **387**, 49 (2003).
45. Order-disorder coexistence and metastability in vortex lattices
E. Y. Andrei, Z. L. Xiao, O. Dogru, P. Shuk and M. Greenblatt, **Condensed Matter Theories** **18**, 159 (2003).
44. Nickel antidot arrays on alumina substrates
Z. L. Xiao, Catherine Y. Han, U. Welp, H. H. Wang, V. K. Vlasko-Vlasov, W. K. Kwok, G. A. Willing, D. J. Miller, J. M. Hiller, R. E. Cook, and G. W. Crabtree, **Appl. Phys. Lett.** **81**, 2869 (2002).
(Zhili Xiao was also the corresponding author)
43. Fabrication of alumina nanotubes and nanowires by etching porous alumina membranes
Z. L. Xiao, Catherine Y. Han, U. Welp, H. H. Wang, W. K. Kwok, J. M. Hiller, R. E. Cook, D. J. Miller, and G. W. Crabtree, **Nano Lett.** **2**, 1293 (2002).
(Zhili Xiao was also the corresponding author)
42. Superconducting transition and vortex pinning in Nb films patterned with nano-scale hole-arrays
U. Welp, Z. L. Xiao, J. S. Jiang, V. K. Vlasko-Vlasov, S. Bader, G. W. Crabtree, J. Liang, H. Chik, J. Xu, **Phys. Rev. B.** **66**, 212507 (2002).
41. Edge and bulk transport in the mixed state of a type-II superconductor
Z. L. Xiao, E. Y. Andrei, Y. Paltiel, E. Zeldov, P. Shuk and M. Greenblatt, **Phys. Rev. B** **65**, 450289 (2002).
40. Depinning of a metastable disordered vortex lattice

- Z. L. Xiao, E. Y. Andrei, P. Shuk and M. Greenblatt, **Phys. Rev. Lett.** **86**, 2431 (2001).
39. Joule heating induced by vortex motion in a type-II superconductor
Z. L. Xiao, E. Y. Andrei, P. Shuk and M. Greenblatt, **Phys. Rev. B** **64**, 094511 (2001).
38. Order-disorder transitions in a vortex lattice
 E. Y. Andrei, Z. L. Xiao, W. Henderson, Y. Paltiel, E. Zeldov, M. Higgins, S. Bhattacharya, P. Shuk and M. Greenblatt, **Condensed Matter Theories** **16**, 241 (2001).
37. Equilibration and dynamic phase transitions of a driven vortex lattice
Z. L. Xiao, E. Y. Andrei, P. Shuk and M. Greenblatt, **Phys. Rev. Lett.** **85**, 3265 (2000).
36. Dynamic instabilities and memory effects in vortex matter
 Y. Paltiel, E. Zeldov, Y. N. Myasoedov, H. Shtrikman, S. Bhattacharya, M. J. Higgins, Z. L. Xiao, E. Y. Andrei, P. L. Gammel and D. J. Bishop, **Nature** **403**, 398 (2000).
 (Xiao's contribution: experimental design and data analysis)
35. Instabilities and disorder-driven first-order transition of the vortex lattice
 Y. Paltiel, E. Zeldov, Y. Myasoedov, M.L. Rappaport, G. Jung, S. Bhattacharya, M.J. Higgins, Z. L. Xiao, E. Y. Andrei, P. L. Gammel and D. J. Bishop, **Phys. Rev. Lett.** **85**, 3712 (2000).
 (Xiao's contribution: experimental design and data analysis)
34. Current ramping rate dependence of the critical current in 2H-NbSe₂ crystals
Z. L. Xiao, E. Y. Andrei, P. Shuk and M. Greenblatt, **Physica C** **341-348**, 1163 (2000).
33. Local studies of vortex instabilities and memory effects in NbSe₂
 Y. Paltiel, E. Zeldov, Y. N. Myasoedov, S. Bhattacharya, M. J. Higgins, E. Y. Andrei, Z. L. Xiao, H. Shtrikman, P. L. Gammel and D. J. Bishop, **Physica C** **341-348**, 1221 (2000).
32. Preparation and characterization of Hg-based superconducting films using stable Mo_{0.3}Sr₂(Ca_{0.7}Y_{0.3})-Cu₂O_x and Re_{0.1}Ba₂CaCu₂O_y precursors by laser ablation
Z. L. Xiao, G. Jakob, B. Hensel, H. Adrian and E. Y. Andrei, **Physica C** **341-348**, 2393 (2000).
31. Flux-flow instability and heating effects in Bi₂Sr₂CaCu₂O₈ and YBa₂Cu₃O₇ thin films
 G. Jakob, P. Voss-de Haan, M. Wagner, Z. L. Xiao and H. Adrian, **Physica B** **284-288**, 897 (2000).
30. Flow induced organization and memory of a vortex lattice
Z. L. Xiao, E. Y. Andrei and M. J. Higgins, **Phys. Rev. Lett.** **83**, 1664 (1999).
29. Flux-flow instability and its anisotropy in Bi₂Sr₂CaCu₂O_{8+δ} superconducting films
Z. L. Xiao, P. Voss-de Hann, G. Jakob, Th. Kluge, P. Haibach, H. Adrian and E. Y. Andrei, **Phys. Rev. B** **59**, 1481 (1999).
28. Current driven organization of magnetic vortices
 Eva Y. Andrei, Z. L. Xiao, W. Henderson, M. J. Higgins, P. Shuk and M. Greenblatt, **J. Phys. IV (Paris)** **10**, 5 (1999).
27. Coexistence of the hot-spot effect and flux-flow instability in high-*T_c* superconducting films
Z. L. Xiao, E. Y. Andrei and P. Ziemann, **Phys. Rev. B** **58**, 11185 (1998).
26. Voltage jumps in current-voltage characteristics of Bi₂Sr₂CaCu₂O_{8+δ} superconducting films: Evidence for flux-flow instability under the self-heating
Z. L. Xiao, P. Voss-de Hann, G. Jakob and H. Adrian, **Phys. Rev. B** **57**, (Rapid Commun.) R736 (1998).
25. Anisotropy of a vortex instability observed at high current densities in YBa₂Cu₃O_{7-δ} superconducting films
Z. L. Xiao and P. Ziemann, **Z. Phys. B** **104**, 451 (1997).
24. High current driven vortex instability in YBa₂Cu₃O_{7-δ} thin films - analysis in terms of self organized criticality
Z. L. Xiao and P. Ziemann, **Physica C** **282-287**, 2363 (1997).
23. Vortex dynamics in YBa₂Cu₃O_{7-δ} superconducting films: experimental evidence for an instability of the vortex system at high current density
Z. L. Xiao and P. Ziemann, **Phys. Rev. B** **53**, 15265 (1996).

22. Effect of helium ion irradiation at medium energies on the anisotropy of the critical currents in $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ thin films
Z. L. Xiao, J. Haering and P. Ziemann, **Solid State Commun.** **100**, 27 (1996).
21. Influence of helium ion bombardment on the vortex instability at high current densities observed in YBaCuO films
Z. L. Xiao, J. Haering and P. Ziemann, **J. Low Temp. Phys.** **105**, 1159 (1996).
20. Thermally activated flux motion in YBaCuO thin films: experimental evidence for the temperature current separability of the activation energy
Z. L. Xiao, J. Haering, Ch. Heinzel and P. Ziemann, **Solid State Commun.** **95**, 153 (1995).
19. Current- voltage characteristics of YBaCuO-films extracted from relaxation measurements
Ch. Heinzel, J. Haering, Z. L. Xiao and P. Ziemann, **Physica C** **235-240**, 2679 (1994).
18. The effect of the medium energy ion irradiation on the pinning force of YBaCuO-films
Z. L. Xiao, J. Haering and P. Ziemann, **Physica C** **235-240**, 2979 (1994).
17. The orientation of (Pb,La)TiO₃ thin films grown on different substrates by multi-ion-beam reactive cosputtering technique
D. Q. Xiao, J. M. Zhu, J. G. Zhu, Z. L. Xiao, Z. H. Qian, H. L. Zhang, H. C. Guo and B. Z. Xie, **Ferroelectrics** **141**, 327 (1993).
16. Epitaxial growth and crystallographic analyses of lanthanum modified lead titanate thin films
D. Q. Xiao, Z. L. Xiao, J. M. Zhu, D. R. Wan, H. C. Guo, B. Z. Xie and H. Yuan, **Appl. Phys. Lett.** **58**, 36 (1991).
15. Effect of sintering time on the specific heat of $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ samples
Q. Z. Ran, R. Y. Jin, Z. L. Xiao, B. J. Jin and D. Jin, **Chin. J. Low. Temp. Phys.** **12**, 38 (1990).
14. Multi-ion-beam reactive co-sputtering (MIBRECS) system and technique for preparing complex oxide thin films
H. C. Guo, D. Q. Xiao, Z. L. Xiao, B. Z. Xie, Q. W. Shao and J. M. Zhu, **Ferroelectrics** **108**, 65 (1990).
13. The preparation of PLT thin films by MIBRECS technique
D. Q. Xiao, Z. L. Xiao, J. M. Zhu, Y. B. Li and H. C. Guo, **Ferroelectrics** **108**, 59 (1990).
12. Anomaly of specific heat around 200K in $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ superconductor
Q. Z. Ran, R. Y. Jin, Z. L. Xiao and B. J. Jin, **Chin. J. Low. Temp. Phys.** **11**, 458 (1989).
11. A large step change of specific heat in yttrium barium copper oxide
J. W. Li, Q. Z. Ran and Z. L. Xiao, **Chin. J. Low. Temp. Phys.** **12**, 28 (1989).
10. Studies on the 120K superconducting phase in the Bi-Sr-Ca-Cu-O system
Z. L. Xiao, L. Q. Chen, Y. Z. Huang, J. Q. Bi, X. G. Jin, D. N. Zheng, S. L. Jia and Z. X. Zhao, **Chin. J. Low. Temp. Phys.** **11**, 430 (1989) and **Chinese Physics (New York)** **10**, 775 (1990).
9. Ultrasonic studies on high T_c superconductor $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$
T. Z. Deng, L. K. Zhang, H. C. Gu, Z. L. Xiao, L. Q. Chen, **Chin. Phys. Lett. (English)** **5**, 461 (1988).
8. High- T_c superconductor without rare-earth element Bi-Sr-Ca-Cu-O system
Z. X. Zhao, L. Q. Chen, Y. Z. Huang, Z. L. Xiao, Y. M. Ni, D. N. Zheng, J. Q. Bi, S. L. Jia, Z. Y. Ran, D. H. Shen, R. J. Xue, J. R. Chen, G. H. Chen, **Kexue Tongbao (Chin. Sci. Bull.)** **34**, 375 (1988).
7. The relation between the superconductivity on Ba-Y-Cu-O system and the oxygen atmosphere during the sintering process
Z. L. Xiao, L. Q. Chen, Y. Z. Hunag, L. Z. Wang, S. L. Jia and Y. M. Ni, **Chin. Mat. Sci. Prog.** **1**, 32 (1988).
6. 120K superconductor $\text{TiBaCaCu}_2\text{O}_y$
Z. X. Zhao, L. Q. Chen, Z. H. Mai, Y. Z. Huang, Z. L. Xiao, X. Chu, D. N. Zheng, S. L. Jia, J. H. Wang, G. H. Chen, Y. M. Ni, J. Q. Bi, Q. S. Yang, D. H. Shen and L. Z. Wang, **Mod. Phys. Lett. B** **2**, 479 (1988).
5. The microregion compositional variation in $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ materials

- Z. H. Mai, L. Q. Chen, X. Chu, D. Y. Dai, Y. M. Ni, Y. Z. Huang, Z. L. Xiao, P. W. Ge and Z. X. Zhao, **Phys. Lett. A** **127**, 297 (1988).
4. Superconducting phases in Bi-Sr-Ca-Cu-O system
Z. X. Zhao, L. Q. Chen, Y. Z. Huang, Z. H. Mai, J. H. Wang, Z. Y. Ran, X. Chu, Z. L. Xiao, Y. F. Yan, D. N. Zheng, J. Q. Li, G. H. Chen, D. H. Shen and Q. S. Yang, **Annales de Physique (Ann. Phys. Fr.)** **13**, 339 (1988).
 3. The identification of two superconducting phases in Tl-Ba-Ca-Cu-O system
Z. H. Mai, L. Q. Chen, X. Chu, S. F. Cui, Y. Z. Huang, D. Y. Dai, Z. L. Xiao, D. N. Zheng and Z. X. Zhao, **Supercond. Sci. Technol.** **1**, 94 (1988).
 2. Some factors effect on zero-resistance temperature of superconductor Y-Ba-Cu-O
L. Q. Chen, Z. L. Xiao, Y. Z. Huang, Z. H. Mai, X. Chu, D. Y. Dai, Z. X. Zhao, G. H. Chen, Y. M. Ni, J. Q. Bi, L. Z. Wang and C. Q. Wang, **Int. J. Mod. Phys. B** **1**, 267 (1987).
 1. The micro-region compositional variation of $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$
Z. H. Mai, L. Q. Chen, X. Chu, D. Y. Dai, Y. M. Ni, Y. Z. Huang, Z. L. Xiao, P. W. Ge and Z. X. Zhao, **Int. J. Mod. Phys. B** **1**, 231 (1987).